

# Dams, Rivers & People

## UPDATE ON RELATED ISSUES

SANDRP

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### INDEX

About the Update	1	Water Supply Options	30
Water & Constitution of India: Federalism	2	Lakes, Tanks, Wetlands, Glaciers	30
R Iyer on SC order on Linking Rivers	4	Rural Water Supply	31
Why River Linking is such a Mindless idea	5	Urban Water Supply	32
China's cross country water plans	6	Publications available with SANDRP	32
Expert opinions on the River Linking proposal	7	Water Privatisation	33
Who will remind the PM about his words?	8	River privatised in Chhatisgarh	33
The Drying Bhavani, the Waterless Attappady & the Volatile Cauvery	9	'Keep Water Out of WTO'	34
National Water Policy Silent on India's Rivers	14	Anger over water for profit	35
The most charitable face of India's Large Dams	15	Fisheries	35
The Sinking feelings of the Bhakra Displaced	17	Quotes	36
R&R lagging behind in Tehri	18	Floods	36
News from the Narmada Valley	19	Saptakoshi DPR in two years?	37
Maan Dam affected evicted with police terror	20	Pollution	38
HydroProjects: Parliament misled on Sawalkot?	21	Water Pollution in J&K	39
Hydro Projects in North East India	23	Foodgrains Management	39
South Asia: Nepal, Pakistan, Sri Lanka	24	Food availability drops in 1990s	40
Around the World: Dam Removal in US	24	Agriculture	41
Indonesians to sue Japan Govt over dam	25	GM food in unsafe	42
Water Sector	26	Sugar	42
Issues about Rivers	27	Contract Farming	43
Interstate Disputes	27	Power Options	43
Groundwater	28	Small Hydro	45
Irrigation Options	28	Power Reforms	45
Irrigation	29	Power Policy	46
MKVDC, Others Downgraded again	29	Power Generation	46
		Power Finance News	47
		Your Responses	48

#### UPDATE ON DAMS, RIVERS & PEOPLE

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

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

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

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## Water and the Constitution of India

### ASPECTS OF FEDERALISM

Recently, there has been renewed attempt to bring the subject of water from state subject to being under concurrent or central list. The Supreme Court of India, while hearing the Cauvery dispute matter between Karnataka and Tamil Nadu, had asked solicitor general, if it is possible to put rivers under the Union List of the Constitution because this (water sharing) problem is going to happen in the case of every river. The World Bank has been pushing this for some time. To clarify the issues arising from such a proposition, we invited **Shri Ramaswamy Iyer**, former secretary, Union Water Resources Ministry and well-known expert on water resources development, to send us a Special Article for *Update*. Here is what he has sent us. Comments are welcome.

**Entries in the Constitution** A statement that is often made is that under the Indian Constitution water is a State subject. There is a tendency to take this proposition for granted as a basic datum from which to proceed to further propositions and arguments. Those further propositions and arguments take one of two directions: one is to assert that water is rightly a State subject, that this position must be accepted and that the Centre must refrain from encroaching into this area; the other is to deplore that water is a State subject and to argue that the Centre needs to play an important role in regard to this precious resource, and that in order to facilitate this water should be transferred to the Concurrent List. Both these views are over-simplifications.

The relevant provisions are Entry 17 in the State List, Entry 56 in the Union List and Article 262. There are other articles and entries, which may have a bearing on the matter; but the ones just mentioned are specifically concerned with water.

Entry 17 in the State List runs as follows:  
*"Water, that is to say, water supplies, irrigation and canals, drainage and embankments, water storage and water power subject to the provisions of Entry 56 of List I".*

It can be seen at once that it is not an unqualified entry. Water is indeed in the State List but this is subject to the provisions of Entry 56 in the Union List, which runs as follows:  
*"Regulation and development of inter-state rivers and river valleys to the extent to which such regulation and development under the control of the Union is declared by parliament by law to be expedient in the public interest".*

The legislative competence of the State Governments under Entry 17 of the State List

remains unfettered only because Parliament has not made much use of the powers vested in it by Entry 56 of the Union List. It is, therefore, not quite right to say simply that water is a State subject; it is potentially as much a Central subject as a State subject, particularly as most of our important rivers are inter-State.

Moreover, we must also note the provisions of Article 262:

*"262. Adjudication of disputes relating to waters of inter-state rivers or river valleys.*

*(1) Parliament may by law provide for the adjudication of any dispute or complaint with respect to the use, distribution or control of the waters of, or in, any interstate river or river valley.*

*(2) Notwithstanding anything in this Constitution, parliament may by law provide that neither the Supreme Court nor any other court shall exercise jurisdiction in respect of any such dispute or complaint as is referred to in clause (1)."*

It stands to reason that the legislative competence of a State under Entry 17 must be exercised in such a manner as not to prejudice the interests of other States and create a water dispute within the meaning of Article 262. This has been clearly stated in some of the Tribunals' awards.

**Role of the Centre** Water is not in the Concurrent List; but it is both in the Union List and in the State List. The role given to the Centre in regard to inter-State rivers and river valleys is at least potentially an important one; and this is reinforced by the use of the provisions of Entry 20 in the Concurrent List, namely, 'economic and social planning', by virtue of which major and medium irrigation, hydro-power, flood control and multi-purpose projects have been subjected to the requirement of Central clearance for inclusion in the national plan. This has been questioned by

some State Governments but the clearance requirement remains; and there is of course the requirement of Central clearances under the Forest Conservation Act and the Environment Protection Act. It could be plausibly argued that even under the present dispensation the Centre has significant responsibilities in relation to water, and that it has not in fact discharged those responsibilities adequately.

The River Boards Act 1956, passed by Parliament under Entry 56 of the Union List, provides for the establishment of advisory boards, but no boards have been set up under the Act: the Act has remained virtually inoperative. The Inter State Water Disputes Act 1956, enacted under Article 262 of the Constitution, has also run into difficulties in recent years.

**73<sup>rd</sup> and 74<sup>th</sup> Amendments** Apart from the Union and the States there is now a third tier in the constitutional structure, created by the 73<sup>rd</sup> and 74<sup>th</sup> Amendments, namely, local bodies of governance at the village and city level: the village *panchayats* and the city *nagarpalikas* (municipalities/corporations). The Eleventh and Twelfth Schedules to the Constitution lay down lists of subjects to be devolved to the *panchayats* and *nagarpalikas*. The lists include, *inter alia*, drinking water, water management, watershed development, sanitation, and so on. It seems likely that in future this third tier will come to play an important role in relation to water-resource development. However, the processes of decentralization and devolution are still evolving, and the role of the third tier is yet to emerge fully.

**Deficiencies of the Existing Position?** In the light of the above account, can it be said that the present constitutional position in relation to water is satisfactory? The Sarkaria Commission thought so, but serious doubts in this regard seem warranted, though these are perhaps a matter of hindsight.

➤ First, even the most general entry regarding water, namely, Entry 17 in the State List, quickly slips into specific uses of water such as water supply, irrigation, etc.

➤ Secondly, irrigation looms large; and the reference to canals, embankments, drainage, water storage, and so on, shows the heavy influence of the engineering point of view.

➤ Thirdly, while the word 'water' may doubtless be taken to include groundwater, there is no

specific reference to the latter; the Constitution-makers seem to have been thinking mainly of river waters.

➤ Fourthly, the Centre has been given a role only in relation to inter-State rivers and river valleys, but it is conceivable that even in a river which flows entirely in one State that State's intervention might produce environmental or social consequences in another State; and such interventions in intra-State surface waters may also have an impact on groundwater aquifers cutting across State boundaries. There is no explicit recognition of this in the Constitution.

➤ Fifthly, the constitutional provisions do not show any direct evidence of a perception of water as a natural resource much less of water as a part of the larger environment or the ecological system. (Some of the emerging concerns were incorporated into the Constitution at a later stage. Under the 42<sup>nd</sup> Amendment of 1976, references to the protection of the environment, forests and wildlife were introduced *via* Articles 48A and 51A, and two entries relating to forests and wildlife were added to the Concurrent List.) There is also no explicit evidence of an awareness of traditional community-managed systems of rainwater-harvesting or water management, or of the role of civil society in these matters. Nor is there any *overt* reference to water as a basic essential for life and therefore a basic human and animal right.

Some of these perceptions and concerns are of relatively recent origin, and perhaps the makers of the Constitution cannot be faulted for not having foreseen these developments. Further, a Constitution provides a foundation for the laws of the land, and is essentially a *legal* document; it cannot be expected to spell out sectoral policies in detail. Subject to those caveats, however, it is possible to argue that if the kinds of thinking that have now come to prevail had been well established when the Constitution was being drafted, the constitutional provisions might well have been very different.

**Amendments Needed?** However, that is a speculative reflection, and a case of hindsight. The reality is the text of the Constitution as it exists. Amendments to put 'water' in the Concurrent List would be enormously difficult to put through: they go counter to the persistent trend towards greater decentralization and federalism.

Moreover, it is necessary to ask ourselves what precisely will be achieved by shifting water to the Concurrent List, assuming that this proves politically feasible. Such a change will merely mean that the Centre will be enabled to legislate on water. In seeking to bring water into the Concurrent List, the Central Ministry of Water Resources is essentially trying to enlarge its own role on the ground that this will serve some useful national purposes. In the first place, there is no ground for believing that the Centre will necessarily take a more holistic view of water than the States; at both levels, limited engineering-dominated perceptions tend to prevail. Secondly, the Constitution only deals with the legislative (and correspondingly the executive) powers of *governments* at the State and Central levels; and water is not a matter merely for governments. The growing movement for a revival of the traditional water-harvesting and water-management systems and practices envisages an enlargement of the role of the community and a transformation of the relationship between the state and civil society.

Lastly, in the context of the advocacy of community-management of common pool resources, there arises the whole question of what has come to be known as 'legal pluralism', i.e., the relationship between the formal law of the statute books and 'customary law'. From this point of view again, constitutional amendments to bring water into the Concurrent List will be of no great help.

The question about the constitutional entries relating to water needs to be considered, not merely with reference to the narrow issue of the role of the Central Government but with some of the larger perspectives mentioned above in view. The Report of the National Commission for Reviewing the Working of the Constitution is silent

on this issue. It is difficult to believe that the question did not come up before the Commission. Perhaps its silence represents a deliberate decision. If so, one can only regret it. It is not clear when another opportunity to go into this matter will present itself. Meanwhile much can be done to promote a holistic view of water, better Centre-State and inter-State relations, and a constructive relationship between state and civil society, even within the ambit of the existing constitutional entries relating to water.

**National Water Resources Council: Statutory Backing?** A related point is that the National Water Resources Council, an important element in Indian federalism in relation to water resources, is only an institution established by a Resolution of the Government of India and has no statutory backing. Its prestige and influence are derived from its composition with the Prime Minister as its Chairman, the Union Minister of Water Resources as Vice-Chairman and all State Chief Ministers and several Central Ministers as Members. The National Water Policy 1987 and 2002 approved by it is not a law; it has only the force of consent. It may be added that the NWRC meets very infrequently, and apart from the approval of the NWP in 1987 and of the NWP 2002 fifteen years later, it cannot be said to have done much. It is sometimes suggested that the NWRC and the NWP – not in its present form, but possibly decided in a democratic way with participation of people from across the country - should be given a statutory backing, but it is not clear whether this is in fact necessary, and if so how, and under what entries in the Constitution, this can be done.

**-Shri Ramaswamy Iyer (Former Secretary, Union Ministry for Water Resources)**

**ON SUPREME COURT ORDER ON LINKING RIVERS** The Supreme Court has decreed that the rivers of India shall be linked within 10 years. The usual response "one does not know whether to laugh or to cry" would be inappropriate in this case, as one is not permitted to laugh at anything that the judges say except at their jokes if they make any; but presumably one is not precluded from crying in despair. An almost abandoned idea has been given fresh currency; a dubious idea has been given legitimacy; and a wild-goose chase has been not merely sanctioned but mandated... The SC direction is not at all a defensible instance of judicial activism. That apart, turning to the merits of the direction, one wishes that the learned judges had undertaken a more careful study of the subject before deciding to issue directions. Fortunately these are interim directions, and there is still time for a reconsideration of the matter. It is to be hoped that the Task Force that is to be set up as directed by the Supreme Court will consider not merely the 'modalities' of the 'linking of rivers' but also the soundness and wisdom of the idea. Any headlong rush in the pursuit of this chimera will be disastrous.

(From Shri Ramaswamy R Iyer's article *Linking of Rivers: Judicial Activism or Error?* in EPW 161102)

## Why National River linking is such A mindless idea?

The basic justification behind the concept of linking rivers is to transfer water from the so called deficit areas to the so called surplus areas. First question that then arises is that do we have clear studies establishing deficit river basins and surplus river basins? This then raises the sub question as to the how do you arrive at a definition of deficit or surplus?

We all know that wettest place on earth, Cherapunjee, is facing water problems today. And there are the wonderful, unprecedented water harvesting success stories from the driest regions of India, namely Rajasthan. In fact, for the first time in the history of Independent India, President of India visited Alwar two years back to honour the people of Bhavta Kolyali villages for their successful community work in harvesting water and along with 72 other villages of Arvari river basin, make the river perennial. If there was one sound slap on the face of river linking advocates, it came from that region. Because here, people had shown that it is possible to solve local water problems and make a river perennial without importing water from elsewhere.

It was then indeed shocking that the first spark in the recent river linkage controversy came from (the speech on August 14, 2002 of) the same office of the President of India, now being occupied by another incumbent. A misguided quote from that speech then lead to a rather unfounded petition in the Supreme Court of India, giving chance to the outgoing Chief Justice of India to suggest (a day before he retired as Chief Justice) that centre set up a task force to consider river linking. And now the Prime Minister Vajpayeeji has, rather strangely, joined the bandwagon. It is strange to come from Vajpayeeji as he has been speaking rather consistently in favour of all out efforts to *first* harvest water where it falls.

Coming back to the questions with which we started, are there any studies for any river basin in India to declare it as surplus or deficit basin? The answer, is unfortunately, no. Comprehensive assessment of potential of all available sources of water, including rainwater, soil moisture, groundwater and surface water, through all available options has not been done for any river basin. In fact, comprehensive rainwater harvesting potential through local projects has not been done in a participatory way or otherwise even for any sub basin.

National Water Development Agency, under the Union Water Resources Ministry, is the agency entrusted with task of preparing studies for feasibility of inter-basin transfers across various rivers in India. The various pre feasibility and feasibility level studies it has prepared so far are essentially based on existing and planned large and small dam projects in various states. It has not done ground level or comprehensive assessment across any river basin in India. Its conclusions hence are mostly without scientific basis.

To show how unfounded the conclusions of the agency are, two of the rivers it declared as surplus are Godavari and Mahanadi. But people of many of the states through which these rivers pass, e.g. Andhra Pradesh in case of Godavari and Orissa in case of Mahanadi have protested, saying these are not surplus river basins. Similarly, attempts at floating Brahmaputra Ganga link in the past have faced strong opposition on hydrological, environmental and social grounds, besides issues of financial viability.

While talking about Ganga Cauvery link, it is assumed that Ganga is surplus and Cauvery is deficit basin. But ask any planner of UP, Bihar, W Bengal or Bangladesh if Ganga is surplus and you will get only vehement protests in return. It may be recalled that when Indo Bangladesh agreement was signed in 1996 to ensure that there is enough water for desilting of Howarah port and at the same time Bangladesh gets its due share of water, Bihar and UP had protested saying their potential water projects have been put in jeopardy by the agreement. And would you believe if you were told that Kerala govt is actually planning a project to divert waters from Cauvery basin to Bharatpuzha, one its west flowing rivers? So if Cauvery is rich enough to allow diversions to another river basin, then what is the logic in calling it deficit basin? The fundamental trouble with the idea of river linking plans, then is that the idea has no studies or sound basis.

That the river-linking plan is politically impractical and legally unviable was also argued in the Supreme Court. Let us take some concrete examples.

Sutlej Yamuna link canal is an attempt at transferring waters of Sutlej to Yamuna river basin. Here everything is supposed to be in place, including an order from the Supreme Court. But Punjab refuses to implement this plan, saying it has no surplus water. Another such example is the attempt by Karnataka to divert water from west flowing Mahadayi to Malaprabha, a tributary

of east flowing Krishna River. In this case, the former Secretary, Union Ministry of Water Resources had to in fact lose his job when he tried politicking by giving a certificate to Karnataka that it can divert some water from Mahadayi basin to Krishna basin. Goa has been steadfastly opposing this proposal, as Mahadayi is lifeline for them.

The cost of river link proposal is roughly estimated at Rs 560 000 crores. Mobilising that kind of money from all kinds of sources is impossible even in ten decades, leave aside one. As mid term review of Ninth Five year plan noted, the financial requirements of ongoing projects, some incomplete since the second five year plan, and the financial requirements of operation and maintenance of existing projects to achieve optimum results would consume budgets of at least next ten years, if not more.

In fact, as the World Bank-MWR study of India's Water Sector done in 1999 showed, India, though having the largest irrigation infrastructure in the world is not able to even maintain it to provide existing

benefits, leave aside optimum benefits. In fact, in spite of spending hundreds of crores of rupees each year, the irrigated area by canals is in fact coming down in a number of states. Only vested interests would push new bigger projects like river linking while, cheaper local options are available, ongoing projects are incomplete and maintenance of existing projects is inadequate. Moreover, while the social and environmental impacts of river link proposals is not even known, it can be safely said that they will be more severe than the impacts of biggest dams in India.

Will better sense prevail when the issue next comes up before the Supreme Court on Dec. 16? Only time will tell, but in the meantime, those who care enough for our rivers and our resources, need to speak up about their concerns.

**South Asia Network on Dams, Rivers and People (An edited version of this article was published in *Dainik Hindustan* (Hindi))**

**China's plans of cross country water project** The Chinese govt has okayed a multi billion dollar plan to build the world's biggest water transfer project to transfer water from South China to North China, including Beijing. The project includes three south-north canals in the eastern, central and western parts of the country, forming a network among the nation's longest, including the Yangtze, Yelow, Huaihe and Haihe. By 2050 the project is expected to be capable of shifting 44.8 BCM of water annually, with 14.8 BCM, 13 BCM and 17 BCM carried out by the eastern, central and western canals respectively. In the first phase the govt plans to invest \$18.65B in the eastern and central canal project. (THE HINDU 271102)

## Why is the River Linking Proposal Being Pushed?

As the cacophony in favour of linking up India's rivers grew louder past few weeks, many friends told us to highlight the issues connected with the proposal. What are the problems with the proposal? Why is the proposal being floated? Who are really pushing it and what is the REAL agenda? While immediate answers to all the question are not available, in the following two pages (in addition to the previous two pages and the box on page 4), we have put together responses on this issue from some well known experts and leaders of India.

National River Grid Proposal will create many social and environmental problems. The Planning and implementation processes have been so lopsided that while there were 232 no source villages during 1<sup>st</sup> five-year plan, today the number has gone upto 90000. The water problems can be solved through rainwater harvesting. We need to convey our concern to the Supreme Court.

Rashtriya Jal Biradari 's National Executive, Nov 2002

Vajpayee's speech on drought two years ago (see box below) was focused on capturing every drop as it falls. The new turn he has taken offers no explanation of what follow up they did in past 2 years. Rs.2000 crore

were announced as the budget for this. Now this grandiose scheme is clearly to ward off public opinion critical of Govt. failure to mitigate drought. Ten PMs would come and go but not a drop will be available.

L C Jain, former member, Planning Commission

**Medha Patkar, Narmada Bachao Andolan** This is a direct attempt to centralise control on land, water, forest resources, and impinge on people's right. It must not be forgotten that it was none other than Jawahar Lal Nehru who had rejected the Dastur plan. So many past water resources experts have also abandoned the plan. "Just the other day at meeting to finalise the National Water Policy, the PM, Atal Bihari Vajpayee, announced that they would go for

decentralised and community based water management projects. The judiciary took on the executive's role when it issued a diktat that the interlinking should be done, and done in 10 years. The same judiciary had declined the case on Enron and Narmada dam to take on the mantle of executive.

Who has seen the plan? Has it been discussed or debated in any public forum? This plan won't carry water but silt and floods. Disputes such as Cauvery will multiply and the displacement and environment problems will be huge.

#### **Editorial comment in The Hindustan Times**

...a mothballed idea... No surprise, of course, considering that idea was first mooted by a congress govt. but there appears to be a precious little to show whether a serious cost benefit analysis – of the financial, social, ecological, and technological parameters – of the scheme has been attempted in the 40 years that the idea has been around. So all that one can say now is that it is little more than a fancy in its infancy.... There are also wild variations in the financial cost estimates being proffered by diverse source and the time horizon being discussed. At any rate, nothing like this has been attempted anywhere in the world. Let's also remember that the impact of drought is being felt in the country even while grain stocks have reached an embarrassing high. This tells us that we need to get the delivery systems right.

**Ganga Cauvery link not feasible** "At Patna, which is the only point along the course with a divertive surplus, the Ganga flows 200 ft above mean sea level. If it has to be linked with any river of the peninsula, the water has to be raised over the Vindhyas chain – that is, to 2 860 ft above MSL. Pumping 20 000 cusecs of water to that height would have required an entire day's power generated in the country forty year ago. Even 40 years later, this requirement would make the link enviable. Unless you can reach water cheap to the beneficiary, the project would be unsustainable. Further, India, which has an accord with Bangladesh on the sharing of Ganga could face with protests from Bangaladesh."

R K Murthy, former engineer of Neyveli Lignite Corp

**Interlinking rivers will be a disaster** Connecting the rivers will be a disaster because the gigantic project, which will take decades if not a century to complete, will cause massive human displacement. The construction of dams and the excavation of thousands of kms of canals will make villages disappear, flood towns and cut through millions of Ha of agricultural land. It will uproot millions, the number exceeding the population shifts of partition. This mammoth project will be another kind of disaster as well because of its cost. The only beneficiaries will be the civil contractors and the political distributors of largesse who will become millionaire many times over.

**Weak links in river's network plan** It has been suggested that a Central authority should construct huge reservoirs on the Ganga and Brahmaputra and link these two mighty rivers with canals, thereby diverting surplus waters south-eastwards into Mahanadi. Any scheme that smacks of gigantomania of this kind ought to be questioned. It is not as if rivers, in the course of their flow, play no ecological role other than supplying water-parched regions. They carry silt which replenishes the topsoil and enables agriculture to flourish. Once you create reservoirs and virtually a countrywide network of canals, this will play havoc with this ecological role. It will impoverish river valleys and the prosperity these sustained, displace local communities and as one see in Punjab and Haryana, lead to water logging and salinity in the absence of proper drainage that rivers provide. Not least, a Garland canal system will fragment wildlife habitats. Animals require corridor to connect them to far-flung forests, and these will be severed.

Well-known journalist Darryl D'Monte

**Not in National Interest** River link project will give birth to many types of problems and controversies and this is not in the interest of the nation. It will be in the best interest of the nation that without democratic and transparent nation wide consultation, no steps should be taken in this direction by the govt.

Well-known columnist Bharat Dogra

In many parts of our country there are professional marriage arrangers. Their only interest in seeing that the marriage they arrange is carried and they get their commissions. They are not bothered if the marriages last or bust, if there is love or water among the parties involved. Now the norms of such marriages are being extended to marriages between rivers.

Dinesh Kumar Mishra, Barh Mukti Abhiyan, Bihar

As an ecologist within the CGIAR system, I personally think the idea of linking rivers will likely be disastrous from an ecological perspective. I actually believe that the result is more likely to be a funeral wreath for India's rivers than a garland!

Rebecca Tharme, Freshwater Ecologist, International Water Management Institute, Sri Lanka

(THE HINDUSTAN TIMES 231002, 221102 THE TIMES OF INDIA 061102 THE HINDU 201002, 271102 *Dainik Hindustan* 091102)

#### **MORE DOUBTS OVER WISDOM OF RIVER LINKING PLANS**

#### **Scripting water war of the 21st Century**

„the unholy contractor-bureaucrat-politician alliance assesses potential benefit to push the proposal.

Political ramifications of the project are drawing diverse actors into it... Not only does economics of the scheme make the project improbable, its social, geographical, ecological and political ramifications are too serious to warrant its execution... Far from increasing productivity through irrigation along its course, the large network of dams and canals will alter the natural drainage such that occasional flooding and waterlogging will inundate millions of hectares of agricultural land. .. While altering the geography of the country significantly, the equitable distribution of water across the country will inadvertently distribute pollutant load across the rivers equitably as well... Undoubtedly, the proposal of linking rivers is rooted in an engineering mindset, which believes that the only way to tackle the problem is to find and transport water – wherever it might be.

Not counting the reasons for the drying up of Sabarmati, its flow has been restored by diverting Narmada waters 225 km upstream. According to the Central Water Commission, not long ago Sabarmati had a recorded annual flow of 3,200 million cubic metres. Instead of creating favourable conditions of recharge in 21,674 square kilometres of its catchment, Sabarmati has been reduced to a canal – dependant on Narmada waters for perpetuity.

Punjab has clearly shown that improving irrigation infrastructure cannot be a solution. Thanks to assured surface irrigation, the once fertile land is fast turning a desert due to salinity and waterlogging forcing the Punjab government to give incentives to farmers to switch from water inefficient rice-wheat cropping pattern to more diverse water conserving crops. Planning Commission contends that a mere 10 per cent increase in the efficiency of the existing irrigation infrastructure would lead to 14 million hectares of additional agricultural land getting water.

Sudhirendar Sharma, Janmancha.org, Nov 12 2002

**Opposition from Punjab** We are opposed to the Plans to link up Rivers of India. The (Akali Dal) party would oppose this plan of the NDA government despite being an NDA constituent. Our alliance with the Union government doesn't make any difference when it come to safeguarding the interests of Punjabis. We are concerned over the apathetic attitude of the Punjab government in not reacting to the situation. No state can be deprived of its natural resources.

Former Punjab CM Prakash Singh Badal, The Times of India, Nov 29 2002

#### **Who will remind the Prime Minister Vajpayee that these too were HIS words?**

***One of the real gains of the challenge posed by the drought, however, is that the country is today talking not only about the problem but also about solutions to it. Solutions that are practical, appropriate and durable. In particular, I see widespread interest everywhere in rainwater harvesting and other water conservation ideas.***

...the one idea that stands out for its simplicity, efficacy and affordability is rain water harvesting. Capture rainwater, store it and use it – it is as simple as that. If appropriate technologies are built around this simple idea, they can provide decentralised, local-level solutions that can considerably meet the drinking water needs of our urban and rural populations.

Prime Minister Atal Behari Vajpayee  
During Drought of 2000

Our culture and tradition enjoins upon us to treat our rivers as sacred. Yet, over the past few decades, more rivers are getting more polluted at more places than ever before... The policy should also recognize that the community is the rightful custodian of water. Exclusive control by the government machinery, and the resultant mindset among the people that water management is the exclusive responsibility of the government, cannot help us to make the paradigm shift that to participative, essentially local management of water resources. Both the Centre and the State governments should, therefore, actively seek the involvement of the community at all levels — from decision-making to monitoring the implementation of decisions... Let this meeting of the Council send out a powerful message that “harnessing of every drop of rainwater” is a national priority. We should lay special emphasis on localized, decentralized harnessing of water resources, which is most cost-effective and which also lends itself to better community participation.

Our catchword should be: “Catch the catchment”. Wherever necessary, our farmers and rural communities should be encouraged to bund every field and bind every rivulet. This will prevent soil erosion and silting of the reservoirs. There is a suggestion that every village should earmark five percent of its area for creation of community water bodies, much like the community grazing grounds that still exist in many villages. It is a powerful idea whose time has come.

Prime Minister Vajpayee on  
April 1 2002, while releasing NWP 2002

## THE DRYING BHVANI, WATERLESS ATTAPPADY AND THE VOLATILE CAUVERY

\* S SATISH CHANDRAN NAIR

### THE CURRENT ISSUE

**A minor Irrigation Project at Mukkali** The Dept of Irrigation (Minor), Govt of Kerala is proposing to construct a minor irrigation weir at Mukkali in Attappady and divert waters for irrigation in the Mannarkad area further west for an estimated cost of Rs 8.8 M. The proposal originally notified in September 1997 is confusing. It mentions diversion of the 'stream' without naming it as Bhavani, near the forest office at Mukkali. There is only one 'stream' namely the main Bhavani river in this place. The notification states that the waters are to be diverted to Panthanthodu, which actually is a small tributary of the same Bhavani about 1 km upstream of the proposed water site. It originates in the Attappady Reserve Forest and flows through Karuvara and Chindakki and joins Bhavani on the left flank. Actually there is already a minor irrigation weir across in Chindakki. From Mukkali, from the proposed weir, water cannot be taken upstream to Panthanthodu. The command area of the proposed project is identified as 'Mannarkad area', which is lower down, at the base of the Ghats, towards west. Actually a small stream Manthampotty originates hardly 50 m to the south of the proposed weir location flows down the Ghats south of the Mannarkad – Mukkali road and joins Nellipuzha at Thenkara. It is part of the west flowing Bharathapuzha basin. **So actually the proposed project is intended for the diversion of the east flowing Bhavani waters towards west into Bharthapuzha.** Across Manthampotty at the base of the Ghats at Anamooli there is an existing minor irrigation weir. The command area identified in the proposed project is already in the irrigated command area of Kanjirapuzha right bank main canal and the area is not in need of irrigation.

**Ramifications of the Issue** Behind the façade of this innocuous minor irrigation weir there are more dangerous implications, the most important of which is the diversion of the Bhavani spelling disaster for Attappady.

Currently an exaggerated alarm regarding power scarcity has been created in Kerala. In the name of deigned crisis, hydel power projects are being pushed through. There is the proposal to invite

private participation in small hydro. Chinese involvement is also expected. Once Bhavani waters are diverted to Manthampotty, rather than irrigation, power generation possibilities will be highlighted to marshal public support and silence any opposition to the diversion of Bhavani.

Another justification, which is going to be projected for this proposal, would be that Kerala is tapping its due share of the Cauvery waters. Otherwise this water would anyway flow into Tamil Nadu. But the truth is that for Attappady which is part of Kerala the only available water source is the Bhavani river. Even now there is only too little of it.

The east sloping Wayanad, Attappady and the Marayoor-Chinnar of the Idukki (Which from the Kerala part of the Cauvery basin) are all already facing severe drought and the water scarcity. Further westward diversion of the available waters of these regions will only make them arid and there is no possibility of bringing water for them from any other region.

The impact of the diversion weir at Mukkali will be felt immediately and irreversibly in the Attappady and this destructive impact will not be restricted to Attappady alone but will severely affect human communities dependent upon Bhavani all the way down to Lower Bhavani dam and in a less drastic way further downstream in the Cauvery basin.

### Impact in the Attappady

**Attappady – The Area** Attappady (10° 55' to 11° 15' N Latitude, 76° 45' E Longitude) is an approximately 750 sq km east sloping plateau in the northwestern corner of Mannarkad taluk in the Palakkad district of Kerala. To its north is the Nilgiris district and the east the Coimbatore of Tamil Nadu. To the southwest and northwest, the Palakkad district of Kerala borders Attappady.

Attappady lies to the east of the main Western Ghats watershed line and drains to the east to Cauvery through Bhavani and her tributaries, Siruvani and Kodungarapallam. Kunda joins Bhavani in Tamil Nadu at a place called Athikadavu. Attappady is essentially a plateau at an approximate elevation of 500 m above sea

level, which is dissected by Bhavani, Siruvani and Kodungarapallam in to a series of valleys.

**Bhavani River** Bhavani originates in the south west corner of the Nilgiris in the Kunda hills of Tamil Nadu and often flowing for a few kilometers southward it enters Kerala through a deep gorge and continues south for another 20 km, between two high, forested ridges till Mukkali. At Mukkali, Bhavani takes an abrupt 120° turn towards the northeast and flows for another 25 km through Attappady in Kerala till it reaches Koodappatti in the Kerala-Tamil Nadu border. If the initial course of the river was steeply descending there after it flows gently without descending much till it exits from the State. At the Koodappatti, Siruvani and Kodungarapallam flowing from the south and southeast respectively joins Bhavani. The combined river then flows northeast along the inter-State border for another 7 km. The Kunda river coming from north, draining an extensive extent of the Nilgiris form the boundary between Kerala and Tamil Nadu for 5 km along the north eastern of the Attappady. It then joins Bhavani on its left flank in Tamil Nadu. Thereafter Bhavani flows east along the base of Nilgiris.

Siruvani, originating in the south western corner of Attappady plateau in the high, rain drenched and heavily forested Muthikulam hills descends rapidly to the Attappady plateau and flows north east tangentially across Attappady towards its confluence with Kodungarapallam. During its 35 km course through Attappady it receives a number of tributaries of which five important ones are from the Varadimala slopes joining it on the right flank. There is only one important tributary joining it on the left flank and it comes from the northwestern slopes of the Muthikulam hills.

Kodungarapallam from near its origin in the Perumalmudi in the southeast corner of the Attappady flows north along the inter-State boundary for its entire length of 35 kms. It joins Siruvani and together they empty into Bhavani at Koodappatty.

#### **State of the Water Resources of Attappady**

Bhavani has been dammed close to Kerala border by the Upper Bhavani Dam and the waters in the reservoir (Bhaktavalsalam Sagar) is diverted to the adjacent Kunda basin for power generation. The extensive catchment of the Upper Bhavani reservoir located in the heavy rainfall zone receiving well over 3000 mm of rain was originally

high elevation shola – grassland vegetation. This has been extensively degraded and replaced with blue gum, pine and wattle plantations. Downstream of the dam, till Mukkali the river has at least 150 sq km catchment slopes with six large perennial streams including Panthanthodu feeding the main river in Kerala. Because of the dam no water from the upper reaches in Tamil Nadu flow into Kerala. There is about 150 sq km of forested catchment area upstream of Mukkali in Kerala. This mostly falls within the Attappady Reserve Forest Block I and V. Actually it has hardly 50 sq km of original forest remaining in a few secluded, scattered packets. 1089 Ha has been clear felled and converted to teak plantations in the past. More than 2000 Ha of forest are severely degraded by shifting cultivation around 9 Kurumba settlements. About 3000 Ha of forest have been degraded through the past extraction of bamboo, selective felling and severe annual fires to open savannas or bare rock. This forest degradation has resulted in all the six perennial feeder streams getting reduced to seasonal streams. Downstream of the Mukkali till the river flows out of Kerala, 12 major rivulets join Bhavani draining the southern Nilgiri slopes. The west and East Varagar tributaries coming from the Nilgiris are the largest. Both of them have dams in Tamil Nadu preventing water from flowing into Attappady in Kerala. There is yet another major tributary of Bhavani flowing past Palur and Bommiampady on the left flank and a long tributary starting from near Pilamaram flowing east, past Narasimukku and meeting the main river on the right flank near Pattimalam. Every one of these tributaries are now totally dead mainly because of near total deforestation of the ridges where from they originate. Excepting during a few days of unpredictable erratic rainfall no water reaches Bhavani from them. Even the flow along the main river tapers off to a nominal trickle and in particular if there has been a failure of northeast monsoon the river actually stops flowing within Attappady.

The entire course of Siruvani is within the state of Kerala. Siruvani has been dammed near its source within Muthikulam forests more than a century ago for providing drinking water to Coimbatore city. This old weir has been replaced by a major dam in the late 1970s. As a regulated run off from the forested upper catchment has been diverted, Siruvani flows into Attappady in an already depleted condition. Ten kms downstream of this dam at a place called Chitoor in Attappady, an

irrigation project called the Attappady Valley Irrigation Project was launched in the late 1970s. This dam was meant to store 65 Mm<sup>3</sup> waters to irrigate 4323 Ha of lands in Attappady. This was also projected as a development meant for the tribal people. Although originally estimated to cost Rs 47.6 M, even now after spending ten of millions of rupees, fortunately actual construction of the dam has not started. Had this dam been completed Siruvani river would have dried up for most of the year. But meanwhile most of the catchment forests and even the submersible area of the dam acquired by the Irrigation Dept have been encroached by settlers from the central Kerala. This has further increased soil erosion and sedimentation and curtailed river flow. At the same time practically all the agricultural land in the proposed command area owned by the tribal people has been lost to settlers from Kerala plains. Siruvani now flows as a small muddy trickle during most of the year, which swells into thicker, muddy torrent for a couple of days when the rains are heavy.

Kodungrapallam coming off the steep rocky Varadimala had meandering course along eastern Attappady till its confluence with Siruvani. Its catchment areas in the Varadimala slopes had been almost completely deforested by plantations (privately owned as well as public), by the settlers from outside Attappady, by Adivasis, due to heavy illicit tree felling, recurrent forest fires, heavy cattle grazing etc. As a consequence Kodungrapallam has ceased to be a stream. During late 1980s and early 1990s massive sand mining destroyed even the waterless river bed reducing it to a rocky wash. At present when eastern Attappady gets very heavy rains for a few hours, thick silty waters flush down the channel.

Kunda river has three major dams in the Nilgiris in Tamil Nadu for power generation. It has lost all its catchment forests. Massive landslides and soil erosion plague the catchment. Thus this river has also gone almost dry excepting some tailrace waters after power generation reaching the Pilu dam in Tamil Nadu.

**Rainfall** Attappady is mistakenly often labelled as a dry tract and this is explained as due to rain shadow effect. Actually it is one of those few areas in the Western Ghats where the impact of the southwest as well as the retreat monsoon are equally felt. The western edge of Attappady i.e. the

upper catchment areas of both Bhavani and Siruvani received well over 4000 mm of annual rainfall. The north eastern and southeastern edges of the Attappady are high ridges and the rainfall must be around 2500 mm. Eastern Attappady gets more of the retreat monsoon whereas western Attappady gets more rain during the southwest monsoon. The overall average is well over 1500 mm. Its elevation and topographical conditions gives it cool, moist tropical climate. Its soils are rich and have high moisture retentively. Hence it could not have been originally a dry tract. But at present there are locations in Attappady where the annual rainfall is less than 900 mm.

**Ecodegradation of Attappady** Most of the 750 sq km of the Attappady plateau blessed with three perennial rivers, well spread adequate rainfall and equable climate, had forest cover ranging from sub-temperate montane shola-grasslands to evergreen forests and semi-deciduous vegetation. Within the forest cover there was a mosaic of shifting cultivation plots in various stages of regeneration. This vegetation cover had been extremely severely degraded over half a century of deforestation and expansion of destructive agricultural practices. This loss of vegetation has desiccated the land, led to massive soil erosion, changed the local climate and thus led to the current, acute water scarcity. Rainfall has become erratic, north east monsoon has been regularly failing. Without the forest vegetation in the steep catchment slopes in the Nilgiris, Muthicullam hillas and in the Varadimala ridge Bhavani, Siruvani and Kodungrapallam have lost their perennial nature. Dams to divert waters from the two major rivers accelerated their downstream death. Poverty, community and cultural disruption, contributed to the ecodegradation activities of the local population. Inappropriate govt development measures ostensibly for tribal development further depleted their ecological resource base, accelerated social disruption, bred corruption and curtailed many future options for correction.

**Forests of Attappady** Till the early twentieth century practically the entire Attappady was heavily forested. It was part of a huge tract of forests skirting the Nilgiris extending from the Palakkad gap northward beyond Wayanad and extending from Coimbatore plains well in to the Kerala mid lands. This continuity has been severed in many places. At present in Attappady only two islands of forest vegetation remain. The

larger of these is the 140 sq km Attappady Reserve Forest Block I-V along the northwestern corner of Attappady on the Nilgiri slopes. (This is continuous with the 89 sq km Silent Valley National Park and a tiny strip of shola – grassland vegetation along the inter-state boundary in Tamil Nadu.) The second segment of forest vegetation is the 64 sq km Muthikulam forest (Attappady Reserve Forest Block IV) along the southwest corner of Attappady. Apart from these there is about 170 sq km of forest in various degrees of degradation scattered all over the Attappady plateau. A major portion of it is in a strip along the southern Nilgiris slopes. There is an even more attenuated, fragmented band along the western outer face of Attappady. Most of the area is fire degraded scrub and barren areas. The continuity of water flow in Bhavani and her tributaries depend on these forests. So far there had not been any serious attempt to protect them or help accelerate their regeneration.

**Water Scarcity in Attappady** This rugged, eroded terrain of Attappady with the current unpredictable climate and rapidly changing land use practices with the scattered low density marginal farmer population faces many serious development problems. The most critical of these is the water scarcity. There is no tradition of the shallow open home wells in the Attappady as elsewhere in Kerala. It is not feasible also. Conditions are not suitable for large-scale groundwater development. There are a few deep borewells mostly dug by the govt for public water supply. The chemical quality of the water is not good, with a high mineral content. The 180 odd scattered tribal settlements cannot be provided with the piped water supply. Wherever accessible people depend upon surface (stream) water sources. These are now drying up.

The valley bottomlands have been taken over by non-tribals from the plains. Intensive, irrigated farming of crops such as banana, coconut, sugar cane and to lesser extent paddy are replacing traditional, unirrigated dry cereal crops. For the expanding irrigation requirements, even the meager stream flow in the Bhavani and Siruvani are being pumped out. There is no regulation governing water withdrawals from rivers. There is no data on the number of pumps, quantum of water pumped out, area irrigated etc. Energy subsidies, concession given to tribal people, bank finances are all being misused to deplete the last remaining precious water. Extensive and careless

use of pesticides, fertilizers and other agro-chemical are contaminating the available limited water resources and the insanitary conditions around the tribal hamlets add to the health hazards from contaminated waters.

As it is, for the most of the people in Attappady, the only available water is that pumped from rivers. For the Pudur Panchayath the only available water is from the Bhavani river. For the Agali Panchyath, water is extracted from both Bhavani and Siruvani. For the Sholayur Panchayath only Siruvani is available as the water source. The current population of Attappady is over 85,000 of which 26,000 people are from the tribal communities. Their domestic water needs are very little. The vast majority of the population is marginal farmers. There is no possibility of irrigating their lands. Climatic disruption has rendered rain fed cultivation unpredictable. Although govt has spent a huge amount over the last four decades for providing drinking water, most of the tribal hamlets still depend upon stream or river water, which in drought years simply disappears. It is against this background that the diversion of Bhavani to the west at Mukkali in the name of irrigation around Mannarkad has to be considered.

**Conflict over Cauvery and the Current Issue of Water Diversion from Bhavani** Cauvery is the most important river in Tamil Nadu and upon its life giving waters a large population is the southern part of the Karnataka and the Central parts of Tamil Nadu depend for survival. Agriculture in Tamil Nadu particularly paddy cultivation in the down stream reaches in the Cauvery basin depends on canal irrigation from Mettur, Bhavani Sagar and other regulators and anicuts.

Any change in the river flow will immediately be reflected in every aspect of human life in Tamil Nadu. The water of the river has frequently become the cause for a violent conflict between Karnataka and Tami Nadu. Though this conflict has been building up over the years since independence, the gradual death of the river has not been given any attention. Over the years demand for the waters has been increasing rapidly while land misuse has been steadily strangling the river. Widespread pollution – both industrial as well as domestic – has been choking the river, while domestic, agricultural and industrial dependence on the shrinking Cauvery has been increasing tremendously fast.

During the past half a century great emphasis has been laid on constructing large dams and expanding canal irrigation. But basic measures in sustainable land husbandry, particularly soil and water conservation and optimizing water use in agriculture have been neglected. Ecologically unsuitable forestry practices, population pressure and expansion of agricultural into marginal lands have destroyed protective river catchment forests everywhere in the country. This has been in particular severe in and around the Nilgiris, adversely affecting Cauvery. Although we have been investing huge amounts of the public money for dam construction, both for power generation and irrigation, we have not been taking note of the rapidly deteriorating health of the rivers nor the greatly reduced viability of the river valley projects. Cauvery river has a total basin area of 87,900 sq km of which 3.3% area falls within Kerala, 41.2% falls within Karnataka and 55.5% in Tamil Nadu. The mean annual flow has been estimated as 20,950 M m<sup>3</sup>. Most of the basin area in Tamil Nadu is down stream wherein the impact of all the adverse changes happening upstream are felt.

**Kerala and Cauvery** The Kerala portion of Cauvery is in three segments. The northernmost, the Wayanad portion of Kabini is expected to yield 96 tmc waters. The area is located immediately upstream of the Kabini reservoir in Karnataka. The rapidly deteriorating condition of forest in the tract, current land use and agricultural practices, increasing consumption and reducing recharge and ongoing water resource development measures including the two existing major dams and diversions to the west are only going to reduce water availability in Kabini.

The second segment of Cauvery basin in Kerala in Bhavani in Attappady. Its yield is estimated to be 36 tmc. As it is there are only 2 eastward diversion from within this basin and only westward diversion currently planned is the weir at Mukkali. There are 2 major dams within the basin, one in Tamil Nadu and another in Kerala. This part of Kerala Cauvery catchment directly feeds the Lower Bhavani reservoir in Tamil Nadu. Its current ecological condition has been described earlier.

The third segment of Cauvery basin in Kerala is the Pambar in the northeastern part of Idukki district immediately upstream of the Amaravathi in Tamil Nadu. This basin is estimated to yield 15 tmc of waters. There are no dams in this basin in

Kerala. Waters from this basin cannot be diverted towards west.

Kerala claims it is currently taking 5 tmc of waters from its share of the Cauvery basin. To increase the use of its share a series of diversion projects are planned both for power generation and irrigation in Wayanad and Attappady and a hydel dam in Pambar. The weir at Mukkali is part of this measure to use Cauvery Waters for Kerala. The first and foremost question to be raised before one proceeds with the development plan is whether the estimated amount of water is available in the river. With such a drastic change in condition of the basin over the years and with such a drastic fluctuation in the rainfall, the actual availability has to be realistically estimated.

The Cauvery basin areas of Kerala are on the eastern side of the Western Ghats and the proposed developments intend to take the waters beyond the crest line towards west. This will deprive part of the very same Kerala where there is already acute water scarcity. In all the three segments of the Cauvery basin in Kerala there are large tribal populations, extensive forest loss, large number of small farmers with a subsistence agricultural economic base. These people are already suffering the ravages of ecodegradation. Further reduction of water availability will be the death knell for the people of these regions.

Even now currently available waters in the Kabini, Bhavani and Pambar are not adequate to meet the existing needs of people in the Kerala part of basin. That is why these areas are permanently identified as water scarce locations.

For the betterment of the Cauvery river, for enhancing water availability in the river, these heavy rainfall catchments must have ecorestorative land husbanding. In fact on behalf of this highly contested river its Western Ghat catchment need an immediate ecological stock taking and priority action to prevent further degradation. Our past experience with costly but grossly inadequate interventions such as the Hill Area Development Programme, the Western Ghat Development Programme and the Kunda Soil Conservation Programme should help us not repeat earlier mistakes.

## National Water Policy is Silent on the state of India's Rivers

Callousness, ignorance or Just plain DAM centric mindset?

In any society, Rivers are very important. Rivers provide water for various uses. They provide sustenance in other forms, like fisheries, silt for agricultural lands in the floodplains; they recharge groundwater and stop ingress of salinity into lands and waters in the coastal areas. Rivers act as natural drainage systems. Freshwater systems of rivers are the earth's richest biodiversity spots. For ages Rivers have provided efficient means of transportation. Moreover, societies attach cultural and religious importance to rivers. Most modern civilisations are born on the banks of rivers. The cultural and religious significance attached to rivers is even more pertinent in India. Rivers here are worshipped as mothers and many of the customs and festivals are linked with rivers.

Today, however, Rivers face many risks. When dams are built on rivers to store and transport water away from the rivers, the river in the immediate upstream and downstream of the dams and in many cases right upto the point where rivers meet sea gets destroyed. In areas of Bihar and Eastern Uttar Pradesh, embankments have converted many of the rivers from a life-sustaining boon to flood ravaging bane. Pollution, whether it is from industries, municipalities or agriculture, also play role in destruction of rivers. Deforestation and destruction of local water systems also contribute significantly to destruction of rivers. Global warming is threatening the glaciers that feed rivers like Ganga, Yamuna, Sutlej, Beas, Ravi, etc. Now a new threat is emerging in a bigger way in the form of mindless proposals of river links and inter-basin transfer of water. Yet another new threat to the rivers is privatisation. In Chhatisgarh, for example, a 23 km stretch of Sheonath river near Bhilai has been handed over to a private party, taking away people's access to the river and posing a threat to its very existence.

The biggest threat to India's rivers is from India's politicians and water resources establishment. For most of them, water flowing down a river is waste. A greater evidence of river blindness would be difficult to find.

One would think that when rivers play such an important role in a nation's needs and

development, this importance would be recognised. And what would be a more appropriate place than the National Water Policy? Sadly, our National Water policy, either of 1987 or the one passed on April 1, 2002, is singular examples of "River Illiteracy" of our planners and decision makers. The policy does not have even a sentence recognising the importance of Rivers or the risks that the rivers face.

Scanning through NWP 2002, one can count the appearance of word *river* exactly ten times: thrice in Para 4.2; twice each in Para 1.2 and 18.1; once each in Para 3.5, 21.1 and 25. None of them are about recognising the importance of rivers or preserving them. There are, however two provisions that have found fresh presence in NWP 2002, which inspire some hope. These are Para 5 and Para 14. In Para 5, while listing broad priorities of water allocation, it is stated that Ecology will have fourth priority AFTER drinking water, irrigation and hydropower. This then practically is a licence to kill any river. When the drinking water needs of people or cattle is unfulfilled, river water should certainly be used. But can one say that rivers can be killed for irrigation and hydropower generation?

In Para 14 of NWP 2002, there are two useful clauses. Para 14.3 says "Minimum flow should be ensured in the perennial streams for maintaining ecology and social considerations". Para 14.5 gives further hope: "Necessary legislation is to be made for preservation of existing water bodies by preventing encroachment and deterioration of water quality". Assuming that the term water bodies include rivers.

But this hope simply evaporates if one is reminded that there are no norms or criteria to decide what would be the minimum flow requirement of any river or stream. Also, both the above provisions of Para 14 require legal backing, which does not exist. If one goes by the policies & practices of govts, there is little hope of this coming about soon.

Recently, when the Union Water Resources Ministry circulated draft Action Plan for implementing the NWP 2002, these worst fears seemed to be real. For Policy Para 14.3, the draft action plan says that necessary guidelines will be issued in FIVE years. Here we need to remind ourselves that the guidelines are not even mandatory for implementation. About Policy Para

14.5, the draft action plan says the draft legislation for preservation of the existing water bodies will be drawn in three years. This only shows how low priority is this subject for the water resources establishment in India.

Thus, while NWP has little by way of hope for India's rivers it in fact contains provisions that are clearly a threat to the existence of rivers. Thus, section 3.5 says that water should be transferred from one basin to another to satisfy the needs of "water short areas". And how overactive the ministry is in this regard is evident when one sees the draft action plan that says that five years from now, implementation of at least six River link canal schemes will be started. The illogical nature of this action point would be apparent if one considers that the same Draft Action plan admits that there are no river basin plans available for any river in the country and that it would take at least five years even to prepare sub basin level plans. Now if we do not have river basin action plans including potential of all options for any river basin, how can one decide if certain basin is surplus or deficient? It is clear our water resources decision makers do

THE MOST CHARITABLE FACE OF INDIA'S LARGE DAMS

### NOT VERY CHERISHABLE

"...the (large) dam(s) will serve you breakfast in bed, it will get your daughter married and cure your jaundice" these words of well known author Arundhati Roy very effectively describe the pathetic faith that India's water resources establishment have in Large Dams. Ever since India's first Prime Minister Nehru called large dams as temples of modern India in early fifties, all kinds of arguments have been used to push large dams. Today according to the report of the World Commission on Dams ([www.dams.org](http://www.dams.org)) India has the largest number of under construction large dams. Within India, today one of the most talked about topics on water resources is linking up rivers across the country. This mindless proposal that has been floating around for decades is getting ascendancy as dam establishment exhausts sites available for building large dams. Mask provided by all the pronouncements of Prime Minister of India in favour of rainwater harvesting notwithstanding, the new version of India's NWP 2002 shows no break from the past. Even the World Bank, which in recent years had wisely shown some reluctance in funding large dams *directly*, have given new hope to India's large dam lobby through the Bank's new proposed Water

not bother about logic when it is the question of pushing big projects.

India's rivers are already fit case to be described as endangered species. In most cases, what passes off as a river is hardly fit to be described that way. According to Central Pollution Control Board, there is no river in plains area in India that has drinking quality water. The list of number of rivers killed by big dams is long. Some of these include: Sutlej, Beas, Ravi, Cauvery, Krishna, Mahanadi, Tapi, Sabarmati, Mahi, Damodar, Godavari, Yamuna, etc. The day is not far off when we would start talking about rivers in past tense.

**END NOTE:** At a recent Policy dialogue on action plan in Delhi for NWP 2002, organised by Union Ministry of Water Resources, when the point was raised that the NWP does not recognise Rain as a resource, the person representing the ministry rebuked the person saying tomorrow you may call clouds as resource...

#### South Asia Network on Dams, Rivers and People

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Resources Sector Strategy which is to soon come to the Bank Board for approval.

The serious problems that the poorest in the country face following misguided agenda of large dams in India are increasingly getting clearer to all concerned. However, let us try and examine the most charitable account one can get of India's experience of large dams. One name that the dam lobby is bound to throw at you if you dare of question the wisdom of building dams is Bhakra Nangal. Let us look a little closely at that most charitable of India's experience with large dams.

Most important claim made in favour of Bhakra's performance is that India has turned from a food deficit state in 1950s to food surplus today due to Bhakra. This claim attributed to Bhakra was never put to test until two years ago when the India Country Study and the Study on Irrigation Options in India done for the World Commission on Dams both arrived through different paths at the conclusion (which has remained practically unchallenged till date) that the *gross* contribution of land irrigated by large dams in India is just about 10% of India's current foodgrains production of 208 MT. The *net* contribution, i.e. the incremental

contribution after deduction of production loss due to various impacts would be much less. And this 10% is the cumulative contribution of India's 3600 odd dams including Bhakra project. The contribution due to Bhakra would certainly be a miniscule fraction of India's total foodgrains production.

As far as contribution of large dams in general and Bhakra in particular to food security is concerned, nobody would today dare claim that big dams have provided food security to India's poor. Particularly when on the one hand India's foodgrains storage exceeds 60 MT and the highly subsidised food exports have reached record levels (mainly for the purpose of cattle feed in developed countries). On the other hand, everyday there are news of malnutrition and starvation deaths from various parts of the country. Research by many including Amartya Sen and Jean Dreze have shown that the reason for absence of large scale famines in India today as compared to what occurred in Bihar in 1943 or elsewhere in nineteenth century is not increased production due to large dams or otherwise, but due to a number of other factors related to governance, adversarial politics and public advocacy institutes like Media and others. More than anything else, the food insecurity of the poor in India is evident from the continued reports of starvations deaths (see section on Food Management below).

Coming back to Bhakra story, here are some quick snapshots that give us insights into its performance on various aspects. Following facts come mostly from some of the representatives of India's dam establishment and not from those who are known critics of large dams.

- A senior member of Planning Commission and former water resources minister recently said that Bhakra is silting up so fast that the actual useful remaining life of the project may be less than the current age of the project.
- While there is no comprehensive post facto evaluation of the project, one done by the reputed economist of Delhi School of Economics showed that the project does not satisfy the minimum planning commission criteria for such projects.
- All concerned agree that over 8 M Ha of canal-irrigated land in India is practically useless because of water logging and salinisation in canal commands. It is well known that large parts of Punjab, Haryana and Rajasthan served by Bhakra and related infrastructure is also so affected.

- Environmental destruction in the submergence, immediate upstream and downstream regions is so severe that the HP Pollution Control Board has filed a criminal case against Bhakra Management Board for destroying Balh valley in Mandi district.
- CM of the HP even today keeps announcing that the plans for rehabilitation of people displaced by the project almost half a century ago are being taken up. A recent SANDRP survey of the affected people showed the gap between what was promised to them and what they got.
- One of the tests of the any development project would be the number of needy and displaced people that get the benefits from the project. When HP CM recently *pleaded* that the displace people should get water and power for their minimum needs, it was clear that Bhakra project has failed even this test.

There is no doubt that when you spend over Rs 16000 B (at constant 1996-7 prices) on large dams as India spent during 1950-97 (as per Ninth Five Year Plan), there would be some benefits. But even today the water resources establishment is not ready to ask as to what is the most cost effective, sustainable, quick option before the country for satisfying justifiable, prioritised needs of the people. Even today there is no credible, independent, comprehensive evaluation of any of the thousands of dams built over the years.

"For some time past, however, I have been beginning to think that we are suffering from what we may call, "disease of gigantism". We want to show that we can build big dams and do big things... the idea of having big undertakings and doing big tasks for the sake of showing that we can do big things is not a good outlook at all...We have to realise that we can also meet our problems much more rapidly and efficiently by taking up a large number of small schemes, especially when the time involved in a small scheme is much less and the results obtained are rapid. Further, in those small schemes you can get a good deal of what is called public co-operation, and therefore, there is that social value in associating people with such small schemes".

Not many from the big dam lobby would like us to know that these were the words of none other than the same Jawaharlal Nehru, spoken at 29<sup>th</sup> annual meeting of Central Bureau of Irrigation and Power on Nov. 17, 1958.

South Asia Network on Dams, Rivers and People  
**(Inter Press Service published an edited version of this article in Columnist section on 211102)**

**DAMS**

**Private Sector to Build Dams in Maharashtra?** The Maharashtra govt is evolving a policy to involve the private sector to build, operate and transfer dams in a bid to increase the irrigation potential. The right to collect the water cess would rest with the builder till the cost of construction and stipulated profits are recovered. Gross irrigated area is 17% of cropped area in Maharashtra. (THE HINDU 070702)

**360 Ha for Tourism, not for displaced At WB funded Almatti** Krishna Bhagya Jala Nigam Ltd, a govt of Karnataka Undertaking, has invited letters of interest from private parties for taking up Tourism related works near the World Bank funded Almatti dam.

➤ **No land for the displaced** And yet the govt does not land to give to the people even as per the norms in Sardar Sarovar project, leave aside giving land as per land for land policy. The affected people of Baghalkot are without even basic amenities of water or sanitation. There has been rampant corruption even in distribution of cash compensation.

➤ "Give us work and proper homes to live," was the plea of Bagalkot Old Town residents when the state cabinet team came visiting on Oct 18, 2002, even as the town was flooded. The leader of opposition in the state threatened to go on indefinite fast if the CM did not visit and listen to the woes of the people displaced from Asia's biggest town displaced by a dam, as he called it. The demand was so innocuous because even the opposition in the state have failed to demand justice for the displaced. (INDIAN EXPRESS 200702, JANSATTA 250702, THE TIMES OF INDIA-BANGALORE 191002)

**Sinking feelings of Bhakra displaced** The condition of people displaced by Bhakra dam is bad. The houses of residents of Khulmi and Sloa villages along the reservoir just upstream of Bhakra village collapsed between 1988 and 1998. Due to water seeping up the land from reservoir, the land is sinking, leading to cracks in houses. Says 75 year old Ram Prakash of Bhakra village: "I have been displaced four times: Once by the dam and thrice due to house collapse". The govt said that those not resettled or have returned from resettlement sites due to unsatisfactory conditions can stay in the upstream area. HP govt gave them some land for houses and cultivation. There was no R&R policy for the Bhakra displaced. There were many promises, but little implementation. The displaced for decades did not have even electricity and even today many do not have water. Children coming to study in Bhakra village school has to bring their own water. Thousands of disputes about land for R&R remains pending even today. Says Hari Krishna of Bhakra village: "On what basis did the Supreme Court say in Narmada Judgement in Oct 2000 that Bhakra R&R has been very good? The falsehood of that judgement is exposed here". (JANSATTA 280702)

**HC notice over Mullaiperiyar dam** The Kerala high court issued notices to the Central, Kerala and Tamil Nadu govts on a PIL filed against the proposal to raise the height of the Mullaiperiyar dam from 136 ft to 152 ft. The petitioners submitted that if the dam's height was increased, it would endanger their lives and their livelihood would be affected. The bench observed that it would be preferable that one of the petitioners move the Supreme Court, which is hearing some other petitions regarding the Mullaiperiyar issue, to transfer this plea. Considering the fact that the petitioners have no means, it would be appropriate for the govt to move the apex court, the court said. (THE TIMES OF INDIA-Thiruvananthapuram 260702)

**Goa to review Tillari project** The Chief Minister of Goa expressed apprehension that the Tillari project could turn into a "white elephant" in terms of investment. "The state can't sustain the financial burden of around Rs 10 B towards a project which will lead (the state) nowhere." He, however, made it clear that any decision on the project, on which the state govt has already invested over Rs 3 B, will be taken only after taking complete preview of the actual needs of water for Goa including the required potential. The project needs additional Rs 7 to Rs 8 B, to get 77.6% of the benefit of the project while the balance goes to Maharashtra. The cost of servicing the money would be as low as Rs 60 000 (interest cost) per Ha per annum, whereas the best production in Goa can give an average income of Rs 20 000 per Ha per annum. Therefore, the future of Tillari project also needs to consider as the maximum area of measuring 8 000 Ha happens to fall in Pernem taluk out of the total 17 000 Ha of land under cultivation. The Tillari project envisages raising of an earthen dam across river Tillari near village Tillariwadi, Sawanhwadi district, Maharashtra, having length of 900 m and height of 71.35 m. The Union govt, which had cleared the Rs 2.17 B Tillari project, envisages construction of a storage dam across river Tillari along with a powerhouse with an installed capacity of 10 MW. The benefits of the project are to be shared in the ratio of 73.30:26.70 between Goa and Maharashtra. Its cost is to be borne in proportion to the benefits accruing to each state: 76% by Goa, 24% by Maharashtra. Its original estimated cost at 1989 prices was Rs 2.17 B. The latest estimate is Rs 8 B. The expenditure incurred by Goa till date is estimated to be around Rs 3.25 B and is expected to further rise to Rs 130 B at the time of completion of actual work. The project was expected to be completed by March 2002, but very little has been done so far. This project is aimed at irrigating 23 654 Ha of land in the two states. The storage dam with a maximum height of 71 m will have live storage capacity of 447 MCM. Further, the project is aimed at supplying around 57.3 MCM of water annually to Goa for industrial and domestic use.

**Farmers in tizzy** The Goa govt has cited shortage of funds for the reported withdrawal from Tillari project, the farmers - whose lands were acquired by the govt in Bardez and Pernem taluks - have just one concern. The forest dept officials aired similar views. "Several trees in the forests were felled for the project for constructing canals. The dept encouraged the project hoping that plantation would increase once the dam water is made available," sources said. The govt set up a new village at Sal in Bicholim taluk to rehabilitate families which would be displaced due to the project under an agreement between Goa and Maharashtra. Some families have moved in and continue to fight for basic amenities. It was expected to irrigate 16 978 Ha of land in Bicholim, Bardez and Pernem taluks and 6 676 Ha in Sawantwadi taluk of Maharashtra. The state govt showed keen interest in the project and even established the Goa Tillari Irrigation Development Corp in 1999. So far, 75% of the earth work has been completed and 57% of distributaries and branches constructed. Goa also floated bonds and forwarded Rs 540 M to Maharashtra as its share towards the project and succeeded in getting water released from the Terwanmeddhe weir to Pernem taluk.

➤ **Cost revised** The revised cost of the Tillari Irrigation Project (TIP) has risen to Rs 7.77 B, based on the 1999-2000 rates, and Goa's share has been pegged at Rs 5.38 B. As per the 1988 rates, the cost was Rs 2.1722 B, as accepted by the Planning Commission. Goa and Maharashtra signed an agreement in April 1990 to construct the project. The Goa govt has expressed its inability to go ahead with the project due to paucity of funds. Besides the irrigation potential, the TIP will provide 57.43 cum. of water for domestic and industrial consumption. Govt sources clarified that the project cost and other aspects were being reviewed and no decision was taken to abandon it. Maharashtra has made sufficient headway in the project being constructed on the Tillari river. The total length surveyed for alignment in Goa is 37.42 km to cover an area of 11 971 Ha in Bardez and Bicholim taluks. Remaining will be diverted to Menkurem, Siolim, Bastora, Calangute, Revora and Anjunem. The state govt has set up the Tillari Irrigation Development Corporation to complete the project and to raise funds through bonds. The land acquisition for about 32 985 km canal has been completed, while the procedure is on to acquire another 4 435 km. (THE TIMES OF INDIA-Panaji 020702, 060702, 220702)

**Kalpasar project** The Gujarat govt is considering for ambitious Kalpasar project that envisages an engineering feat by way of building a dam across the Gulf of Khambat to generate sweet water for drinking and power production. The Rs 250 B project envisages building a dam across the Gulf of Khambat - thereby connecting Bhavnagar with Bharuch. With an estimated 14 000 MCM water being discharged annually by rivers in the gulf, the dam will form a lake and ensure that this

water dilutes the sea water and make it equivalent to drinking water. The project will ensure sweet water for drinking purposes, water for irrigation, generate power, develop road-rail transport, lead to development of roads and help other aspects like development of fisheries. (THE TIMES OF INDIA 110702)

**Opposition to Pancheswor Dam** The Activists of Save Himalaya Movement in India said that they would strongly oppose construction of the proposed 315 m high Pancheswhor Dam on the Mahakali River on the Nepal-India border. The activists have expressed their concern over the deforestation and environmental degradation in the Himalayan region and have said that high dams are not appropriate in the fragile mountains. Stating that large projects with high dams only benefit foreign companies and their commission agents, they stressed the need for smaller projects built using local resources.

➤ According to reliable sources, Centre for Policy Research, Delhi based Ford Foundation funded think tank has taken up a study to somehow justify the project ostensibly trying to consult the affected people. The study is to be completed in a year. (Kantipur Daily-Nepal 040702)

**R&R lagging in Tehri** The Uttaranchal Minister of state for Industrial Development and MLA from Tehri, Kishore Upadhyay warned state govt that work at the controversial Tehri Dam project may once again come to a standstill if the govt does not agree to the demand for a quick and comprehensive rehabilitation of all affected persons in the 125 villages across Tehri and Uttarkashi Districts with time-bound programme. A resolution to this effect was passed by a Mahapanchayat of affected villagers. The villagers had been cheated by the authorities as their land, though notified to be acquired as it will be fully or partially submerged by the Bhagirathi over which the Dam is coming up, had not been acquired so far. "All we want is that the repeated GOs by the UP govt and the THDC regarding acquiring the land and rehabilitating the oustees should be implemented immediately", said Upadhyay. The definition of family need to be announced and the disparities between urban and rural, and fully and partially submerged lands have to be removed.

➤ **Double Displacement** At least 200 families displaced by the Tehri dam and supposed to have been resettled a decade ago at Bhaniawala in Dehra Dun district are to be displaced again due to the plans of expanding the Jolly Grant Airstrip into a full fledged airport. (THE HINDU 140702, 240702)

**Gender Bias in R&R** Following tables illustrates how the rehabilitation provisions are biased against women in case of two of the most well known big dams in India.

	Sardar Sarovar	Tehri
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	Gujarat	Madhya Pradesh	Maharashtra	Uttar Pradesh
Landed family	2 Ha	2 Ha	2 Ha	0.8 Ha
Major sons	2 Ha	Cash	1 Ha	No provision
Major unwed daughters	No provision	No provision	As above, if 35 yrs or more	No provision
Widows	No provision	No provision	No provision	No provision

(National Council for Applied Economic Research, 01/2000)  
(THE ECONOMIC TIMES 110702)

**No money for Shahpur Dam** There has been no progress in the work of the Shahpur Kandi Dam Project as Punjab govt has no money. Centre had allocated Rs 130 M in 2001 for the project, but it remains unutilised as Punjab could not release matching amount. In absence of SKDP, the 600 MW Ranjit Sagar Dam too has not been able to run to full capacity. If all four generators of RSD are to run at full capacity, that would release 24 000 cusecs of water, which would go unutilised in absence of SKDP. (THE TRIBUNE 220702)

**110 dams are unsafe in MP** The MP govt has identified 110 small dams, which are unsafe and may cause heavy damage any time to people residing nearby them. According to official sources, there are 832 dams in the state. Among them 30 dams were built before independence. Water Resource Dept accepted that many of them are degrading due to water logging and improper drainage, which require expenses. (RAJASTHAN PATRIKA 250802 also see p 7 of Update 5)

### NEWS FROM THE NARMADA VALLEY

**Experts speak up for dam oustees** Expressing deep shock and concern over the inadequate rehabilitation of the oustees in Narmada Valley, the former Chairperson of NCW Mohini Giri, asserted that people's right over natural resources can not be ignored. There is a need for comprehensive review of the Sardar Sarovar Project vis-a-vis rehabilitation aspects in view of the Supreme Court judgement. The report compiled by a four-member team, which visited the people in Narmada Valley during July 13-15. The members also included the former chief of Naval Staff, Admiral Vishnu Bhagwat, Senior Adv of SC R Venkatramani and law researcher Ms Usha Ramnathan. The report pointed out that the number of people directly displaced by the dam has been growing even on the official record. "The unavailability of land on which to rehabilitate those in the submergence zone has been acknowledged by the govts of MP and Maharashtra. It is a problem that will not disappear, and has to be confronted and surmounted before the homes and lands of the people in the area are to submerge," the report pointed out. (Along the Narmada: *Jan Sunvai*, THE HINDU 090802)

### Financial Troubles of Sardar Sarovar

#### Sardar Sarovar Bonds Downgraded

The rating agency CRISIL have downgraded the various bond programmes of Sardar Sarovar Nigam Ltd from A (so) to A-(so). This was on account of the suspected inability of the Corp to generate sufficient revenue to meet its short and mid term debt servicing obligations.

#### Gujarat "Persuades" Cooperative Banks to invest in Sardar Sarovar Bonds

Gujarat Chief Minister "persuaded" the state cooperative banks to park Rs 3 B in Sardar Sarovar Narmada Nigam Ltd. Some 30 odd cooperative banks "have agreed" to park Rs 2.59 B in some of the investment instruments of SSSNL as per section 71(G) of State Cooperative Act. Gujarat State Cooperative Bank has pledged Rs 250 M. The move comes only days after as many as four bond issues of SSNNL were downgraded including three NCBs of Rs 3.75 B, Rs 3.02 B and Rs 2.7 B and a deep discount bond of Rs 2.77 B. The Gujarat CM has requested the Union Finance Minister to get the guidelines of permissible limits of Cooperative Banks investing in public sector bonds as the state cooperative banks had already exhausted the limit of 10% of its deposits having been invested in SSNNL. Gujarat CM also pleaded that SSP should be accorded "National Infrastructure Project" status and for approval for issuing tax free bonds of Rs 5 B by SSNNL. (THE ECONOMIC TIMES 010702, THE BUSINESS LINE 030702, THE HINDU 310702)

**Maharashtra asks for more money for R&R** The Maharashtra CM has demanded from Gujarat extra money for rehabilitating the 1500 affected families yet to be resettled on the same lines as MP. (THE TIMES OF INDIA 250802)

**SSP Affected face submergence** As the Sardar Sarovar dam caused large-scale submergence and devastation in the Narmada Valley, the 'Satyagrahis' in the Narmada Valley faced the rising waters. The dam water had already crossed 102 m and by the night of 21<sup>st</sup> August inundated Domkhedi and Jalsindhi villages in Maharashtra and MP respectively. Despite the arrests of several activists and villagers, over 50 villagers and activists including Sitaram Kaka, Mohanbhai, Geetanjali, Medha Patkar and others continued the Satyagraha by standing in the knee-deep waters by the evening of 21<sup>st</sup> August. The submergence is the result of the increased height of the SSP dam, from 90 m to 95 m (plus 3 m humps) even as thousands of affected families remain to be resettled. In Gujarat, rising waters have affected large tracts of standing crop in Mokhadi, Antras, Gadher, Turkheda and Hapheshwar. The ancient temple in Hapheshwar has also submerged. (NBA PR 220802, 240802)

**Propaganda on Narmada exposed** The Gujarat govt claimed that over 2000 cusecs of Narmada waters was released into the dry Sabarmati river-bed. The SSNNL sources claimed that besides the recharging of French wells in the river-bed, the Narmada waters would also irrigate 66 000 Ha area in Ahmedabad district. The State Congress chief termed the govt propaganda on the Narmada water as a drama "the water released in the Narmada canal was not enough to even fill a tank ahead of Kadi". He said that the govt have not even met the conditions of resettlement and rehabilitation. (THE TIMES OF INDIA 240802)

**Maan Dam Affected Evicted with Police Terror** On 20th July 2002, about 400 police entered the Maan dam project affected village Khedi-Balwari (Dist. Dhar, M.P.) and forcibly evicted the village using terror tactics. The women and even children were severely beaten up, the houses looted and the people were picked up and dumped at the so-called "resettlement" sites of Aamkheda 40 kms and Kesur, 75 kms away from their village. The belongings of the villagers were also seized and dumped in these sites. As per the FIR lodged at the Tukoganj PS by the women, jewellery weighing nearly 14 kilos and cash worth around Rs. 20 000 has been looted by the police. The adivasis, mainly women and children who had been dumped at the camps and kept under jail like conditions escaped from these camps to come to Indore and began their dharna there from the 25th of July, with their demands. They filed their petition at the GRA. They demanded that they should be taken back to their village along with their belongings, that officials responsible for the repression must be punished and that they should be rehabilitated with agricultural land as per the rehabilitation policy. It may be noted that after the long struggle of the Maan oustees at Bhopal from the May 15 to June 18, and the 29 day long fast by four activists, the state govt had directed the GRA to address the grievances of the Maan dam oustees and ensure their complete rehabilitation by July 31 2002. Senior journalist Shri Prabhash Joshi and Ex- Commissioner Scheduled Castes and Tribes Shri B.D. Sharma were appointed as experts to ensure the rehabilitation of the oustees. Both the experts toured the area for almost 10 days, held public hearings and have submitted their final report and recommendations to the GRA. The GRA Chairman has also heard one round of hearings and another hearing was planned. Around 200 adivasis who had been sitting on dharna in Indore for the one week, reached Bhopal and began their dharna at the Tin shed in Bhopal. The oustees have demanded that the report of the experts as well as all documents relating to the displacement and rehabilitation of the oustees be made available for public scrutiny as the submergence and inundation is being justified in public interest. They have also demanded that the GRA immediately issue orders for the rehabilitation of the oustees and provide them with irrigated agricultural land as per the rehabilitation

policy. Large number of eminent people and organizations visited the dharna and declared their full support to the people. The State Women's Commission visited the dharna on hearing about the repression of the affected people. A representative group of the Commission met the police Director General and made a complaint about the matter. Following this, the women who had been injured in the police action during the forcible eviction were taken for a medical examination at the local M.Y. Hospital late evening. Evidence of injuries was found in 7 women who were present at the dharna. (NBA PR 210702, 260702, 280702, 310702)

➤ **Amnesty urges inquiry of police brutality**

Amnesty International has written to the CM of Madhya Pradesh, asking for an inquiry into an incident in the adivasi village of Khedi Balwadi, district Dhar, on July 20, 2002. Amnesty International pointed out that the police operation as reported amounts to cruel, inhuman and degrading treatment as defined in the Convention against Torture and Other Cruel, Inhuman and Degrading Treatment, which India has signed. The operation also appears to be in violation of Article 3 of the "Code of Conduct for Law Enforcement Officials" (1979), stating that "Law enforcement officials may use force only when strictly necessary and to the extent required for the performance of their duty". (Amnesty International)

**GRA orders return of the Maan oustees** In response to the complaints of the Maan dam oustees filed with the Grievance Redressal Authority about their brutal and forcible eviction from village Khedi Balwadi in July, the Chairman of the GRA has passed an order stating that the oustees may be allowed to resume their residences in Village and that the district administration must assist them in bringing back their household belongings, grain, etc. The GRA has objected to the police action in the affected villages in May and once again in July this year and has ordered that the police force stationed at the village must be immediately withdrawn. It says "It is not appropriate to forcibly evict the oustees from their homes, to withhold public services such as electricity, water, school from them and to cut standing trees and to use bull dozers." It also quotes the report of the two experts (Shri B.D.Sharma, Ex- Commissioner, Scheduled Tribes and Castes, and Shri Parbhash Joshi, senior journalist) submitted to the GRA "In our view, this action, specially when it is clear that the proper implementation of the process laid down in the rehabilitation policy is yet to ensue, and that it is under consideration by the GRA, is a violation of the law and the constitutional arrangements that protect the interests of the adivasis. In our view, the level of water in the reservoir should not be allowed to rise to an extent that any habitation be submerged during this monsoon." However the whole Khedi Viillage, first village comes under the submergence area of Maan Dam, had fully submerged by the dam. (NBA PR 060702, 010802, 090802)

## HYDRO PROJECTS

**Parliament Misled on Sawalkot?** Union Minister of state for Power informed the Lok Sabha on July 25 that the 600 MW Sawalkot HEP was under execution in the state sector. However, that project is yet to get clearance from Union Ministry of Environment and Forests, Planning Commission and PIB, in addition to from the CCEA. The project has yet to complete the Environment Impact Assessment, yet to enter into PPA or achieve financial closure. How can the project said to be under execution? (THE TRIBUNE 260702)

**Uncertainty of HEPs exposed** The uncertainty in power production from HEPs was exposed across the country due to monsoon shortfall till late July. The 480 MW Uri HEP is producing just about 250 MW. The 540 MW Chamara is running for just a few hours and generate about 100 MW. Bhakra HEPs are generating only lesser hours now. In Northern Grid alone the HEP generation has dropped by 700-800 MW. The Punjab govt decided to close down all educational institutions for a week as low hydel generation was not enough to cater to rising agricultural power needs. In Karnataka, the inflows into reservoir has been just about 15 669 Mcft (equivalent to generation of 1052 MU) compared to 27603 Mcft (1676 MU) on the same date last year. The grim power situation in that state has meant loss of employment for about 2 M people. In AP, Upper Sileru was producing 60 MW against capacity of 240 MW, Lower Sileru 95 MW against capacity of 460 MW. In Orissa as against the production of 900 MW this time of the year, the production now is 250 MW. In Kerala, the reservoirs on June 30 had enough water to generate 360 MU when the average figure for the last four years on the same date was 893 MU. Nationwide, the storage in 70 reservoirs monitored by CWC was just 18% of full reservoir capacity of 130.55 BCM on July 26, when it should have been 40%. Union Power Minister declared that Hydro output would be down by 30% and demand up by 40%, requiring contingency planning. (BUSINESS LINE 060702, 170702 THE HINDU 100702, 280702, 290702 THE TRIBUNE 300702, THE BUSINESS STANDARD 310702)

**Damage at Shanan HEP** There has been irreparable damage at the 15 MW generator No 2 of Shanan HEP in Punjab. The generator will have to be replaced. The 15 MW generator no 1 also stopped functioning due to damage to its fan, leading to total loss 0.7-0.8 M per day. The power generation at Bassi HEP of HP which is fed by the tail end water of Shanan is also seriously affected in the process. The capacity of 4X15 MW Shanan HEP (built in 1936) was augmented by 50 MW by adding a fifth generator of that capacity during Shanan Augmentation stage II.

➤ When the Shanan HEP was constructed in 1936, an agreement with the ruler of Mandi state in the catchment of Uhl river, a tributary of Beas had been reached for protection against grazing and then Punjab

Govt had been paying compensation to the shepherds and others for the deprivation of grazing rights. This continued till the state of Himachal Pradesh was formed and the Bassi HEP came under HP. Punjab then argued that half the compensation should be paid by HP, which HP refused and thus the protection agreement became defunct, leading to destruction of the rich forest area in Uhl catchment. (THE TRIBUNE 010702, 170702)

**Moves to expedite HEP** The power ministry has constituted a committee headed by solicitor-general Harish Salve to recommend guidelines for management of contracts to expedite execution of central HEPs. The committee will examine the experience of various HEPs in respect of preparedness for execution, systems of awarding contracts, methodology of monitoring, legal provisions for protecting the interest of executors, and possible intervention points for reviewing contractual liabilities and submit its report in 3 months. The Power Ministry is also likely to organise a high profile international meet before the end of the year to offer 100 HEPs (25 in HP, 24 in ArP and 17 in Uttaranchal) to international business, funders, etc. (BUSINESS STANDARD 290702)

**BBMB-Punjab dispute over canal HEPs** The BBMB has approached the Central govt to allow it to install power projects on the Bhakra Main canal under its control. Haryana and Rajasthan agree to the BBMB proposal. After the feasibility studies three spots upstream and downstream of Nirwana branch on Bhakra mainline canal were selected for 18 MW HEP each. The proposals were accepted by the BBMB. However, the Punjab govt objected to the BBMB idea of setting up its own projects on the plea that the state had exclusive riparian rights over the water flowing into BBMB canals. If BBMB were to set up the projects, other partner states like Haryana and Rajasthan would demand share in the power produced, which Punjab did not want to allow. The BBMB sources said that due to multiple ownership of the board the other partner states objected to Punjab exclusively setting up a generation project on the Bhakra mainline. The Punjab govt had earlier proposed to set up the said project through private developers. However, the BBMB rejected the idea. Besides, BBMB was also facing problems in installing a 40 MW power project on the Baggi tunnel in HP as HP was asking for a 12% share in generation from the project, which BBMB could not give due to Punjab Reorganisation Act. (THE TRIBUNE 290702)

**Canada involved in Kashang HEP** A protocol of intent was signed between the govt of Himachal Pradesh and Canadian Commercial Corp for the Integrated Development of Kashang HEP (258 MW) in Kinnaur district. (THE ECONOMIC TIMES & THE TRIBUNE 270702)

**CEA clears Kol Dam** The NTPC has obtained clearance from the CEA for setting up its first HEP,

namely 4 X 200 MW 163 m rock fill Kol Dam on Sutlej River in Bilaspur district of Himachal Pradesh six km upstream of existing Dehar project, at an estimated cost of Rs 53 B. The power would be evacuated through the 400 kv lines being laid for NJPC. (BUSINESS LINE 030702)

**Maneri Bhali II** The work on this 304 MW project was "recommended" on 18.07.02 by the Uttaranchal CM. (THE TRIBUNE 180702)

**233% time and cost overruns in NJP** The cost of the power to be generated from this 1500 MW NJ HEP may be as high as Rs 3.17 per unit in the first year against an earlier projection of Rs. 0.68. The levelised tariff over 35 years has been pegged at Rs 2.72 per unit after the provision of 12% free power to HP. HP govt, which was supposed to invest 25% of equity, has so far invested Rs 6.59 B against its share of Rs 11.46 B (25% of total project equity). The debt equity ratio for the project is 50:50.

➤ **Rampur** The HP govt and Union Power Ministry have finalised agreement for the implementation of the 480 MW Rampur HEP in the Sutlej basin. The project will have debt equity ratio of 70:30. Centre and state will share the equity in the ratio of 75:25. (THE TRIBUNE 140702, HINDUSTAN TIMES 160802)

**Almatti tariff higher than CEA norms** The PPA and the DPR for the 290 MW Almatti HEP indicate a tariff of Rs 3.76 per unit and after factoring in the royalty component, the effective first year tariff from the project works to Rs 4.76 per unit, well above what is being quoted for liquid fuel based project (Rs 4.3), making it a very expensive power project. The CEA had disallowed loading of royalty charges on the tariff. The TEC approved cost is estimated at Rs 6.74 B. The royalty charges are payable to another state govt owned special purpose vehicle, the KJBNL, for servicing its borrowings. The legalised tariff for the project has been fixed at Rs 3.17 a unit over the project life of 35 years. However, the life of PPA is only for 15 years and fixed cost recovery would have to be done during the PPA period. (BUSINESS LINE 140802)

**HP claims 32 B water royalty from Punjab** Himachal Pradesh has demanded Rs 21.99 B from Punjab in a suit filed under Article 131 of the Constitution in 1996, with regard to its share in the Bhakra-Nangal and Beas projects, situated in HP. HP has claimed that the user state had failed to supply 7.19% share and 12% free power to it from the 2 HEPs. The Punjab Advocate-General said that the present total liability on the state would be around Rs 32 B, including interest. Punjab had earlier listed four witnesses, who had attended the crucial meeting on April 1967, where the allocation of share from available power – after excluding the share of Rajasthan and other common pool consumers from the Bhakra Nangal Project – was agreed. HP has challenged that agreement. The share allocated to the

partner states was as under: Punjab, (54.5%), Haryana, (39.5%), Chandigarh, (3.5%) and HP (2.5%). (THE TRIBUNE 070802)

**30 HEPs in limbo** Due to inter-state disputes, the implementation of over 30 HEPs are in limbo. The Union govt is not satisfied with the demand of concerned states to constitute inter-state tribunal for solving these problems. The projects of 6085 MW capacity have been submitted to CEA. The SYL project in Punjab and 160 MW Adghat III project in Rajasthan are also included in these. In northern region Punjab, Rajasthan, UP and Uttaranchal each has one disputed project. In western region, one in Maharashtra, three in MP, one in Goa and in Southern region one in AP, six in Karnataka & Kerala each and TN have seven disputed projects. In eastern region, one each in Assam and Jharkhand and two projects in Orissa are in dispute. (RASHTRIYA SAHARA 240802)

**KSEB approaches ADB for Loans for 5 HEPs** The Kerala State Electricity Board has approached ADB for financial assistance for 5 HEPs including the controversial Athirappilly HEP. The Rs 6 B loan is being allotted for Power Sector Reforms, as the second phase of ADB assistance to the State. ADB has expressed willingness for investment in the generation as well as transmission sectors. The 5 projects include Athirappilly HEP (163 MW), Neriya Mangalam Extension (25 MW), Lower Meenmutty (3 MW), Pallivasal Extension (60 MW), Mankulam (40 MW). Repair and Maintenance of Poringalkuthu is also included. The KSEB announced that they hope to get MoEF clearance soon for the Athirappilly HEP. The KSEB claims to have abided by the High Court orders and conducted a summer season EIA. The KSEB has also claimed to have conducted a People Interaction Programme and the reports of all these have been sent to the MoEF. The KSEB says that Athirappilly HEP is the last project viable in the Chalakkudy River since it already hosts 5 dams. However, at a latter date, ADB wrote to Chalakkudy Samiti that they are not considering Athirappilly project. (Chalakkudy River PR 160802)

**Chhattisgarh govt for revival of Bodhghat HEP** The Chhattisgarh CM wants the 500 MW Bodhghat HEP on Indravati river. The Rs 4.5 B project conceived by the MP govt some decades back, had been shot down by the MoEF in 1980 just a year after it received approval of the Planning Commission and CEA. The project involves construction of a 90 m high dam at Barsoor and would submerge 12 460 Ha of land and 5 676 Ha of dense Sal forest, affecting 42 villages with the population of 1 700 families. In 1980, the MoEF had refused clearance to the project on the grounds that it would cause heavy damage to the region's ecology and biodiversity. A team headed by T N Seshan, then Secretary MoEF, had visited the site and, in its report opposed the project. (THE INDIAN EXPRESS 240802)

## HYDRO PROJECTS IN NORTH EAST INDIA

**Tipaimukh HEP** According to the Power Minister of Manipur, the govt is waiting for a go ahead from the centre for implementation of the Tipaimukh project at Tipaimukh on the Barak river at the tri-junction of Assam, Manipur and Mizoram at a cost of Rs 88.68 B (from Rs 28.99 B estimated in 1995) over a period of 12 years creating a reservoir up to a height of 172.4 msl. NEEPCO had submitted a project report on the 1 500 MW project. The state is supposed to get 12% of the total generation free. Dozens of tribal villages in Manipur will be submerged by the project. The protest against the project is gaining strength across the state.

➤ The project has run into rough weather with Manipur and Mizoram refusing to sign a MoU with NEEPCO unless the Centre abides by some of their conditions. The project was given the go-ahead by Centre for work to begin only in July 1999. It has been officially estimated that the cost of security, compensation for flood victims and the diversion of NH 53 would cost additional Rs 10 B, which NEEPCO is not ready to bear. (<http://e-pao.net/> 150702 North East Sun 150802)

**Unviable Loktak Downstream HEP** Five years ago, the govt had asked the NHPC to set up the 90 MW Loktak downstream HEP in Manipur. At the time the power from this Rs 6.7 B plant was to cost Rs 3.5 per unit. But the NHPC asked the govt to provide security to its personnel. Five years later, with the security forces fully stretched the NHPC was still waiting for the security cover. So, the govt asked NHPC to get its own security. When the NHPC started doing it sums once more, it found all this would double the project cost and also that of the cost of electricity to Rs 7 per unit when more prosperous Maharashtra consumers were finding it difficult to pay Rs 3-4 per unit for Power from Enron. Now NHPC is asking subsidy from centre in terms of free security. (INDIAN EXPRESS 170702)

**People up in arms against Ramam HEP** The Ramam HEP has installed capacity of (12.75 MW X 4) 52 MW. However, the present output is only 20 MW. In order to increase the output the WBSEB is planning to dig a tunnel 4.75 km long and 2.5 m in diameter from Lodhoma - Mungmung Khola inter-connection up to the Fore Bay Reservoir. This phase was commissioned in 1995. A survey of the river was done by the WBSEB with the help of Asian Tech. The total cost of the project is Rs 399 M and the Planning Commission has approved it. The residents of Lodhoma, Rammam and Rimbik have expressed their opposition to the project on the ground that the diversion of the river will cause extreme shortage of water for drinking and cultivation.

This is a sinking area and places like Gumba Dara and Yakrebong are dotted with cracks, crevices and clefts that make the hills vulnerable to landslides. When the project was implemented the residents were given the

assurance that it would not lead to landslides. This proved to be untrue and a large number of landslides did occur destroying a lot of property as well as lives. This factor, together with the fact that the affected people are yet to get the compensation promised to them as well as the fact that the villages around Rammam are yet to be electrified has made the people oppose any further work on the project. (Affected People)

### Feasibility reports of NHPC HEPs in ArP submitted

The NHPC has submitted feasibility reports of three HEPs in Arunachal Pradesh to the Union Ministry of Power. Official sources told that the feasibility reports of Siang Middle Project (1000 MW), Upper Subansiri (2500 MW) and Middle Subansiri Project (2000 MW) were submitted on June 30 and the clearance of the reports were expected within a short period. The NHPC after obtaining the clearance of the reports would prepare the Detailed Project Reports on each project. NHPC has taken up construction of 6 MW Kambang project in West Siang district and 4 MW Sippi Project in Upper Subansiri district of ArP.

➤ The NHPC plans to set up 14 new projects in the country during the tenth plan in order to add 5310 MW capacity. For execution of these projects, the NHPC has finalised an investment plan of Rs 314.66 B, out of which the net budgetary support by the Centre would be Rs 142 B. The corp. planned to add 10 341 MW capacity during the 11<sup>th</sup> plan period. During 2001-02, the NHPC earned a net profit of Rs 4.6909 B with sales turnover of Rs 12.89 B. The corp. had paid a dividend of Rs 300 M to the Central govt during the year. The operating power stations of NHPC had achieved 96.26% capacity index and generated 9733.69 BU. (Daily Excelsior 100702)

**Subansiri Lower HEP in ArP** The estimated cost of the Subansiri Lower HEP (8x250 MW) on the Subansiri River is Rs 74.69 B at March 2001 prices excluding the transmission system and the completion cost is Rs 92.77 B, to be completed in seven years by 2008-9. The project is expected to generate 7551.10 MU in a 90% dependable year. It is to have a catchment area of 34 900 sq km with a submergence area of 3 436 Ha. The 116 m high concrete gravity dam will have an orifice type spillway with nine gates. The underground powerhouses will have eight Francis type turbines and 91m gross head. There will be five diversion tunnels of 9.5 m diameter. Total length of access tunnels will be 3065 m. The right bank of the dam is in Lower Subansiri district of ArP and the left bank falls in Dhemaaji district of Assam. (BUSINESS LINE 240802)

**Funds for NE** The Union govt has released a sum of Rs 1.09 B for Teesta HEP and Loktak Downstream project. In addition, Rs 125.3 M have been disbursed for electrification of 500 Adivasi villages and Rs 520 M have been provided for laying transmission lines.

➤ Union Power Minister has said that the centre is working on a proposal to treat security costs involved in

power projects in NE separately and will ask Home Ministry to bear them to make the projects viable. (INDIAN EXPRESS 200702, www.projectsmonitor.com)

## SOUTH ASIA

**WB not to fund Melamchi** The govt of Nepal has formally requested the ADB to provide additional financial assistance for Melamchi Drinking Water Supply Project. The WB earlier formally backtracked from its earlier position on Melamchi, saying it would divert the \$ 15 M financial aid to the govt's poverty alleviation programmes. The officials at the Bank as well as in the concerned govt ministry maintain that the WB decision came as per "mutual understanding". The official sources said that the govt made a formal request for providing \$ 40 M to the ADB. Already, the ADB has agreed to provide \$ 116 M for the project that is estimated to cost \$ 464 M. The ADB had also funded the project's engineering component. HMG is spending \$ 118 M on Melamchi. Other donors funding the project include JBIC (\$ 52 M), NORAD (\$ 28 M), SIDA (\$ 25), NDF (\$ 9 M), OPEC (\$ 14 M) & Japan govt (\$ 18 M). The project would divert 170 MLD water in 2008. (Kathmandu Post 170702)

**Efficiency potential in Nepal** T&D losses in power system are over 25%. If the existing T&D system is strengthened, 10% of the loss can be prevented. (Kathmandu Post 140702)

**Indo-Nepal border embankment** According to a survey 18-village development committee areas in Marchbar, Rupandehi district, including Lumbini, the birthplace of Buddha would be affected by the Rasiyawal Khurdalotan embankment by India. A field visit to the area carried out by Nepal-India joint technical committee has confirmed the apprehensions. (Nepalnews 160802)

**Japan threatens Sri Lanka over Hydro?** Japan has allegedly threatened the Sri Lankan govt to stop all funding if Sri Lanka does not agree to implement the JBIC funded controversial Upper Kotmale HEP under the yen package. The estimated cost of the project was Rs 35 B, which originally came as a loan. But due to the fear of cancellation due to possible environmental impacts and the local pressure it has now been proposed to offer Rs 25 B as a grant, and the rest is supposed to be paid back. Environmental Foundation Ltd of Sri Lanka adds that it is very unethical for a donor country to pressurise an aid-receiving govt to implement a questionable project with many impacts in this way, and when the project has not properly been approved by the Sri Lanka's Central Environmental Authority.

➤ Critics argue that the project will entail relocating 400 families. Apart from this the project would dry up 7 of the country's most beautiful waterfalls. Some experts are of the view that the project will not be able to generate more than 70 MW of power, against 150 MW

that the govt claims it would generate. (POWERLINE Aug 02 p-31, EFL 220702)

**Pak opposes India project on Neelum River** Pakistan has refused to allow India to divert the water of the Neelum River for power generation in J&K, saying it would jeopardise the development of its Rs 87 B Neelum-Jhelum HEP in Pakistan-occupied Kashmir. According to the Indus Water Treaty, 1960, India can't change the flow of Neelum River even for power generation, if doing so affects any of Pakistan's power projects. India wants the diversion of Neelum waters for power generation in Kashmir. It had assured Pakistan that there would be no storage and the diverted water would be re-routed into the Neelum through Wullar Barrage. Islamabad will have to immediately start the construction of the power project in PoK if it doesn't want India to divert the Neelum waters. (DAWN-Pak 150702 & THE TRIBUNE, DAILY EXCELSIOR 160702)

**New HEPs in Pak** Pakistan's Water and Power Development Authority will set up four new HEPs at a cost of \$1.45 B with a capacity of 1 000 MW in various parts of Northwest Frontier Province. The Ministry of water and Power has completed the feasibility report for these projects. The proposed HEPs are Allai Khwar, Khan Khwar, Daral Khwar and Battal Khwar. Wapda will start construction work by end of 2002 and complete by 2006. (POWERLINE 0802 p-8)

**Drinking water in Nepal** According to data from the National Census last year, some 2.21 M families (of the total 4.2 M households) have drinking water supplied by pipe while some 0.377 M households make do with wells. The number of households using tubewells for water is 1.184 M while another 0.267 M households use natural springs, and 61 400 use streams, etc. Another 37 000 are dependent on other sources of water. Out of the 0.235 M roughly households in the capital, some 0.198 M use tap water. (Kathmandu Post 090802)

**Indus water distribution in Pak** The Punjab govt in Pakistan resented the Indus River System Authority's decision of reducing water supplies to the province terming it "detrimental" to cotton crop. In a letter to the authority it has demanded rescinding of the decision. The river flows have already dropped to historic low. The Punjab state currently needed around 132 000 cusecs (including 20% losses). Of this, the province got 110 000 cusecs – 35 000 cusecs from the Indus arm, 10 000 from the Mangla lake and 65 000 from Chenab. The total requirement of the country is around 332 000 cusecs. (Dawn-Pak 090802)

## AROUND THE WORLD

**Dam Removal in US** According to American Rivers, which has been tracking planned dam removals since 1999, 63 dams in 15 states and the District of Columbia - are scheduled for removal in 2002. The nation's aging

dam infrastructure, combined with a growing appreciation of the ecological impacts of dams, provided the impetus for the growing movement to remove unneeded dams. About 40 dams have been removed since 1999 when the breaching of Edwards Dam on Maine's Kennebec River captured national attention. Another milestone was reached in Oct 2001, when conservationists celebrated the completion of a series of dam removals that restored 115 miles of the Wisconsin's Baraboo River, the longest stretch of river ever returned to free flowing condition in America. The Association of State Dam Safety Officials estimates that about 30% of America's dams have reached the end of their lives. Many dams have outlived their intended purpose and no longer provide any economic benefit. Many communities have looked at their local dams and realized the dams provide virtually no benefits. (ENS 230702)

**Indonesians To Sue Japan govt over Dam** Citizens of Indonesia's Sumatra Island plan to sue the Japanese govt and its affiliates for damage caused by a Tokyo-funded hydropower dam. The case would mark the first legal challenge over a project paid for by Japan's official development assistance. About 3 000 people from 13 villages on the island are planning to file a lawsuit with the Tokyo District Court to seek compensation from the Japanese govt, the JICA, JBIC and Tokyo Electric Power Services Co. The four were involved in building Kotopanjang Dam, which caused the plaintiffs and 20 000 other villagers to be forcibly resettled, Japanese supporters of the plaintiffs said. The dam was completed in 1997 at a cost of Y31.18 B paid for by a yen-denominated govt loan. The local residents have been left without proper living facilities, such as clean well water on the resettled land, and haven't been guaranteed job opportunities there, becoming "developmental refugees." (Asia News 020702, IRN PR 080702)

**Zambezi HEP stir opposition** The NGOs of Mozambique are in the route to oppose the HEP at Mepanda Uncua on the Zambezi River in Mozambique. The 1 300 MW project is to be built on a build-operate-transfer basis. The project will require 1 560 km transmission lines. According to the Mineral Resources and Energy Ministry of Mozambique, the project would involve creation of a 97 sq km reservoir, and resettlement of 1 400 people. Mozambique had hydro reserves of more than 12 000 MW, of which 2 300 MW is developed. The 1997 electricity law opened the sector to private investment. Mozambican NGO Livaningo is concerned about the potential downstream impact of the scheme. River flow management at the Cahora Bassa dam has been blamed for flooding that killed 100 people in Tete in 2001. A decline in the prawn and fisheries industries in the Zambezi delta is blamed on the decline in sediment deposits caused by the building of the dam. The NGOs are also concerned that

the project has not included studies carried out in accordance with the WCD guidelines. (IRN PR 030802)

**China's HEP for Thailand risks environment** Thailand is helping China to build a 15000 MW HEP on the Mekong in Yunnan province and will buy back its entire output. GMS Power, the Chinese Power Corporations, Yunnan Electricity Generating Authority, and the govt of Yunnan province are developing the project. Work is scheduled to start in 2006. A transmission line through Laos will deliver the power to Chiangmai, 400 km away, where the Thai grid will take over. Its part of the river, known locally as the Lancang, has turbulent course with deep drops all along its 1240 km stretch. The eight plants will have combined capacity of 15 550 MW, equal to almost 80% of the proposed capacity of controversial Three Gorges project on the Yangtze. According to the experts, it will interrupt the river's natural flow, destroy its many islands, swallow vast agricultural areas, swamp villages, and ruin fishing grounds in Laos, Cambodia, and Vietnam. (BUSINESS STANDARD 090802)

**Floods in East Germany** The worst floods in at least 150 years drove tens of thousands from their homes across eastern Germany. The Elbe River rose to 8.92 m, beating the highest level on record of 8.77 m seen in 1845. Some 40 000 people were being evacuated from five districts of the city. Flood water invaded Dresden. (THE HINDU 170802, BUSINESS LINE 180802)

**Death trail in China** Almost 250 people were confirmed dead after a fortnight of torrential rains across large parts of China. From Yunnan province in the southwest over Hunan in the center to Zhejiang in the east. People have died mainly in landslides, and flashfloods have washed away not only mud huts, but entire brick houses. The Hunan govt declared a "flood emergency period for the first time since 1998, when the worst floods in the decade killed more than 4000 people in China. China's summer floods, which began early this year, have already killed more than 900 people. (THE TIMES OF INDIA 190802, 220802)

**Floods in Russia** More than 58 people have been killed in the flood of Russia's Black Sea Region due to heavy rains. Floods also cut railway and power lines and washed away bridges. Thousands of people are being evacuated from around Abrau-Dyurso, as a dam overlooking the village gave way. (THE HINDU 100802)

**Water chief held in bribery inquiry** The chairman and chief executive of Wessex Water, Colin Skellett, has been arrested on suspicion of receiving a bribe of nearly £1 M. Police are investigating whether Skellett received payments in connection with the recent take-over of Wessex Water by Malaysia-based YTL Power. YTL Power bought Wessex Water in May this year for \$ 1.7 B. Bath-based Wessex Water supplies drinking water to about 1.2 M people and sewerage services to

2.5 M people in the south-west of England. Skellett has said that he received a £ 1 M fee from YTL for consultancy work. (BBC News 230802, 260802)

**Dams Burst in Mexico, 11 Killed** Heavy rains burst two dams and sent a wave of flood waters roaring over villages in central Mexico, where authorities said at least 11 people were killed. The state officials warned that three other dams were in danger. Water gushed through the streets, reached the rooftops of many houses and washed away dozens of others. Authorities had declared a state of emergency in Villa Garcia and two other Zacatecas cities. Floods in the area displaced 3000 people. (Associated Press 160802)

**Call to stop impoundment at the San Roque** Despite various unresolved issues and repeated suggestions from the Japanese govt to postpone the impounding of the by now finished San Roque dam reservoir, the Philippine govt allowed the San Roque Power Corp to start impounding last August. Unless the impoundment is aborted, the eight small villages located within the 1,600 Ha reservoir area will be submerged in coming months. In July, more than 20 people in the reservoir area were forcibly pulled out from their huts and forced to leave the area, while their huts were burned. So that impoundment can be started. And beyond the eight villages, more than 20 000 people in the upstream of the dam will be victimised by siltation and upstream flooding over the coming years. The national govt's own finding that the dam project does not have the "free, informed and prior consent" of affected indigenous communities, is being dismissed on technical grounds. Under the PPA of the San Roque Dam, SRPC is guaranteed return of investment and profits within 12 years of operation, even with zero electric output of the power station. It is even cheaper not to operate the dam and pay back the capital expense of SRPC, including interest payment if NPC will have to abide by the terms of canceling the agreement. This will save the Filipino people from paying a higher electricity from SRPC, which will just add up to existing electricity surplus at a tremendous financial, environmental, economic and social cost to the affected communities and the Filipino people. (Assembly for the Poor, Thailand)

## WATER SECTOR

**Water governance in South Africa** The independent South African govt brought out comprehensive water policy document within three years of its coming to power, heralding the importance of water resource management. It has brought in policy, institutional and legal changes for better management of the resources. Though the context in SA is different from that in India, the policy changes provide useful insights and lessons. Right to use water is tied to the ownership of land along rivers and groundwater aquifers. As a result common pool resources are used as private property. This is root cause of the problems related to equity and

sustainability. SA has effectively abolished the riparian system, as it is racially biased. In SA, the state has become the custodian of all water bodies in the country. No ownership of water is allowed. Only water rights to individuals/firms on a five-year contact basis (to a maximum of 40 years depending on the use) are allocated by the state. To promote efficient use of water, user charges on the basis of full financial costs of providing access to water. These costs include operating and maintenance of publicly provided schemes, capital costs, overheads such as administration and support required to operate, an allowance to provide for depreciation, replacements and refurbishment, catchment management costs and social environment costs. All water uses will be covered by the new pricing policy. Water for basic human needs will be provided free of cost. The environmental levy may include charges for effluent disposal and significant interception as a result of land uses such as afforestation or agriculture. Disadvantaged individuals and communities will be supported through specific measures for beneficiaries of land restitution, land reform or other programmes of corrective action. (EPW 130702 p2879)

**Goa Plan** Goa has drafted a master plan to develop water resources in the Mahadayi, Zuari, Galjibaag and Talpona river basins. It is proposed to develop 61 projects in the Mahadayi river basin, 119 in Zuari river basin, 41 in Talpona River and 16 in Galjibaag river basin. The plan includes seven projects for hydropower generation. The state engineers were working on the details of these projects. (THE TIMES OF INDIA-Panaji 290702)

**Global water crisis** People already use over half the world's accessible freshwater, and may use nearly three-quarters by 2025. Over 1.5 B people lack ready access to drinking water and, if current consumption patterns continue, at least 3.5 B people - nearly half the world's projected population - will live in water-stressed river basins in 20 years. On top of this, contamination denies some 3.3 B people access to clean water, and 2.5 B people have no sanitation services. In developing countries an estimated 90% of wastewater is discharged without treatment into rivers and streams. Each year there are about 250 M cases of water-related diseases, with some 5-10 M deaths. Half the world's wetlands have been destroyed in the last 100 years. 40% of the world's fish are freshwater species - and of these, 20% are threatened, endangered, or have become extinct in recent decades. Culprits include dams, deforestation and overgrazing, which lead to erratic water runoff and desertification. Water diversion and inefficient water use are also a problem. Irrigated agricultural systems, which consume 70% of the world's diverted water, lose up to 80% of their water through leakage in earthen channels and inefficient application onto fields. In Africa, 21% of the population's protein

comes from freshwater fisheries. These fisheries are destroyed by dams, but could be improved through better habitat management. There are 261 major transboundary water bodies, many without an effective, or even any, cooperative management organisation.

➤ **New Approach?** According to the latest book "The World's Water: 2002-3" released by Dr. Gleick of the Pacific Institute, The "soft path" approach to water problems can save lives and money while protecting the environment by pushing us to rethink what we use water for and how we use it. (Pacific Institute Newsletter 230702, IRN 310702)

## ISSUES ABOUT RIVERS

**Sutlej Glaciers are melting** In July 2002, when nation feared the worst drought; the Bhakra dam had excess inflows, mainly due to melting of the glaciers in the catchment of Sutlej and its tributary Baspa. The Bhakra inflow as of July 25 was 38 000 cusecs, almost double the last year as 47-70% inflow in Sutlej is from snow melt. (INDIAN EXPRESS 270702)

**Kerala Rivers affected due to sand mining** As a result of continuous mining from the Pampa River, the riverbed level has fallen to 3 m below the mean sea level, according to the hydrographical station under CWC at Aranmula. Before 1986 it was above the MSL. The same is the case at Manimala, Periyar, Bharathapuzha, Meenachil and other rivers, official sources said. They added that the sand deposits seemed to have been created in these areas by the change in the course of the rivers. The Pampa river valley area until Kuttand is spread over 2 177 sq km and 6 308 MCM of water flow down through this river every year. According to the study conducted by the CWC and Thiruvananthapuram based Centre for Earth Sciences, every year 27 350 tonnes of sand flows in to the river. And 408 800 cubic m of sand had been taken out through 23 mining points every year. Sand mining also leads to drying up of riverbeds soon after monsoon and lowering of water tables, besides weakening of foundations of bridges. (BUSINESS LINE 040702)

## INTERSTATE DISPUTES

**Cauvery dispute again in SC** TN, in a suit in SC, has asked the court to give a direction for the constitution of a committee of technical officers to take over the regulations of the reservoirs and structures in the Cauvery basin in Karnataka to ensure due compliance of the Tribunal's interim award. A writ petition on behalf of 2 M Cauvery delta farmers and agricultural labourer was also filed in the Supreme Court by the 'Tamil Nadu Neerpaasana Vilaiporulgal Vivasayigal Nala Urimai Padhugappu Sangam' to direct Karnataka to release water to Tamil Nadu as per the interim orders of the Cauvery Tribunal. (THE HINDU 110702, 200702)

**SYL** The Haryana CM has said that Punjab will have to complete the construction of SYL canal (having 121 km in Punjab and 91 km in Haryana) by January 15, 2003 as per SC orders. This, he said will help irrigate 0.16 M Ha and without which the state was incurring annual loss of Rs 5 B. The Punjab CM termed the construction of the SYL canal as an exercise in futility and maintained that Haryana already had more than its share of waters from various rivers and "Punjab can't spare a drop of water from its rivers for Haryana". The Punjab CM says the Centre must first decide the share of river waters to be allocated between both states. A meeting of CMs of Punjab, Haryana and Rajasthan called by Union Water Resources Ministry failed to resolve the issue. Punjab CM said that a writ has been filed by the Punjab farmers in SC challenging the SYL construction.

➤ **Punjab-Rajasthan dispute on Ravi Beas waters** At the meeting of CMs, Rajasthan CM demanded that the control of Ropar, Harike and Ferozepore headworks should be handed over to BBMB and Rajasthan should be given additional allocation of 0.6 MAF of Ravi Beas waters as per the 1992 agreement. Rejecting both the demands, Punjab CM said that the control of headworks has been with Punjab for 36 years and will not change and that until interstate dispute was resolved, no additional water could be given to Rajasthan. (THE TRIBUNE 160702, 240702, 260702)

**AP-Karnataka Dispute over Tungabhadra** AP CM has requested dialogue with Karnataka counterpart to sort out the AP complaint that Karnataka was drawing more water than its due share from the Tungabhadra reservoir. (BUSINESS STANDARD 170702)

**Chhattisgarh-Orissa dispute over Indravati** Orissa is using Indravati water for irrigation while Chhattisgarh's Jagdalpur town and 52 nearby villages depend largely on Indravati for its drinking water. The Chhattisgarh govt sources said, "We want Orissa to maintain a minimum level of water in Indravati to meet our demands. It is CWC's responsibility to be fair to the aggrieved state and see that the 1975 agreement is implemented." Under a signed agreement, Orissa is supposed to maintain a flow of 45 000 Mcft of water in Indravati. But Orissa has constructed four major dams reducing the flow drastically. The residual water now flows in to Jaura Nullah, leaving Chhattisgarh "high and dry." Chhattisgarh has proposed to Orissa that a permanent structure be constructed across Jaura Nullah to stop water being "pilfered" from the Indravati. Chhattisgarh wants Orissa to ensure supply of minimum 9 000 Mcft of water after the monsoon and also cautions about severe flash floods devastating the area if steps are not taken to plug the Indravati river breach to Jaura Nullah. (INDIAN EXPRESS 100702)

## GROUND WATER

**Scam in Assam WB project** According to Agriculture Minister of Assam, the pumpsets supplied under the World Bank aided ARIASP project have been found to be weighing around 40 kg less than the recommended 215 kg. This is another scam in pumpsets dealing. The earlier Rs 1 B scam involved the distribution of 100 000 pumpsets financed by the NABARD and another 50 000 funded by WB. The CM has approved a CBI probe in to the earlier case. (THE HINDUSTAN TIMES 240702)

**Decrease in water table in Bathinda** Groundwater levels fell drastically in all the seven blocks (Bathinda, Phul, Rampura, Nathana, Maur, Talwandi Sabo and Sangat) of Bathinda district of Punjab in 2001-2 even as water levels were actually rising through the nineties. The areas where the fall in water table is more pronounced are those where paddy is being cultivated. Paddy cultivation has been rising even through the sandy soil of this region is unsuitable for it. In 1981-2 only 5 791 Ha was under paddy, which rose to 82 494 Ha in 2001-2. The number of tubewells in the district were 184 in 1960, 26 833 in 1990, 32 650 in 1997 and 42 551 in 2001-2 according to Agriculture Dept. (THE TRIBUNE 290702)

**CGWA Deadline for registration** CGWA has directed that all persons/ organisations (private or govt) engaged in construction of groundwater mechanisms like well should register themselves with the CGWA by 20<sup>th</sup> Dec 2002. The earlier stipulated deadline was 20<sup>th</sup> June 2002. (THE HINDUSTAN TIMES 280702)

**Tide over the water table?** Scientists at Indo-French Centre for Groundwater Research at the National Geophysical Research Institute have discovered that cyclic changes in the water table are caused by "earth tides" rather than groundwater pumping. Earth tides are the result of the planet's elastic deformation under the gravitational pull of the moon and the sun similar to the ocean tides that take place on the water surface due to the same pull. Using the mathematical technique called spectral analysis, the scientist concluded that it was "earth tides" that were responsible for the observed fluctuations in the water table. (BUSINESS LINE 200702)

**Groundwater in AP** According to the Groundwater Dept of Andhra Pradesh, drastic reduction in yields of wells and drying up shallow wells, falling trend in water level and clamour for drilling deeper wells reflects the current scenario in the state. The state witnessed a three fold increase in well population from 800 000 in 1975 to 2.2 M in 2001 and area irrigated with groundwater from 1 M Ha to 2.6 M Ha, and four-fold increase in the density of wells. The state govt had taken up groundwater assessment recently to immediately initiate administrative, scientific and legal measures in the form of water conservation and recharge, Land Water and Tree Act and groundwater resource estimation.

	Basins	Area, sq km
Over Exploited	118	20714
Critical	70	13568
Semi Critical	192	33263
<b>TOTAL Requiring Attention</b>	<b>389 (33.56%)</b>	<b>67547 (30 %)</b>
Safe	770 (66.43 %)	160000 (70 %)
<i>GRAND TOTAL</i>	<i>1159</i>	<i>227000</i>

AP and Maharashtra are the only two states that have taken up groundwater reassessment work recently as stipulated in NWP 2002. (BUSINESS LINE 220702)

#### **AP claim on increase in water table countered**

According to a hydrological studies by a team of Indo French scientists in the National Geophysical Research Institute, preliminary investigations at 28 sites near Hyderabad under a pilot project revealed that the water table had actually gone down by up to 4 m. NGRI is the second scientific body in the state after the National Remote Sensing Agency to have refuted the govt's claim. While the state govt claimed that the underground water table has increased by a meter despite deficit rainfall last year, thanks to water conservation programme? The experts say that the reason for the failure of Neeru-Meeru in and around the City is the presence of granite rocks, which cannot hold water. The Indo-French project when completed will help in understanding the aquifers in hard rocks. The state govt has drawn up an ambitious five year programme to improve the groundwater levels by spending Rs 6 B to bring an additional 500 000 Ha under irrigation. (DECCAN CHRONICAL 290802)

### **IRRIGATION OPTIONS**

#### **Only local water harvesting can boost agriculture**

Despite the fact that there has been a remarkable expansion of irrigated area over the past 30 years and more, whether the expansion is efficient and sustainable is not clear. In case of foodgrains, the area under irrigation has increased from 24.5% in 1970-71 to 40.6% in 1997-98. At present, a little over 38% of gross cropped area receives irrigation compared to 23% in 1970-71. While canals supplied almost 40% of irrigation water in 1980-81, mismanagement of resources and official neglect have reduced the percentage to 31% in 1997-98. As canal usage declines, farmers rely increasingly on diesel-powered pumps to extract groundwater. This practice has a clear downside, as the running costs are very high. According to the CWC, India receives annual precipitation of the order of 4 000 BCM. The usable water resources from this precipitation are 1 100 BCM, roughly 28%. Even if this proportion can be raised by 5%, it would mean an additional 200 BCM of usable water. To get an idea of how much water this is, the total reservoir capacity in the country is 130 BCM. (THE ECONOMIC TIMES 230702)

**Importance of Water Use Efficiency** The importance of increasing efficiency in water usage can hardly be overstated. Accordingly to mid term evaluation of Ninth Five Year Plan, a mere 10% increase in irrigation efficiency would translate into 14 M Ha additional irrigation. The Planning Commission has estimated that the number of dark zones has increased by 70% between 1985 and 2000. (Mid Term Evaluation of Ninth Five-Year Plan, THE ECONOMIC TIMES 300702)

**Hydraulic Rams for Solan** The HP state govt has sanctioned 30 hydraulic rams as novel irrigation scheme in Solan dist. HR operated without electric power were suitable for hill conditions. HR could lift water upto height of 150-200 m and was meant to be installed on natural water streams. The govt would be giving subsidy of Rs 0.15 M on each HR. (THE TRIBUNE 130702)

**Villagers join hands for irrigation canal** A group of villagers in Kawardha district of Chhattisgarh decided last year to dig a local canal so that its water can be used for irrigation in summer. It was decided that each house would dig two to three meters of canal as public contribution. The village Panchayat, the Mahila Mandal, and the local MLA have contributed monetarily, from which each villager was given Rs 20 as a day's labour. So far 2.25 kms of canal have been dug and temporary dam made to store water. The original canal ultimately joins Fein river and flows in to the neighbouring state. In the first year, the water from the canal is expected to irrigate 10 Ha of land in Akalgharia and Pagwani villages with the area expanding to 30 Ha in the following year. The total irrigated area at the end of the third year will be 70 Ha. The water from the canal will only be used for irrigating wheat fields, which is grown as second crop in the region. (THE HINDU 260802)

**A drought wrecked by nature and man** A combination of factors -- natural and man-made -- has turned Orissa into a state that reels under a drought virtually every year. More pertinent is the natural degradation over the years that have cost the state dear, making it infamous for deaths due to starvation and hunger. Govt statistics in Orissa record that 52% of the state's land face erosion due to deforestation while vast tracts of agricultural land has become fallow. Over the years, investment in irrigation in general and in groundwater replenishment in particular have been on the decline. The lack of major and medium irrigation worries the small land holding and marginal land holding farmers, who constitute 80% of the farming population in Orissa, as against the national average of 72%. Again, while the rest of the country utilises 30% groundwater for irrigation, the figure is a mere 8% in Orissa. Nature has not been kind to Orissa. The state has faced calamities in 90 of the last 100 years. These include floods in 49 years; droughts in 30 years, and cyclones in 11 years, including the devastating super cyclone that devastated the state in October 1999. Then there are the regular

heat waves, which claim scores of lives across the state. Western Orissa is the worst affected area, having witnessed 20 droughts in 30 years. This year too, thousands of farmers failed to grow crops for the ongoing kharif season, thus facing another extremely bleak year. (Rediff News 220802)

**Wasteland project for Mewat** The Centre has sanctioned special Rs 45 M project for the development of wasteland and water resources in 14 villages of Mewat (Gurgaon and Faridabad districts) in Haryana. According to the guidelines of this project, only 5% of the fund will be spent on administrative cost, 80% will have to be spent on the actual works. The Mewat Development Agency and the implementing body of state Forestry dept, plans to harness agriculture, horticulture, soil conservation, health, education and moisture conservation and repair of check dams, bundhs, embankments, ponds and percolation. (THE TRIBUNE 270702)

## IRRIGATION

### Sources of Irrigation (% of net area irrigated)

	1970-1	1980-1	1990-1	1997-8
<b>Canals</b>	41.3	39.5	36.3	31.3
<b>Tanks</b>	13.2	8.2	6.1	5.7
<b>Tubewells</b>	14.3	24.6	29.7	33.8
<b>Other wells</b>	23.9	21.1	21.7	22.8
<b>Other Sources</b>	7.3	6.6	6.1	6.4
<b>TOTAL</b>	100.0	100.0	100.0	100.0

(THE ECONOMIC TIMES 190702)

**MKVDC, others downgraded again** ICRA has further downgraded five irrigation corps of Maharashtra including MKVDC, Konkan Irrigation Dev Corp, Godavari Irrigation Corp, Tapi Irrigation Corp and Vidarbha Irrigation Corp to LBBB+ (SO) from LA-(SO) and kept them on rating watch with negative implications. In case of Maharashtra Water Conservation Corp, the rating has been downgraded from LAA-(SO) to LA-(SO). In case of MSEB, the rating has been downgraded LA+(SO) to LA-(SO), keeping it under rating watch with negative implications. The downgrading follows delays in meeting interest payment obligations. (BUSINESS STANDARD 120702, Update 4 & 5 (p19))

**AP HC strikes down water tax** In response to a petition filed by Bharatiya Kisan Sangh, a AP High Court Division bench has made it clear that the authorities cannot demand water tax from farmers of Chilakaluripet mandal in Guntur dist, unless the notifications under water tax was issues to declare Kuppangangivagu and Vogeru as irrigation sources and procedure followed, including call for objections from public. (THE HINDU 260702)

**Sidhmukh Nahar Irrigation Project** Rs 3.09 B Sidhmukh Nahar Irrigation Project is to be soon inaugurated. The project was initiated in 1989 to irrigate 0.112 M Ha in Hanumangarh and Churu districts. Funded by EU (45 M ECU worth about Rs 1.9 B) and NABARD, it also to claimed to provide drinking water to 113 villages in Badra (81 villages) tehsil of Hanumangarh and in Rajgarh (14) and Nohar (18 villages, 32 000 Ha) tehsils of Churu District. Rajasthan is to receive 0.47 MAF Ravi-Beas water for this project from Nangal dam. The work involved remodelling of 142 km long Bhakra main canal in Punjab, remodelling of existing channels on a stretch of 157 km in Haryana and 501 km distribution system in Rajasthan. The opposition leaders, however charged that the project was incomplete and those farmers who could afford were pumping the water from the canal. (THE HINDU 090702, 120702, THE HINDUSTAN TIMES 120702)

**Sukla irrigation project in dilapidated condition** The Sukla Irrigation Project has failed to supply water to the cultivated land of the peasants under the command areas since March 1992. This project was built at the cost of Rs 49 M in 1978 for supplying water in North Kamrup district. It is the second biggest irrigation project in Assam. The project lacks maintenance, and is now in a very bad shape. The 12 sub-channels are found damaged till now. (Sentinel 120702)

**AP Irrigation Act changed** In an effort to bring in changes in water use pattern and facilitate integrated water management; the Andhra Pradesh Govt has approved amendments to the AP farmers' management of Irrigation Systems Act. The objective is to make farmers' organisations more broad-based and transparent. Among the changes approved include reduction of term of office of Water Users Organisation, project committees from the present five years to three years, with one third retiring every year. The cabinet approved maintenance of feeder channels in minor irrigation tanks by the respective WUAs, appointment of an officer of agricultural dept as competent authority to farmers' organisation for implementing and executing decisions in respect of agricultural activities. (BUSINESS LINE, DECCAN CHRONICAL 210802)

**Rajasthan irrigation** Rs 1 B would be spent on Rajasthan Water Sector Restructuring Project in current fiscal year for the scheme of proper utilisation of available water in old irrigation projects, water resources development and people's participation in water management. Under this scheme, reconstruction in 619 000 Ha of irrigated area and availability of water for irrigation would be insured from 91 irrigation systems in 24 districts of the state. The irrigation facilities of 4 000 Ha in Jalore, 5 000 Ha in Sirohi and 9 000 Ha in Boondie districts would be surplus after completion of this scheme. NABARD has approved Rs 1.77 B for 92 small projects under RIDF scheme. The budget of Rs 4.16 B has been sanctioned for different

irrigation project in this fiscal year. (DANIK BHASKAR 200802)

## WATER SUPPLY OPTIONS

**Rainwater harvesting in Kerala** Thousands of families in certain waterlogged and low-lying parts of Kerala like the capital district, Kochi, Alappuzha and Kottayam, face shortage of drinking water. Rs 30 M rainwater harvesting project have been inaugurated at Kochi to benefit 2 420 families. The project titled 'Varsha' consists of individual units comprising a 25 000-litre tank that will store filtered rainwater collected from rooftops. Each individual unit, costing around Rs 62 000 would serve the drinking water requirements of five households. Kerala receives heavy rainfall with an annual average of around 3 000 mm. The state has 250 wells in each square km - a world record. (THE TIMES OF INDIA 150802)

**TN to make rainwater harvesting mandatory** Tamil Nadu would bring in a law under which the builders will have to apply for the permission of construction along with a blueprint for rainwater harvesting. (THE TIMES OF INDIA 220802)

**Rs 12 B for Jalasamvardhane scheme** The Centre will spend Rs 12 B on the new Grameena Jalasamvardhane scheme launched by PM on Independence Day, said Union Water Resource Minister. He said the Centre would help states to rehabilitate irrigation tanks and facilitate recharging of groundwater. (DECCAN HERALD 230802)

## LAKES, TANKS, WETLANDS, GLACIERS...

**Conservation of Dal, Nageen Lakes** The Lakes and Waterways Development Authority in consultation with Ministry of Forests and Environment has formulated draft project of Rs 2.70 B for conservation of Dal and Nageen lakes. The board also deliberated the measures being adopted for conservation of Dal and Nageen lakes and rehabilitation of families being dislocated from the lakes and approved Rs. 449 M for conservation of Dal and Nageen lakes and about Rs 130 M for rehabilitation of families being dislocated from the lakes during the current financial year. Rs 730 M were already spent on conservation of Dal and Rs 171.5 M for rehabilitation of the families shifted from Dal and Nageen lakes to other places. (Daily Excelsior 110702)

**Court orders hotel closure for polluting Dal** J&K High Court has ordered the closure of Centaur Lake View Hotel forthwith for causing widespread pollution in the Dal lake in Srinagar. The court also directed the Pollution Control Board to ascertain whether the effluent treatment plants of all the other hotels around the lake were operational and working in accordance with the norms. Acting on a PIL, the court directed the closure of the hotel saying even after the report of PCB that the

effluent treatment of the hotel was not upto the approved standard and norms, the hotel authorities have shown no response to abide by the rules. Experts are of the view that the lake's degradation was the result of continued agriculture activities in the floating gardens and catchment areas, land reclamation, encroachments and construction in and around the lake. Situated at an altitude of 1,580 m above sea level with the high Zeberwan mountains with their lower slopes descending to it, the lake has shrunk from 48 sq km in 1947 to a mere 14 sq km or less today. (Daily Excelsior 310802)

**Renuka Lake** The Renuka lake in Sirmaur dist continues to shrink despite the efforts by the state wild life dept (See Update 4; p 23). Over the past two decades the effective area of the water had been reduced by over 25 % due to silting and spreading of weeds. After trying to stop silt inflow into the lake by protection and retaining walls, now the dept has shifted focus to rehabilitation of the catchments. The reduction in vegetative cover and construction of numerous roads have been cited as main reasons for increased siltation. (THE TRIBUNE 210702)

**Receding lakes in Bangalore** The Bangalore city had 260 lakes in the 1960s but now just around a hundred of them are barely surviving, and only half of them are real water bodies. According to the Lake Development Authority of Bangalore, the 120 odd lakes of Bangalore are slated to get a new lease of life. The authority has begun working with ISRO to prepare an atlas of lakes on the basis of old and the most recent remote sensing data. It will cover the entire Bangalore metropolitan area, which will bring 127 lakes under its action plan. The Hebbal and Madivala lakes have developed by civic initiatives and benefited from Rs 60 M Indo-Norwegian aided plan. A Rs 120 M project for the Nagavara, Jaraganahalli, Venkayankere and Kamakshipalaya lakes were recently approved by the Centre. (BUSINESS LINE 080802)

**Sarusola Beel in Assam** In January 2000 the Guwahati HC orderd the Assam govt to take steps to protect Sarusola Beel – the natural storm water drainage channel in Guwahati – and other wetlands around the city. In May 2001 the MoEF directed the Assam govt to ensure completion of operations against encroachments not eligible for regularisation by September 30, 2002. Two years after the HC's directive, the district administration has only just initiated steps to remove encroachments on the Sarusola Beel area. Apart from the threat to flora and fauna, shrinking of wetlands has also a disastrous impact on adjoining water table levels. (EPW 29-050702 p-2516)

## RURAL WATER SUPPLY

**Rs 50 B required for annual maintenance** The Lok Sabha was informed that to maintain the assets created under various rural water supply schemes in the country, Rs 50 B is required every year. Though since 1999 reforms have been introduced to institutionalise community participation in RWS, this does not apply in drought affected districts as people do not have the wherewithal to participate with their contributions. (BUSINESS LINE 310702)

**Central funds** The Ministry of Rural Development has released Rs 282.5 M to Andhra Pradesh, Rs 184.3 M to Karnataka and Rs 79.2 M to Tamil Nadu for rural drinking water schemes under the ARWSP of the Rajiv Gandhi National Drinking Water Mission during 2002-3. The states are to implement the schemes with matching grants from the state resources. UP has received Rs 253 M and Uttaranchal has received 53.5 M. The Ministry has released Rs 193.52 M to Assam, Rs 13.77 M to Sikkim, Rs 33.46 M to Nagaland, Rs 114.57 M to ArP, Rs 97.85 M to Mizoram and Rs 39.93 M to Tripura. (THE HINDU 310702, BUSINESS LINE 080802, ASSAM TRIBUNE 180802)

**Waterless schools of Bengal** According to a UNICEF report, of the over 51 000 primary schools in W Bengal about 4% primary schools had toilet facilities and only 20% had water facilities. The condition of facilities where available was also very poor, either non-functional or ill maintained. (THE TRIBUNE 160702)

**NCR Haryana** The Centre has released the first instalment of Rs 500 M to improve basic amenities, specially the availability of drinking water in areas of Haryana falling within the National Capital Region. The high power committee of Haryana had sanctioned seven schemes involving Rs 350 M for implementation in the towns of Bahadurgarh, Gohana, Rewari, Jhajjar, Sonipat and Panipat. (THE HINDU 170702)

**Habitations without water in Karnataka** Of the 56 682 habitations in Karnataka, 20 929 are not getting safe drinking water. While 5 822 habitations face the problem of excess fluoride in water, 6 628 face excess iron and 4 077 excess nitrate. Water in 4 401 habitations is brackish. According to a study by the Rural Development Engineering Department, between 1999 and 2001 37% habitations in the state lacked safe drinking water. According to the Rural Development and Panchayat Raj Ministry, 50 of the 175 taluks in the state had fluoride in 5% to 30% of drinking water sources, and 33% of sources in 25 taluks had excess fluoride. (THE HINDU 150702)

**People hit by excess fluoride content in water** More than 60% of children in the age group of 6-14 in the Dharampuri district in TN have been afflicted with skeletal and dental fluorosis. The reason attributed to this trend has been consumption of groundwater with excess fluoride. According to the WHO, fluoride level in

groundwater should be within 1.5 mg/l. But according to the survey conducted by Tamil Nadu Water Supply Board, the fluoride concentration in groundwater in Dharampuri district ranges from 5-9 mg/l. Another survey conducted under the Rajiv Gandhi National Drinking Water Mission during 1994-95 revealed that as many as 1 028 habitants in the district were found to be affected by fluoride and over 475 000 people afflicted with the dental and skeletal fluorosis. (THE INDIAN EXPRESS 300802)

**258 villages in Saurashtra has salty water** Almost the entire Saurashtra coastline has been badly affected by salinity ingress problem, as a result of which the ground water has been rendered unsafe for drinking. In 258 villages water is salty, while in 406 villages it has fluoride-content. In Surendranagar, water is salty in 47 villages while in 63 villages, it has fluoride-content. In Rajkot, water is salty in 30 villages while in 38 villages, it has fluoride-content. In Jamnagar, this is true for 47 and 25 villages respectively, in Junagadh, for 51 and 77 villages respectively, in Kutch 44 and 114 villages respectively, 29 and 109 villages respectively in Bhavnagar, 10 and 80 villages respectively in Amreli.

➤ **Rs 5.58 B plan for 2000 villages in Gujarat** The Gujarat govt has formulated an action plan of Rs 5.58 B to tackle the drinking water shortage in summer. The water supply minister said tenders for the proposed plan have been invited and the work on 70 group village schemes could be completed by March. Under another project, 386 villages and seven towns of North Gujarat region will be supplied drinking water. The state has also approached the Union govt to sanction Rs 2 B to check the salinity ingress in 6 000 coastal villages of Saurashtra and fluoride menace in North Gujarat's Mehsana and Patan districts. (THE TIMES OF INDIA-A 280702, 020802)

**WB project in Maharashtra** Despite having spent about Rs 170 B over the last 42 years on water projects, 25 000 of Maharashtra's 40 000 villages do not have adequate drinking water. The Maharashtra govt is initiating localised schemes with people contributing 10% of the cost. The remaining 90% cost is to be borne by the State. The WB has cleared the project, said state govt sources. The WB has provided an assistance of Rs 20 M to carry out the studies. So far, 950 schemes are already under way and 50 schemes have been completed. (BUSINESS LINE 260802)

## URBAN WATER SUPPLY

**AP HC stays water cess hike** The Andhra Pradesh High Court has stayed the govt order affecting a hike in drinking water cess in Vijayawada city from Rs 40 to Rs 100 a month. The HC passed order on a writ petition filed by a co-opted member in the Vijayawada Municipal Corp and a lawyer P Gowtham Reddy. The state govt had issued a memo in May this year suspending the VMC council resolution opposing the hike in drinking water cess and had directed the municipal commissioner to enforce the hike from June 2002. Subsequently, the memo was converted into a govt order. The petitioner had filed a writ petition in the HC challenging the GO, praying that the state govt could not issue a GO bypassing the VMC council resolution. (THE TIMES OF INDIA-HYD 250702)

**Mahi weir approved** The Gujarat govt has approved construction of Rs 318 M weir across Mahi River at Sindhrot village in Vadodara district which will help in meeting the drinking water requirements of city and surrounding villages and help irrigate 3 200 Ha in the district. (Daily Excelsior 280702)

**Farmers oppose Canal to Delhi** Research Foundation for Science and Technology has raised objections over the Delhi govt's water treatment plant project in Sonia Vihar, for which the govt has tied up with the French water giant, Odeo Degremont, an offshoot of Suez. Dr. Vandana Shiva of the Foundation said that the water for the project, which is being sourced from the Tehri Dam, is at the expense of the livelihood of the people affected by the Tehri dam. "Degremont is not paying for the social, ecological or financial cost for the dam. In addition, the 34 km long water transmission pipe within Delhi is being built by L&T at the cost of over 1 B. Therefore, it is the MNCs who will make profits at the public's expense," says Dr. Shiva. Delhi Jal Board is to pay UP Jal Nigam for the water for the Sonia Vihar plant.

➤ Farmers of western UP lead by *Dehat Morcha* have decided to oppose the supply of water to Delhi through western UP. Farmers have also opposed the move to make the canals in the western UP cement lined, fearing it will stop groundwater recharge. (RASHTRIYA SAHARA 080702, BUSINESS LINE 150702, Update 5, p23)

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2. *Power Finance, Financial Institutions in India's Hydropower Sector*, By Peter Bosshard, Published in India by SANDRP, March 2002, pp 132, Rs. 100/-
3. *Bade Bandh, Bharat ka Anubhav* Hindi Translation of WCD India Country study, By R Rangachari, Nirmal Sengupta, Ramaswamy Iyer, Pranab Banerji & Shekhar Singh, SANDRP, 2001, pp 268, Rs. 100/-.
4. *The Drought, the State and the People: An Experience in Gujarat* SANDRP Dossier on Gujarat Drought 2000, Edited by

Sanjay Sangvai, pp 90, Rs. 75/-.

5. *Report of the Daud Committee on Sardar Sarovar Displaced, Govt. of Maharashtra*, SANDRP a co-publisher, pp 54, Rs. 30/-.

6. *Dam Vs Drinking Water: Exploring the Supreme Court Narmada Judgement*, L C Jain, Parisar Publication, 2001, p 131, Rs 75/-.

7. *Proceedings of the Consultation on the Report of the World Commission on Dams, Ranchi 7-8 August, 2001*, Edited by DK Mishra, Barh Mukti Abhiyan, Oct. 2001, Rs. 40/-.

8. *Testimonies from the Ground: A Report on Tehri Rehabilitation* by Vimal Bhai & Preeti Sampat, SANDRP, Nov. 2001, pp 35, Rs. 20/-

9. *The River and Life: People's struggle in the Narmada Valley* By Sanjay Sangvai, Earthcare books, June 2002, pp 240, Rs 180/-.

10. *Large Dams in India: Environmental, Social & Economic Impacts* By S Singh and P Banerji, 2002, IIPA, pp 338, Rs 500/-

11. *Tehri Environment and Rehabilitation: Towards Failure and Devastation*, Published by MATU, pp44, Rs 25/-

12. *Bharat mein Bade Bandh ka Lekha jokha* (Hindi) summary of WCD India Country Study, Manthan, pp18, Rs 5/-

13. *Water: Private, Limited* by Shripad Dharmadhikary, Manthan, pp 54, Rs 20/-

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**Australia help for Bangalore water** Australian High Commissioner to India presented a master plan for upgrading Bangalore's water supply and sanitation services. The master plan, presented to the Chief Secretary, was produced under the Australian-funded Bangalore Water Supply and Environmental Sanitation Master plan Project, with the cooperation of BWSSB and other city agencies. The Rs 230 M project involved two years of work by a team of Australian and Indian specialists. The project provides water connections to 800 low-income families in Chandranagar. (THE TIMES OF INDIA 080802)

**Chennai may get Veeranam Water in 2004** The TN govt has decided to expedite the Veeranam Project to augment Chennai's drinking water supply. The Rs 434.5 M project is expected to supply 180 MLD water by mid 2004. Some experts say the project is a total waste of money as it will incur recurring expanses and the best solution will be to get the water from Mettur dam. (THE INDIAN EXPRESS 240802)

## WATER PRIVITISATION

**River Privatisation in Chhatisgarh** The state govt has initiated country's first private river water supply scheme on the Sheonath, a semi-perennial river near Durg town, on Build-Own-Operate-Transfer basis. According to private entrepreneur Kailash Soni, "All the water you see here is our private property. In hard cash, water in 23.5-sq km areas is worth Rs 40 M. I can hold on to it, sell it or allow it to flow down. Buyers are ready to pay me the price for assured bulk supply to industry." The Rasmada scheme was commissioned 18 months ago. The scheme supplies water to the Chhatisgarh State Industries Development Corp, which has bulk buyers in distilleries, sponge iron units and thermal power plants e.g. Bhilwara group's Hindustan Electro-Graphite Industries. Currently, the scheme can supply 30 MLD. Private company charges Rs 6.60 per thousand litres of water, which incidentally is less than half the rates (between Rs 12 and Rs 18) charged in MP and

Maharashtra. "The concept is novel, so is the technology at my company, Radius Water," says Soni. "The technology doesn't require expensive electrically operated gate systems. The company uses a Flood Regulating Barrier System, which opens and closes automatically, depending on the level of the Sheonath." Soni claims he took an year to get clearances from the centre and the state, including from the Railways, which required flood safety measures on the river. The promoters also offered to treat effluents and then direct treated effluents for irrigation. (INDIAN EXPRESS 140702, OUTLOOK)

**The Chhattisgarh Water Plan** The govt of Chhattisgarh has allocated Rs. 2.46 B, i.e. more than 20% of the State's plan budget to the water sector. The govt is planning a hefty investment of about Rs. 96.51 B to fully develop the estimated 4.3 M Ha of its irrigation potential. The Municipal Corp of Raipur has proposed an urban water scheme costing Rs. 3.97 B to meet the water requirements of the city till the year 2031. According to the Vision 2010 prepared by govt, the state currently has an irrigated potential of approximately 1.34 M Ha and would increase this irrigated potential to 4.02 M Ha by 2010, by increasing the number of water pumps across the State. The State currently has 54 816 hamlets, of which approximately 85% have access to drinking water. This existing coverage would be extended to all hamlets resulting in access to safe drinking water for all before 2010. Report advises the govt to formulate a framework for private sector participation in the water sector, after tariff study, initiation of tariff reforms, and formulation of a shelf of projects. Under the section about inviting private sector participation, the document states that PSP would be initiated in lift irrigation, since "water tariff for water supplied by lift schemes is more than (normally double) the water tariff for water supplied by gravity schemes, and there exists a higher willingness to pay appropriate water charges on the part of farmers. Clearly, the intention of the govt is to establish market principles in the operation of the water sector, creating an

independent tariff regulatory body. (Price Waterhouse Report for govt of Chhatisgarh)

**Row over privatisation in Bangalore** The opposition member in the Karnataka Legislative Assembly alleged corruption on the part of the govt in an "illegal" move to allow privatisation of water supply in Bangalore. An opposition leader saw an "unseen hand" in the decision to entrust the distribution to the French firms, Northumbrian Water Group and Vivendi Water Environment Company. The contract to be awarded was of the order of Rs 40 B for five years to distribute water on an experimental basis in two years in Bangalore. The opposition member opposed the privatisation move and said that the 44 advisors from the two French companies had become a burden on the BWSSB. Their fee came to Rs 24 M a month, whereas the board was spending only Rs 43.4 M a month on the salaries of its 2900 employees. The opposition members said that public opinion was not sought on the privatisation move. The BWSSB Act of 1964 did not provide for it. The actual operational cost of privatisation would be Rs 2.44 B. Though the contract was of the order of Rs 5.84 B, negotiation would be held to reduce it by Rs 3.4 B. The French firms would be asked to provide an assistance of Rs 2 B, reduce operation fee by Rs 800 M and cut interest by Rs 600 M. (THE HINDU 020802)

**Public Hearing on Water Privatisation** The "Public Hearing on Water" was organised in Bhubaneswar by a number of organisations in the context of the govt of Orissa's "Pani Panchayat" programme. The govt of Orissa recently raised irrigation charge by two and a half times, the Orissa Lift Irrigation Corp is being privatised/closed down. These steps have since been consolidated and strengthened through Pani Panchayat Bill, which was passed by the Orissa Assembly in its last session. The Jury heard over 20 petitions in the presence of over 300 representatives of different peoples' organisations across the state and also from West Bengal and Chhatisgarh. The unanimous verdict delivered by the Jury after the end of the hearing was "Pani Panchayats are a prelude to water privatisation". Distinguished public personalities, Rabi Ray, Kisen Pattnaik, Duti Krushna Panda, and Shivaji Pattnaik responded to the Jury's verdict and have expressed their commitment for furthering the campaign against water privatisation. Highlights of the Jury's Report are:

\* Water is Nature's Gift, primarily required for drinking and food production. No legislation should directly or indirectly violate the natural right over water.

\* The water sector reform is designed to ensure Industrial and Urban population a regular supply of water even at the expense of rural water supply and rivers, which is against the priorities given to drinking water and irrigation by the National Water Policy 2002.

\* The Govt should address to the important issues affecting irrigation systems and restrain itself from

handing over the irrigation system to the private sector ostensibly for efficiency.

\* Pani Panchayats are a prelude to Privatisation of water at the behest of World Bank and DFID leading to substantial increase in water charges. ([dnrm@panchayats.org](mailto:dnrm@panchayats.org))

**Keep water and water services out of the WTO** We call upon all govts to keep water and water services out of the WTO and all other regional and international trade negotiations and investment agreements. Global water crisis will worsen—especially in the developing world—if water is commodified and water services are liberalised under the purview of the WTO.

**Background** Civil society representatives gathered at the Bonn International Freshwater Conference (Dec 2001) stated that **access to adequate safe water is a fundamental human right** and that the govts have an obligation to ensure this right. Those of us present there had expressed our concern and opposition to the increasingly narrow focus on the economic value of water at the expense of the social, cultural, spiritual and ecological values when it comes to policy formulation and practice. We reaffirm that **the integrity of the hydrological cycle must be maintained for the common good of our societies and ecosystems.**

In the context of the above statements, we want to draw your attention to the dangerous developments at the World Trade Organisation Ministerial meeting in Doha, Qatar and after.

• The European Union along with a few other developed countries **have proposed that water be included as an environmental service** under the General Agreement on Trade in Services (GATS). This proposal, if accepted, means that all signatories to GATS will have to comply to "the reduction or as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services."

• A recently leaked document on the European Commissions' **secret** 'WTO negotiating positions' shows a wish list of 29 countries including China, India, Egypt and Mexico amongst others, where they would like **the opening up of service sectors in everything from water supplies to banking.**

Water in developing countries is a major target for European water companies in the current negotiations. Many of them are lobbying their govts for partnership initiatives in the context of the WSSD processes. One of the arguments used to deflect criticisms of GATS is that developing countries have the choice to "opt in" the services they want to be liberalised, making exemptions for those they wish to build up domestically. While that may be true, what the document shows is that the commission has simply taken this list of exemptions and has used it to base its liberalisation hit list.

These developments pose an **immediate threat** to the world's declining freshwater resources, the health of all people and ecosystems and to national sovereignty over water, **especially as a service but also as a good**, as experience in many parts of the world shows.

The GATS process is a one-way street towards increased limitations on environmentally and socially responsible policies. For, WTO rules curtail the national space available to legislate any new laws in the interest of ecological sustainability, equity concerns or national food security.

It is in this context that we call upon all govts of the world to ensure that water and water services are kept out of all world trade negotiations and all other bilateral and multilateral trade and investment agreements. (The Institute for Agriculture & Trade Policy (USA) 070602)

**Anger Over Water for Profit** By 2025, as the world's population grows to 8 B, the UN expects the number of people suffering from an inadequate supply of clean water to grow to 5 B from the current 2 B. The vast potential to make money by filling that gap has prompted several large MNCs like Vivendi and Suez to target what they see as a lucrative market for the future. In Manila, the case for privatisation germinated decades ago after the World Bank unsuccessfully tried to fix the public water supply system. Despite five repair attempts over the years, water loss was as high as 64%. Experts say it is unrealistic to expect private companies, whose main responsibility is to their shareholders, to assume the financial risk of supplying water to portions of the world's population that may not be able to afford it in the first place. But investors are betting that the business of water will boom in coming decades. "This is a \$200 B market, growing at a 6% rate annually, in terms of population," said Hans Peter Portner, a fund manager at Banque Pictet in Geneva who handles the bank's Global Water Fund. He predicts that privatised water systems will expand to serve about 17% of the world's population by 2015, up from 7% now. That leaves the field mostly to the French giants, Vivendi and Suez. Last year, almost half of Vivendi's \$26 B of revenue came from water; roughly one quarter of Suez's \$38 B in revenue was generated by the water division, Ondeo. French dominance is now challenged by a third global player, Thames Water P.L.C. of Britain. Thames rose, after Margaret Thatcher privatised water services in Britain in 1989, by swallowing up smaller British competitors. In 1999, it agreed to a \$9.8 B takeover bid from the big German utility RWE A.G. All three European companies have spent lavishly expanding in the United States. This year, Thames acquired American Water Works, the American market leader, for \$7.6 B. It was playing catch-up to Suez, which spent \$6 B in 1999 to buy United Water Resources and Nalco, a maker of chemicals for water treatment. Earlier that year, Vivendi acquired the U.S. Filter Corporation for almost \$8 B. This year, both Suez and Vivendi

signed long-term deals, some for up to 50 years, to manage municipal water systems in China, which faces huge water shortages. The companies often underbid to get a foot in the door, with prices that fail to take account of the full cost of upgrading old and inefficient water systems. Contracts are therefore regularly renegotiated. Renegotiation often means that parts of the contract, like obligations to provide sewers to go with water distribution, are cut or scaled back, sometimes causing environmental difficulties. The situation in Lomas de Zamora is a pungent illustration of the point. Municipalities award those contracts in part to shift the investment risk to the private sector. Often, however, the private contractors commit little of their own capital, relying instead on the municipalities themselves, private lenders like banks, and international development organisations like the World Bank or regional development banks. In South Africa, for example, 80 % of the money for a recent water development project came from the Development Bank of South Africa. In Peru, 100 % of the money for a similar project originated at the Interamerican Development Bank. In March, Suez landed a 10 year, \$4 B contract to manage the water system of Puerto Rico.

**Uniting Against Vivendi** After Suez landed its lucrative 30-year contract to manage the water system in Buenos Aires, Vivendi decided to jump in. It bid aggressively for the similar contract in Tucumán Province, even after four other bidders dropped out. After rates continued to rise, Mr. Abdala joined other consumer leaders from all over the province in calling for a payment strike. Vivendi's collection rate in Tucumán, which rose to 70 % after it reorganised bill collecting, plummeted to 10 %. When Vivendi employees sought to shut off a nonpaying customer's water, Mr. Abdala and other protest organisers sent demonstrators who stood on manhole covers and blocked access to the water mains. In early 1996, after manganese deposits, always present in the local water, became so great that tap water ran the color of cola, popular anger translated into large-scale demonstrations against Vivendi. Local officials blamed the ineptitude of Vivendi's French engineers; Vivendi suspected sabotage. By the summer of 1998, Vivendi was losing almost \$3 M a month in the province, and it unilaterally canceled the contract. A month later, Tucumán Province pulled out of the deal as well. Vivendi then sued Tucumán before a WB tribunal, but lost. (New York Times 260802)

## FISHERIES

**Punjab fish culture over 6654 Ha** Punjab has covered an area of about 6654.52 Ha under fish culture and about 5 267 units had been brought under this culture, out of which 2 482 units were set up on the land owned by the farmers and remaining in the village ponds. The total fish production in the state from all sources is 5 802.22 T. The state has also set up 14 govt fish seed

farms, besides some private hatcheries. During 2001-2, 91.732 M fish seed was produced. Director and Warden of Fisheries says the dept has developed fisheries in major rivers like Ravi, Beas, Sutlej, Ghaggar and their distributaries. (Daily Excelsior 010702)

**HP** The Govindsagar reservoir in Himachal Pradesh has achieved a production of 1 174 T, valued at Rs 25 M during 2001-2. Fishing activities in the reservoir provides direct and indirect employment to about 4 000 people. The Pong dam reservoir produced 391 T of fish, worth Rs 18.2 M. Over 25 000 T of fish have been harvested from state's water resources during past four

years. The fishermen in HP are organised under 28 coop societies. (THE TRIBUNE 010702)

**Mahasheer project awaits execution** The work on Rs 40 M national Mahasheer fish farm proposed to be set up at Sidhpur in Sarkaghat subdivision of Mandi district in HP has not yet been initiated despite the fact that the Central govt while approving the key project about three years ago had agreed to bear half of the cost and had immediately released Rs 10 M. It will be the first project of its type for the development of Himalayan Mahasheer. (THE TRIBUNE 030702)

## QUOTES

The Kuttidi Augmentation Scheme had been delayed by over 15 years merely because of the cynicism perpetrated by some officials who raised lame excuses and unnecessary objections in the way of the smooth implementation of the project.

Kerala Electricity Minister Mr K Sivadasan (BUSINESS LINE 180702)

Non-performing assets of Rs 830 B is loot and not debt.

Union Finance Minister Jaswant Singh in Parliament (THE TIMES OF INDIA 240702)

It is better to subsidise India' poor rather than feed cattle in foreign markets... Since exports will continue to be loss making proposition,... incurring losses on feeding the country's poor and generating employment for them through food for work programmes, seem a better bet.

Editorial comment in BUSINESS STANDARD, 240702

We may have made a mistake by allowing private participation in power generation.

(The then) Union Power Minister Suresh Prabhu (BUSINESS LINE 070702)

Be it Dabhol or the ongoing privatisation in Delhi, when it comes to attracting private investors, govts somehow manage to display abundant 'political will' that would otherwise do a lot of good if applied to governance of the power sector.

Gajendra Haldea of NCAER (THE HINDUSTAN TIMES 020702)

Power Sector privatisation initiatives in Orissa and Kanpur have failed. If they fails in Delhi as well, the future of power sector reforms in India is doomed.

Editorial comment in BUSINESS STANDARD, 110702

## FLOODS

**10th plan** The Working Group on Flood Control has recommended Rs 66.53 B for taking up flood control, drainage and anti-erosion schemes in the state sector during the Tenth Plan period. It is proposed to cover an area of 2.78 M Ha under these schemes. During the 9th Plan the states have spent nearly Rs. 7.60 B in these schemes benefiting approximately 16 M Ha. The Union Water Resources Minister said the Working Group has recommended Rs. 238 M for Harang scheme and Rs. 1.50 B central assistance for flood control works including drainage in Brahmaputra and Barak Basin during the 10th Plan. It has proposed an outlay of Rs. 500 M for a new scheme titled "Improvement of drainage in the country including Mokmah Tal area". These schemes would operate under central sector. The Minister said that the govt proposes to increase the central assistance limit from Rs 6 000 to Rs 7 500 per

Ha for execution of surface/bio drainage and Rs 20 000 per Ha in case of sub surface drainage during the 10<sup>th</sup> Plan in the water logged areas under the Command Area Development agencies. Under this programme, so far, 441 schemes of 9 States have been approved with an estimated cost of about Rs. 440 M. Total area proposed to be reclaimed from these schemes is about 57 000 Ha out of which about 25 000 Ha has already been reclaimed up to March 2002.

➤ **Assam** The Brahmaputra Board has prepared comprehensive Master Plans for Brahmaputra, Barak and its tributaries. The BB has taken up the execution of Harang Drainage Development Scheme and Pagladiya Dam Project in Assam.

➤ While the Ninth Five-year Plan came to an end in March 31 2002, the Flood Control Dept of Assam is still looking forward to get the unreleased fund of the Ninth Plan from the Central govt. The Flood Control Dept received Rs 100 M in 1997-8, Rs 180 M in 1998-9 and

Rs 150 M in 1999-2000. However, the dept did not receive any fund in the financial years 2000-1 and 2001-2. In fact, the State Flood Control Dept has been seeking 100% Central loan assistance from Union Ministry of Water Resources since 1974. (PIB 100702, 220702, NORTH EAST TRIBUNE 020802)

**Assam floods hit millions** Over 0.5 M have suffered from floods in Assam. About 25 000 Ha of crops have been submerged. Officials said the situation worsened when gushing waters broke several embankments on the main Brahmaputra River, engulfing over 100 villages. The eastern district of Dhemaji was among the worst affected by a breach in the embankments, with at least 100 000 people stranded by the rising waters. Other affected districts include Goalpara, Morigaon and Jorhat. In Aug 2000, floods in the region killed 100, and left 700 000 homeless. Environmentalists blame soil erosion, the silting of riverbeds and the increasing population for the flood damages. (THE HINDU 090702, BBC NEWS 230702)

**Committee for Bihar flood survey** An experts' committee has been set up by the Union Water Resources Ministry to survey flood affected areas in Bihar and to review the implementation of recommendations of National Flood Commission of 1980. (THE HINDUSTAN TIMES 120802)

➤ **Bihar floods affect Half a Million** At least 311 people have lost their lives and some 15 M people are affected by the floods in 7 851 villages in the 24 districts including Madhubani, Sitamarhi, Darbhanga, Muzaffarpur, Nalanda, Saran, Siwan, Patna, Khagaria, Begusarai, Sheikhpura, Lakhisarai, Purnea, Araria, Katihar, Kishanganj, Gopalganj, Samastipur, East & W Champaran, Musaffarpur, Supaul, Madhepura and Sheohar in Bihar. The situation worsened in flood ravaged Madhubani district following a breach in the embankment of Adhwara group of rivers in Benipatti subdivision adding a population of nearly 2.5 M in the district reeling under the floods. The Bihar govt has announced a relief package of Rs 800 M for flood hit areas. Kosi, Adhwara group of rivers, Punpun, Bagmati, Burhi Gandak and Kamala Balan were among the other rivers flowing over the danger mark for days. Nearly 15 M people have been affected by floods in more than 7 851 villages spread over 24 districts in the state. Relief dept sources said the floodwaters had inundated 1.8 M Ha of land. Standing crops worth over Rs 2.5 B and spread over 1.04 M Ha of lands are estimated to have been destroyed in the floods so far. Besides, over 3 30 826 houses worth over Rs 3.75 B have also been damaged. (THE TIMES OF INDIA-Patna 060702, 080802 THE HINDU-D 090702, 310702, 170802 NDTV 290702)

**Saptakosi dam project report within 2 years?** India and Nepal have approved the joint preliminary report on the proposed Saptakosi dam, said Union Minister for Water Resources. The Centre will release Rs 250 M for the preparation of a detailed report on the construction

of a high dam on Saptakosi river at Varah in Nepal to prevent inundation of a major part of North Bihar by the river every year, it is claimed. He said that the DPR would be prepared within two years. The Opposition Leader in Bihar Assembly said that the two nations had also approved the preliminary report on Sun Kosi storage-cum-diversion project in Nepal. Nepal has expressed its inability to allow the construction of a dam on Bagmati river in Nepal as the dam would inundate a large area. The Communist Party of Nepal (Maoist) has been opposing the construction of high dams in Nepal. Rs 33 M was being released to Bihar govt for the construction of embankments along Bagmati and Lalbakiya rivers in Sitamarhi district. (THE TIMES OF INDIA 080802)

**Nepal Floods, Landslides** At least 269 persons have died from landslides and floods triggered by incessant rains in Nepal. The hardest hit district was Makwanpur in south Nepal, where 150 persons have been killed. In the Kathmandu Valley 37 persons have died. More than thousand families in 19 of the Nepal's 75 districts have been affected by floods and landslides. Over 46 people are dead and more than 100 missing in different and simultaneous landslides in Sungdel and Dipsung VDC areas of Khotang district. (Kathmandu Post-N 160702, 170702 THE TRIBUNE 260702)

**India to compensate affected Nepalis** Bihar's Minister for Water Resources assured that India would pay proper compensation to Nepali farmers whose farm lands were inundated due to floods caused by Gandak West barrage. The floods that occurred last month destroyed an embankment of the Gandak canal submerged more than 150 houses in the Triveni Village Development Committee. The floods also destroyed standing crops in the 351 bigahas of land. The barrage on the Narayani river at Triveni, maintained by the Bihar state govt, also supplies water for irrigation of about 0.50 M Ha of lands in UP. Since the repair work is going on, water has not been released into the Gandak canal, affecting the command area. Even Nepali farmers accounting for 8 700 Ha of farmlands in 16 VDCs are facing the problem. (Kathmandu Post-N 120802)

**Manipur floods** A vast area was submerged and several people died in the unprecedented floods that submerged large areas of eastern Imphal, Thoubal and Bishenpur districts of Manipur. There had been at least 50 major breaches of mud embankments along the River Imphal. More than 100 ft of the embankments of the Iril river were breached in Imphal East district. These floods are said to be the worst in Manipur in two decades. (Rediff News 170802, 210802)

**Yamuna floods** The Yamuna river has flooded over 10 villages along its banks in Yamunanagar district of Haryana following heavy rains in its catchment areas in HP. As many as 23 persons were known to have died in flash floods and houses collapsed. Besides, 250 head

of cattle also perished in the two states. (THE TRIBUNE 170802)

**Landslides Tehri** At least 43 people were killed after a cloudburst triggered flash floods and landslides in four remote hilly villages of Tehri district of Uttaranchal.

**West Sikkim district** 4 persons including a child, were killed when their houses was buried by heavy rains and landslides in a remote area of W Sikkim .

**Mumbai** 9 persons have died due to landslides after heavy rain in northwest Mumbai. Several houses have also been damaged in Kurla area. (THE TRIBUNE 050802, RASHTRIYA SAHARA 080802, THE HINDUSTAN TIMES 120802)

## POLLUTION

**CAG faults Bengal PCB** At least 3 850 industries in W Bengal, including 525 major polluting units, were running without the consent of the W Bengal Pollution Control Board as on March 2001. WBPCB contributed to state's environmental degradation by granting consent till April 2000 to 1 775 out of the 2 300 red category units, according to the report of the CAG. Pointing out that the performance of WBPCB in controlling pollution was grossly ineffective, the report said that although the board issued non-compliance notices to some of the grossly polluting units, there was little follow up action and the industries continued to violate the norms. Against total grants of Rs 452.3 M received from the state govt between 1997 and 2001, the state Environment dept could spend only Rs 230.5 M. The Board failed to utilise its own money too. Out of the Rs 533.6 M, which it received from issuing NOCs, consents and sale of forms between 1996 and 2001, only Rs 329.1 M has been spent. (BUSINESS LINE 100702)

**Pollution in Damodar water** Rampant mining in the North Karanpura coalfield spread over Hazaribagh, Ranchi and Palamu district of Jharkhand is contaminating the Damodar. According to a study conducted by dept of geology, University of Ranchi, sediments and surface water of Damodar and Safi rivers in Jharkhand are contaminated with high levels of lead, arsenic, iron, cobalt, chromium and manganese. Iron and zinc were above tolerance level in surface water. Arsenic was high in the water near mining area. People are suffering from health problem and skin diseases. (Down to Earth 150702 p -11)

**Chromite mining posing health risks** According to a recent report by CAG of India about 500 000 people residing in Orissa's Dhenkanal and Jajpur districts are facing high risk on life. It is the profit-driven chromite mining companies that are destroying the ecology of the region. Hexavalent chromium – declared a carcinogen by WHO – has been found to be posing a major health risk due to unscientific mining in the area. As per the Central Pollution Control Board and WHO stipulations,

the level of hexavalent chromium in the potable water should not be higher than .05 mg/l. That a study has found the level of ion to be a high as 2.5 mg/l in the water sources of the valley shows to what extent the permissible limit has been acceded. Damsala river – the region's lone perennial water source – has virtually turned in to an effluent discharge canal for the mines. It is the only source of water for drinking and irrigation for the tribal people of the 20 km stretch of this area. Villages at a distance of less than one km from the sites were the worst effected, with 24.47% of the inhabitants found suffering from pollution induced diseases. (Down to Earth 310702 p38)

**Pampa River in Kerala** A recent environment committee report of the Kerala assembly said the Sabrimala hill shrine faces a grave environmental risk mainly because of the degradation of the Pampa river system. "The menace posed by pollutants and the stress caused on its fragile environs is a grave threat to the very sanctity of the forest temple at Sabarimala," the report warned. Another study conducted by the Thiruvananthapuram-based Centre for Earth Science Studies said the Pampa, the third largest river in Kerala fed by nearly 270 mountain streams, has "reached horrifying levels of pollution and degradation". The report held a popular Christian convention organised every year on the river's bank at Maramon, the annual Hindu festival held at Cherukolpuzha, and the annual Hindu pilgrimage to Sabarimala responsible for this. Nearly 100 000 devotees attend the Maramon convention, which its organiser, the Mar Thoma Evangelistic Association, missionary wing of the Mar Thoma Church, says is the world's largest annual Christian gathering. Similarly, at Cherukolpuzha, Hindus hold their religious festival every year with nearly 50 000 devotees attending. A similar study conducted by the Kerala PCB has revealed that water contamination in the Pampa is so high that it is unfit for even bathing. "The river water is further being contaminated by the dumping of waste material and sewage from towns, markets, hospitals, rubber factories, and slaughter houses," it says. According to Thomas John of the Kochi-based Society for Environmental Concern, the 179 km long river is the lifeline of central Kerala. The total catchment area of the Pampa river is 4,569 s km and over 5 M people reside in its basin. According to the study conducted by the KPCB, during the festival season, coliform bacteria in the Pampa was found to be very high in the in the order of up to 300 000 per 100 ml. The implementation of the proposed Rs 2.72 B Pampa RAP to will now depend on the state's active participation. The Central govt has agreed to provide Rs 250 M for the first phase. According to NRCP guidelines, 30% of the total cost of the project needs to be borne by the state govt. The Pampa Samrakshana Samiti has suggested that a legal river basin authority needs to be set up in Kerala. On Sept 17, Kerala govt has appointed a six-member committee headed by NR

Rajkumar to finalise the Pampa Action Plan Report in two months. (BUSINESS LINE 240702, 180902, Rediff News 310702)

### Water pollution in J&K

➤ **Tawi** Every drop of wastewater in Jammu city including that of rain drains off quickly and finally reaches the river Tawi. With population of 1 M, the amount of wastewater has tremendously increased. The pollution of the river Tawi has reached an alarming stage. The people living down stream who are totally dependent upon river water for drinking, washing and bathing have suffered from a number of diseases. This has become horror of helpless residents in the fifty villages living around the are shaped land mass criss-crossed by the Tawi river about 3-4 km down stream from Jammu city.

➤ **Devak** A great mass of pollutants in the form of sewage water of Udhampur city has been polluting the fresh water of the Devak stream. This stream is considered to be the holiest not merely by the people of Udhampur district but by the people of whole of the Jammu region. The people who come on pilgrimage are suffering as they take, holy dip in the polluted water.

➤ **Jhelum** The quality of water of the Chenab, the Jhelum, the Indus and Ravi too are deteriorating fast. The Jhelum, the lifeline of Kashmir valley, is getting silted up due to soil erosion in its catchment particularly the low hills. As per the Soil Conservation survey report about 80% of the land area is affected by soil erosion. The Jhelum has also become the dumping ground for all the liquid and solid wastes of the people of the Valley. The entire sewage of Kashmir valley enters the Jhelum more so in Srinagar where the river is stinking.

➤ **Lakes** Various other water bodies such as the Wullar and Dal lakes in Kashmir and Mansar and Surinsar in Jammu, are highly polluted. The water of Dal lake in Kashmir valley was once so clear that mountain ridges were reflected in its water. Due to the degradation of its catchment area and colonisation of its banks the lake is now losing its pristine glory of clean water and varied flora and fauna. Of the most serious problems of the lake is the rapid growth of aquatic and terrestrial weeds along its periphery. (Daily Excelsior 210702)

**Yamuna** Of the Yamuna River length of 1376 km a 526 km stretch between Delhi and Etawah is highly polluted. The CPCB, which has been monitoring the water quality of the Yamuna at 17 locations from Yamunotri to Allahabad, has started monitoring it at 4 locations in Delhi, Parliament was informed. Under the Yamuna Action Plan Phase-I, pollution abatement schemes had been undertaken in 8 towns of Uttar Pradesh and 12 towns of Haryana and Delhi at an estimated cost of Rs 7.11 B out of which Rs 6.65 B had already been spent. (THE TRIBUNE 230702)

**Delhi Power plant spews pollutants** Despite making repeated promises for more than a decade; now the

Indraprastha Power Station in Delhi continues to throw fly-ash into the Yamuna. For the past 14-15 years now, the DVB has been only making commitments and has been coming up with new plans and solutions, but nothing in real has been done to arrest the alarming flow of fly ash into the river, said CPCB sources. Examination of the waste water samples collected by the CPCB at the I P station entering Yamuna, showed the concentration of suspended solids crossed prescribed standard of 100 mg per normal cubic meter at times by 16 000 times. (THE HINDU 130802)

**Gomti** Worried over the increasing contamination of the Gomti river waters, the Supreme Court castigated the UP govt for its helplessness in cleaning the river despite a "well-considered" directive. Dismissing the state govt's application, which the SC described as "frivolous" and meant to "scuttle" the directive it was "unfortunate" that the govt had cited lack of resources as a reason for its inability to implement the directive. The court has asked the state govt to construct oxidation ponds at 7 towns including Pilibhit, Lakhimpur, Sitapur, Barabanki, Jaunpur and Sultanpur for the treatment of industrial waste and sewerage before their discharge into the river. (THE TIMES OF INDIA 170802)

## INLAND WATERWAYS

**New national waterway planned** The Kakinada-Marakkanam canal system with the Godavari and Krishna waterways, covering a total distance of 1073 km, is to be developed and declared a national waterway. The Union Minister of State for Shipping said the cost of this project was estimated to Rs 6.87 B. According to surveys, India has about 15 000 km of navigable inland waterways. The Inland Waterways Authority of India has declared three national waterways. NW-1 is Ganga-Bhagirathi-Hooghly river system from Allahabad to Haldia, covering a distance of 1,629 km. NW-2 is on the Brahmaputra from Dhubari to Sadiya, covering 891 km. NW-3, the West Coast canal is from Kottapuram to Kollam in Kerala. (THE HINDU 140802, BUSINESS LINE 200802)

## FOODGRAINS MANAGEMENT

**Starvation deaths in Jharkhand** A public hearing convened by members of the Gram Swaraj Abhiyan and the Right to Food Campaign was preceded by a detailed survey of 36 adivasi villages of Manatu block in Palamu district. It brought to light the disastrous state of public services and welfare programmes in the area. To illustrate, only 17 of the 36 survey villages have primary schools. In 9 of these 17 villages, the schools have been closed for more than a year. Of the 8 functional schools, 5 have just a single teacher. Taken together, the 36 villages have only 12 teachers for more than 2 000 children in the 6-11 age group. Despite a recent Supreme Court directive, there are no school meals. According to a report from the fact-finding team, which

toured the Kusumatand village in Manatu of Jharkhand from June 24 to 26, at least three persons died due to starvation. During the hearing, news came of another starvation death from nearby Majholi village. In Kusumatand village of this area, most people were found living in a state of permanent semi-starvation. Some families have nothing to eat other than wild food. They also drink highly polluted waters from shallow wells. The famished villagers are hence dying of hunger related diseases. The participants exposed massive irregularities in the PDS and the other food related programmes. Not a single BPL household in the crowd had received any grain from the PDS during the last 12 months.

➤ **Orissa villagers die after eating rotten food** 10 people are reported dead after having contaminated food and water in Kashipur block of Orissa's Rayagada district. In many of the remote, inaccessible and desperately poor regions of Rayagada, the people are in no position to buy BPL rice at Rs 6.30 a kg.

➤ **Adivasi Malnutrition in Maharashtra** According to a survey by the Maharashtra Tribal Research Institute, three out of four infants in Kua village in the Adivasi dominated district of Nandurbar are malnourished. According to another survey, over half the families in Maharashtra do not get enough to eat; 70% of the infant deaths go unreported.

➤ **Hunger to stalk world for 130 Years** According to UNDP, if the pace of progress remains at the current pace, it would take over 130 years to rid the world of Hunger. (THE HINDU, THE INDIAN EXPRESS 110702; THE TRIBUNE 250702; THE HINDUSTAN TIMES 270802)

**FFW Rice recycled to FCI in AP** Vigilance authorities in Andhra Pradesh has found over 1530 tonnes of rice released under food for work scheme getting recycled to FCI godowns through millers. According to the leader of opposition in AP assembly, "It is clear that more than 2 MT (of the total 3 MT rice released for FFW) has been misappropriated. (THE HINDU 250702)

**Food Availability Drops in 1990s** Average daily intake of Rice that was 209.1 grams per capita in 1991 dropped to 200 grams in 1991-99 period. The drop for coarse cereals is 20.8% and that for pulses 20.5%. The food production growth averaged 1.71% during the past decade, while population grew at 1.87%. (BUSINESS LINE 020702)

**PDS prices hiked** The govt has increased the APL prices of wheat and rice to Rs 6.1 and Rs 8.3 per kg from Rs 5.1 and Rs 7.3 per kg wef July 1, the same level of prices as before April 1 2002. (BUSINESS LINE 120702)

**States lift less than Half of Mid-Day Meal Grain Allocation** The Planning Commission has taken a serious note of a report by the estimates committee of the Maharashtra legislature on the Central govt-sponsored Midday Meal Scheme. The report alleges

that the scheme has been "moth-eaten by corruption and frauds" and that in one instance, the food supplied contained "rat droppings, glass fragments and stones". Maharashtra lifted 0.214 MT of wheat and rice during 1999-2000 and 0.176 MT during 2000-1 when the allocation was 0.238 MT per year. In Delhi out of 0.018 MT of foodgrains allocated in 1999 Delhi picked up only 200 T. Of the Centre's allocation of 1.4 MT and 1.6 MT under this scheme in 1999-2000 and 2000-1, only 50.66 and 42.73% respectively have been lifted by the states.

➤ Rajasthan CM has written to PM requesting to ensure that only edible quality wheat is issued for mid day meal scheme. (THE TIMES OF INDIA, THE HINDU 130702)

**Grains meant for poor sold for profit** A foodgrain scam involving a powerful bureaucrat-mafia-police cartel has come to light in Jharkhand. The cartel allegedly carted off thousands of quintals of foodgrain, meant for distribution under the Antyodaya Anna Yojana, in the W Singhbhum region. Under the scheme, foodgrain is distributed among BPL families at subsidised rates. Foodgrain worth Rs 4 M has been sold so far in the open market. (THE HINDUSTAN TIMES 190802)

**Millers booked for paddy scam** A case has been registered against owners of three rice mills in Mansa district of Punjab for their alleged involvement in misappropriation of paddy worth Rs 8 M belonging to the Food and Supply Dept. The owner of the rice mill with the help of other mill owners had misappropriated more than 1 100 T of paddy. (THE TRIBUNE 130802)

**Missing Paddy in Punjab** Paddy worth about Rs 2.50 B is reportedly "missing" in Punjab. The paddy was given to rice shellers for milling by various state procurement agencies in recent years. In the process, either this paddy was "misappropriated" or the rice was never handed back to the agencies concerned. The procurement agencies lodged hundreds of FIRs in all 17 districts. According to the information, paddy estimated worth Rs 780 M is missing in the Punjab State Warehousing Corporation record, Rs 900 M from Markfed and Rs 750 M from the Punjab Civil Supplies Corporation. (THE TRIBUNE 100802)

**Farmers' involvement in storage** Dr RP Singh of Punjab Agricultural University has demanded that the costs of storing grains should be passed on to farmers as additional procurement price for encouraging them to store grains. (THE TRIBUNE 200702)

**AP wants more procurement** AP govt has demanded that the FCI should raise the % of rice procured in AP from 50% (actual rice procurement has crossed 60%) to 75%, bringing it at par with Punjab, Haryana, Orissa and Delhi. This will mean an additional expense of Rs 20 B, not including Rs 2.2 per kg for handling and storage of the grain. (INDIAN EXPRESS 220702)

**Ambanis for Grain trade** The Ambanis have submitted their EOI for grain trading, transportation and storage business with an initial investment of Rs 10 B. (BUSINESS STANDARD 090702)

**Global Forecasts** All figures below are from forecasts by the London based International Grains Council.

MT

	Production	Consumption	Trade	Stocks	Stocks with 5 major exporters
<b>Wheat</b>					
2001-2	581	587	107	168	46
2002-3	575	593	103	160	40
<b>Coarse Grains</b>					
2001-2	891	904	106	157	72
2002-3	905	917	105	145	67

(BUSINESS LINE 040702)

## AGRICULTURE

### Agriculture and Population Growth Rates in India

Period	Agriculture Growth Rate (%)	Population Growth Rate (%)
1951-2 to 1961-2	2.70	1.95
1961-2 to 1971-2	2.40	2.20
1971-2 to 1981-2	2.23	2.24
1981-2 to 1991-2	2.95	2.13
1991-2 to 2001-2	3.08	2.13
<b>1951-2 to 2001-2</b>	<b>2.95</b>	<b>1.92</b>

In 15 out of the total 50 years in this period, the agricultural growth rate was negative, showing drought conditions. (BUSINESSLINE 130702)

**Exports** Exports from the Agriculture sector has gone up from Rs 28.21 B in 1991-2 to Rs 107.7 B in 2000-1. Indian Agro export rose by 78% to \$42 M in FY02 as compared to the previous year, when it stood at \$23M. Dairy Products alone have grown by 32% from \$23 M (2001) to \$ 31 M. India's foodgrain exports touched a record level of 7.56 MT during 2001-2 and earned foreign exchange of Rs 40 B. The previous high was 2.8 MT in 1996-7. Earnings on wheat exports were \$279 M (\$ 91 M in the previous year) and on sugar and molasses \$ 374 M (\$ 111 M), both due to export subsidies. On the other hand, the import of pulses went up 500% from \$109 M (0.35 MT import) to \$ 662 M (2 MT import). This is partly because the pulses production in 2000-1 was 10.7 MT, down from 13.4 MT the previous year, but then went up to 13.5 MT in 2001-2. (THE ECONOMIC TIMES 020702, THE HINDUSTAN TIMES 030702, BUSINESS LINE 060702)

**Crop diversification in Punjab** The interim report of the Committee on Diversification and Reorientation of Agriculture in Punjab has suggested that 1M Ha each of kharif cultivation of rice and rabi sowing for wheat be replaced with high value crops such as oilseeds and pulses. A 'crop adjustment programme' has been

proposed to compensate farmers who make the switch, with the state govt seeking the central grant of Rs 12.80 B. The Johl Panel reckons that such a shift will reduce the total rice and wheat output by 8 M tonnes, saving the centre around Rs 70 B for procurement at MSP and Rs 20 B annually for handling, storage and transport plus losses due to wastage. In Punjab almost 97% of the total cultivable area is under the plough, 95% of farmlands are irrigated (compared with national average of 30%); and rice and wheat yields are nearly double the national average. Per capita availability of foodgrain is over 900 kg compared with all India level of 200 kg. However, the share of agriculture in the state domestic product has slumped from 41% to 24% over the last three decades. Public investment in agriculture has declined drastically since the mid-1980s. (EPW 200702 p-2969)

**India Organic Food Logo** Apeda has floated the country's first 'India Organic' logo. Organic food consumption around the world has grown by around 25% per year in the last ten years and is expected to reach 15% of total food consumption by 2005. India already has an accreditation system in place for organic foods that is part of the National Programme for Organic Production that includes certifying organic farms, products and processes as per the National Standards for Organic Products. The official website [www.india\\_organic.info](http://www.india_organic.info) contains information about an international conference being organised.

➤ **Organic Cotton** According to Centre of World Solidarity (Hyderabad), organic cotton grown without pesticides gives better returns than the hybrid and chemical based farming. About 0.5 M Ha around Nagpur grows organic cotton without use of pesticides. (THE ECONOMIC TIMES 270702, SARVODAYA PRESS SERVICE 260702)

**India's Agriculture 'Subsidies'** Latest estimate of agricultural subsidy given by OECD countries during 2001 was \$311 B, representing 1.3% of the GDP of the OECD area, 70% of which went as direct payment to producers. Contrast this with the India's agricultural subsidy being less than one per cent and only a small part of which benefited the producers. In India most of what is accounted as food subsidy is largely expenditure relating to procurement and storage of foodgrains. (BUSINESS LINE 080702)

**Agriculture policy in J&K** The J&K govt has formulated an agricultural policy with emphasis on sustainable agriculture based on the efficient use of natural resources. (THE TRIBUNE 180702)

**FDI In Tea** The Central govt's recent decision to allow 100% FDI in tea plantation has sent a contrary signal that it favours further corporatisation of landholdings. Govt. has stated that more farmland for estate can be acquired by tea MNCs with the approval of concerned state govt. This is likely to speed up further

corporatisation of farm holdings, displacing many farmers and making a mockery of the national agriculture policy. It also can mean that the govt intends to gradually move to farm corporation covering other crops as well. The forex earning through export of tea in 2001-2 has declined by 8.38% to only \$ 358.72 M. It is high time that tea companies embark upon selling off their large estates to farmers. The tea companies can enter into contract farming with tea growers and thereby cut down their huge costs in maintaining large estates. (FINANCIAL EXPRESS 080702)

**Farmers suicide in Bihar** 11 farmers have committed suicide in villages around Patna over the past 4 months due to rotting of onion crop. Bihar has failed to implement the crop insurance schemes fully. (RASHTRIYA SAHARA 100702)

**Credit to Small farmers Decline** Union minister of state for Agriculture agreed in Parliament that even as number of small and marginal farmers are rising, credit given to them is on the decline. (RASHTRIYA SAHARA 270702)

**GM food is unsafe** According to the report published by the UK's Food Standards Agency, genes inserted in GM crops are finding their way into human gut bacteria. GM crops have antibiotic-resistant marker genes inserted in them, and there are fears that if material from these marker genes passes into humans, people's ability to fight infections may be reduced. This research was commissioned by the UK govt, as part of a project "Evaluating the risks associated with using GMOs in human foods." It was described as "insignificant" by the agency but as "dynamite" by Friends of the Earth. The study revealed that volunteers who ate one meal containing GM soya had traces of the modified DNA in bacteria in their small intestines. The research contradicts repeated claims by the GM industry that gene transfer from foods to humans is extremely unlikely. It also raises the possibility that millions of people may already have GM bacteria from food they have eaten. The research report suggested that this transfer may have 'reflected previous exposure of the subjects to genetically modified plants'. But experts claimed the possibility of eating GM crops containing antibiotic resistance genes raised 'serious concerns'. "Direct toxicity may be rapidly detected once the product enters the marketplace, but carcinogenic activity or toxicity caused by interaction with other foods would take decades to detect, if ever... (and) the magnitude of harm caused by a widely consumed toxic food would be much greater than that of any single drug." (Daily Mail, The Guardian 170702)

**Sen panel moots MSP rationalisation** The high level committee on long term grain policy headed by Prof. Abhijit Sen, has recommended the continuation of the existing MSP based system of open ended procurement of foodgrains by the FCI, even as it has

called for rationalising the MSPs to reflect actual 'C-2' production costs incurred by farmers. The C-2 costs cover all cash expenses borne by the farmer on seeds, fertilisers, pesticides, electricity, interest on crop loans, cost of hired labour and machinery, etc. The report further sought that the recommended MSPs be made statutory and CACP should be empowered as a statutory body. (BUSINESS LINE 010802)

**GM crops lead to super weeds** For the first time, researchers have demonstrated that foreign genes from a genetically engineered crop plant can migrate into wild plants in a natural environment. The study shows that wild weeds can incorporate bioengineered genes, potentially making the weeds stronger and more resistant to pests. (www.agbioindia.org)

**Area under cultivation declines** The area under cultivation in Goa is decreasing every year and as for the year 2001-2, the area under cultivation is 0.133 M Ha. Giving the talukwise area under cultivation, he said, for the year 1999-2000, the total was 0.142 M Ha, for 2000-1, it was 0.141 M Ha. The area under horticulture was 10 000 Ha. (THE TIMES OF INDIA 230803)

## SUGAR

**Sugarcane SMP raised in Drought** The statutory minimum price of sugarcane for 2002-3 has been fixed by the Central govt at Rs 645 per T, as against Rs 620.5 in the previous season. The new SMP linked to a basic recovery of 8.5% subject to a premium of Rs 0.076 per T for every 0.1% increase above that level. This happens when global sugar prices are down, India's stocks are rising and India is unable to export sizeable quantity of sugar. This also happens in the worst drought producing months when it is known that sugarcane is one of the most water intensive crops. (THE ECONOMIC TIMES, BUSINESS LINE 310702)

**Rs 800 M sugar scam in Maharashtra** An alleged fraud of around Rs 800 M involving a dozen sugar cooperatives connected with five ministers and three MPs from Maharashtra rocked the state legislative council. The Minister of state for cooperation said that the Union govt, too, was initiating action against the guilty cooperatives. He said the 12 sugar factories had sold some of their stocks to exporters, who in turn had sold the sugar in the domestic market instead of exporting it. The difference of rate between the sugar export price and the domestic price was Rs 1.20 per kg. It was estimated that nearly 28 000 T of sugar was involved in the shady transaction. (THE TIMES OF INDIA 080802)

**Private sector to take over Bihar sugar mills** Management of 15 sugar mills owned by the Bihar State Sugar Corp will be handed over to private sector following poor performance and losses over the last few decades. The corp was sick for quite sometime and

depended on budgetary support for subsistence. BSSC owes a huge amount to sugarcane growers, who supplied cane to the mills and the Corp continued to defer payments. (BUSINESS LINE 120802)

**Gasohol to be mandatory in 8 states from 2003** The sale of gasohol would be mandatory in 8 states and 4 Union Territories from January 2003, said union Petroleum Minister. Petrol mixed with 5% ethanol is to be used as gasohol. The states where the norm will apply are TN, UP, Haryana, Gujarat, Karnataka, Maharashtra, AP, Punjab and UTs of Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Pondicherry. Six plants are to be set up for the purpose, including three in UP (Kanpur, Najibabad and Gonda), one in AP and two in Punjab. (RASHTIRYA SAHARA 120702, BUSINESS LINE 140802)

**Govt approves sugar buffer stock** Union food Minister has approved the creation of a 2 M T buffer stock of Sugar. The sugar industry had been demanding the creation of a buffer stock for the past few years to stabilise the sector and help it tide over the problem of plenty. In 1982, under a long-term policy for buffering operations, the govt had allowed stocking for sugar development programme through the sugar development fund. In fact, since 1982, buffer stocks were created on four occasions. (BUSINESS STANDARD 290802)

**Cane arrears cross Rs 23 B** Sugar mills in the country owe farmers a staggering Rs 23.40 B (of the total dues of 132.29 B) as payment arrears for the cane supplied during the 2001-2 crushing season. Over Rs 10 B is said to be owed to cane farmers in UP alone. (BUSINESS LINE 070802)

## CONTRACT FARMING

**Revenue Ministers skip controversial issues** A two-day National conference of State Revenue Ministers which skimmed over the crucial issues of allowing leasing of agriculture land for contract farming and the controversial draft R&R Policy. The Minister of Rural Development, did talk about the need to bring in legislation for R&R of people affected by projects, but the subject did not form part of the official agenda. The meeting also took no decision on the proposal for legalising contract farming which might threaten the small and marginal farmers' rights to establish their right over their land once the lease runs out. The conference recommended that States expedite allotment of surplus land to the landless and, wherever necessary, bring in legislation to ensure that the land already allotted to the landless was not re-sold then it should come back to the govt. The conference endorsed the proposal for "online mutation and update of land records" and issuance of copies of Records of Rights through computers, with legal backup. (THE HINDU 220802)

**CF for Oilseed in Punjab** The edible oil industry has taken up contract farming on 250 Ha in Fazilka. The Solvent Extractors Association of Punjab is now in the process of finalising the project with Punjab Agro Industries Corp. Only 44 out of 80 oil mills are working and the rest have been forced to close down due to fall in the supply of oilseeds and higher taxes in Punjab. MSP on grains has increased by over 156 % against 91% for oilseeds during the past decade. The oilseed production has decreased from 0.289 MT in 1996-7 to just 0.089 MT in 2001-2. Area under oilseeds had increased from 0.185 M Ha in 1960-1 to 0.248 M Ha in 1996-7, but declined to 0.087 M Ha in 2000-1. Industry is proposing that sugar mills and solvent extraction plants should be allowed to sign contract farming with farmers and PAIC can ensure timely and remunerative returns to farmers. (THE TRIBUNE 150702)

**CF for Soya in MP** The MP State Cooperative Oilseed Growers' Federation Ltd has initiated contract farming in organic soyabean, in an area of 3500 Ha in the Malwa belt of Khargone and Dhar. This area has been certified as organic compliant by SKAL, a Netherlands-based agency accredited by the APEDA. (THE BUSINESSLINE 290702)

**Barley in Belgaum** Ugar Sugar Ltd has initiated contract farming in Belgaum region of Karnataka, now also extended to Bijapur district for cultivation of Barley as an alternative to Sugarcane for alcohol production. It is claimed that Barley will need much less water than sugarcane, that it can grow in saline water regime and gives a yield of 3.0-3.8 T per Ha. The company needs 4 000 Ha under Barley at any point in time and pays Rs 7.5 per kg to farmers. (BUSINESS LINE 010702)

**CF for Cotton in Gujarat** The Union Ministry of Textiles is has tied up with five villages in Bharuch to take up contract farming, also considering some villages in Saurashtra. (BUSINESS LINE 250702)

## POWER OPTIONS

**Eastern Region can export 1300 MW off peak power** According to Union Power Secretary, the eastern region can export upto 1300 MW off peak power to other regions through the new network of links being set up by PGCL. (BUSINESS LINE 300702)

**Energy Conservation Act and BEE operationalised** The Minister for Power has desired that the Bureau of Energy Efficiency should make all out efforts in guiding the industry to achieve vast energy saving potential through voluntary measures and self-regulation. The govt enacted the Energy Conservation Act with effect from March 1 2002 and established the BEE under high-powered Governing Council under the chairmanship of Minister of Power. The Governing Council of BEE has 26 members including Secretaries of Ministry of Power, Coal, Petroleum & Natural Gas,

Non-conventional Energy Sources, Departments of Consumer Affairs and Atomic Energy. With the first meeting of the Governing Council of the BEE, the Energy Conservation Act as well as the BEE has been operationalised.

➤ Under the Indo German Energy Efficiency and Environment Project, an exercise to adapt Indian codes for energy efficiency with prevailing international codes is being contemplated and interested experts have been invited to send their resume. (THE TIMES OF INDIA 050702, PIB 080702)

**9.8 MW wind plant in Rajasthan** A 9.8 MW Rs 425 M wind power plant, sponsored by the Rajasthan State Mines and Mineral Ltd has been inaugurated in Jaisalmer. The plant has 28 towers of 70 m ht in a 140 Ha area. (THE HINDU 070702)

**150 KW SPV for Lakshadweep** BHEL has commissioned a 150 KW Solar Power plant. It will set up three more plants of 150 KW and seven more of 100 KW grid interactive plants in the islands at a cost of Rs 180 M.

➤ Punjab govt plans to set up about 40 solar lanterns in each of the 3800 villages of population less than 500 in the first phase at a total cost of Rs 1.2 B, with 25% contribution to come from the village panchayats. (BUSINESS LINE 160702 THE TRIBUNE 250702)

**Bagasse power rates** MERC has fixed the tariff for power from non fossil fuel based co-generation projects at Rs 3.05 per unit. The order is likely to give a fillip to the Bagasse based plans of sugar cooperatives in S Maharashtra. (BUSINESS LINE 170702)

**Tumkur for first biomass project** The UNDP has chosen Tumkur district for India's first biomass energy project. Aimed at ensuring non-stop power supply to villages in S Karnataka by creating energy through biomass, the pilot project will be taken up in 25 villages during five years of the first phase. The main idea is to reduce pressure on the grid. Besides, villages have irregular supply of power. With this, power supply is in their hands. The Rs 400 M project will be jointly funded by the Global Environment Facility and Indo-Canadian Environmental Fund through UNDP. There will be gasifier plants in every village. The villagers will maintain the community gasifier plants. The money used for paying electricity bills will be used for maintaining biomass plants. (THE TIMES OF INDIA-Bangalore 130702)

**Renewable energy to rural areas** 80 000 villages out of nearly 6 00 000 are not electrified. The ministry of non-conventional energy sources estimates the cost of electrification per village using non-conventional energy sources at Rs 2 M (for 4 hours of power per day). This would require an investment of Rs 160 B. The cost of providing grid connections to so many villages is far higher. Even in villages that are connected to the

national grid, the proportion of households that are connected at an all India level is about 52%. Orissa has the highest proportion of unconnected households at 86%. Regionally speaking, the northern region, with 70% connectivity, has the best record. Where power is available, quality is serious problem. The all India average brown-out per day or the number of hours in which electricity is not available on the "wire" is 9 hrs. The monsoon season average is 15 hours a day and the non-monsoon average is three hours a day. But today, conventional producers of power are not able to provide reliable, predictable and good quality of power to rural areas. Production units based on renewable sources of energy have a lower gestation period of 18-24 months; they also require relatively less capital. They produce power close to consumers and thus reduce T&D losses. Complete cost recovery is possible in 8-10 years. (BUSINESS STANDARD 060802)

**Durable bulbs for saving electricity** The Union Ministry of Science and Technology is in the process for developing of long durable bulbs and tubes that would also save electricity. The average age of this type of bulbs and tubes would be about 15 years and it would also consume 15 times less electricity than conventional bulbs. These bulbs are also feasible in low voltage solar power system. The ministry is taking help from an Indian company D-core Science & Technology and a Russian company Nautchky Centre for this. According to National Research Development Corp, this electrical equipment is based on light emitting diode technique. >From this technique electric energy is directly converted to light energy while in conventional bulbs, 80% of energy is lost for heating to filament. (RASHTRIYA SAHARA 160802)

**Excerpt from PM's inaugural speech at the International Conference on Strategies for Energy Conservation** It is well known that the energy consumption of countries are closely related to their levels of development. However, energy requirement is one thing, and energy supply is another. For too long, the world has focussed on increase in energy supply, including, in particular, through electricity generation. However, there is now increasing realisation that most grid based power supply, transmission, and distribution systems are wasteful, and by saving energy, more of it can be delivered at lower cost to the user. Similarly, energy is useful, not in itself, but for the services it can provide. If the services provided by energy use can be delivered using less energy, in many cases this would be economically beneficial. Again, almost all-conventional energy systems involve adverse environment impacts on local, regional and global scales. If energy is conserved in generation, transmission, distribution, and end-use, all such environmental impacts would also be reduced. India's cost-effective energy conservation potential has been estimated by the Planning Commission at 23% of total

commercial energy generated. In the power sector, our peak and base load shortages are 8 % and 13 % respectively. A national movement for energy conservation can significantly reduce the need for fresh investment in energy supply systems in coming years. A statutory Bureau of Energy Efficiency has been established. The Bureau has prepared a comprehensive Energy Conservation Action Plan. I call on all govt organisations to reduce their energy consumption by 30% in the next 5 years. We look forward to energy savings of 20% over the next five years from the private sector. (PIB 230802)

### SMALL HYDRO

**Micro hydro for jobless in HP** Himachal Pradesh has decided to give preference to educated unemployed youth and cooperative societies to take up mini and micro hydro projects. DPRs of all identified micro and mini hydro projects will be prepared in advance. (THE TRIBUNE 030702)

**Inefficiency galore!** The implementation of 3 MW Holi HEP in Bharmour tribal area of Chamba district has shown that the small hydro is far from priority for the govt. The implementation of the then Rs 120 M project began in 1995 and the cost has already gone above Rs 250 M and the project is yet to start generation. The project that has already been hit by floods during construction and consequent washouts, is being held up as the few foreign components used in the HEP are proving to be a snag. (THE TRIBUNE 060702)

### POWER 'REFORMS'

**Consultants make a killing in Orissa World Bank Power Project** The Orissa govt paid Rs 3.06 B as consultancy fee as part of the Rs 13 B World Bank funded power reforms project. The project is now in doldrums, with mounting losses of the distribution companies, rising T&D losses and so on. (BUSINESS STANDARD 060702)

**APDRP approvals** The Power Ministry's APDRP monitoring committee has decided to provide funds to state power utilities under APDRP without insisting on govt guarantees if the utilities arrange for an escrow account for the revenue streams from the specific towns or circles. The committee approved projects for all 63 distribution circles amounting to Rs 4.24 B. The committee has also approved an incentive scheme for the state govts under which the centre will provide grants to states matching to the extent to which the SEBs are able to reduce their losses. The power ministry has also decided to allow private distribution companies to tap funds allocated under APDRP. (THE ECONOMIC TIMES 200702, BUSINESS STANDARD 220702)

**Bungling in DVB Privatisation** In May 2001 DVB's fixed assets were estimated at Rs 54 B. Six months

later, the figure was scaled down by about Rs 12 B. This is nothing short of scandal.

➤ Power situation on Delhi suddenly deteriorated soon after privatisation. Long and unprecedented black outs across the city and riots were witnessed for weeks after privatisation came into effect on 010702. Deterioration in power situation also led to loss in water supply situation.

➤ **No power shortage for Delhi** General Manager of Northern Load Despatch Centre has said that this year, not even once has the Northern Grid asked Delhi to shed power because of shortage. He said, in fact Delhi was already overdrawing power. Only reason Delhi grid is unable to satisfy demand is that its own T&D system is unable to handle more power than it is doing down, which is 3100 MW at peak hours. (Edit in BUSINESS STANDARD 030702, THE TIMES OF INDIA 160702, many Delhi newspapers throughout July 2002)

**Power Grid favours Berlin distribution model** The CMD of the PGCIL, has come out with a new metering and billing system for Delhi, which will drastically reduce the aggregate transmission and commercial losses in a much shorter duration and with lesser manpower. Arguing that about 50% of the Delhi's power was consumed by nearly 10 000 of the about 2.5 M consumers, he said these people should be provided uninterrupted electricity on a real time basis, with the energy consumed being monitored. Power supply to them should be through the close loop supply system, so as to ensure uninterrupted supply of electricity to these privileged consumers. While the bulk consumers like industrial units and utilities would be assured of quality and uninterrupted electricity supply, for the DISCOMs the real time energy supply would help them reduce AT&C loss. As for the rest of the consumers their meter should be read only once a year the average billing should be sent on a monthly or twice a month basis, as suitable to DISCOMs. (THE HINDU 150702)

**Loss of SEBs up 300% in five years** According to a report on progress of SEBs by Planning Commission, the losses of various SEBs have mounted 300% in five years. The loss of SEBs was Rs 113.05 B in 1996-7, which has risen to Rs 331.77 B in 2001-2. The average T&D loss was 24.53% in 1996-7, which has risen to 27.8% in 2001-2. The domestic subsidy was Rs 43.86 B in 1996-7, which has risen to Rs 122.38 B in 2001-2. The supply deficit was 18% in 1996-7 that has reduced to 12.6% in 2001-2. The agriculture subsidy was Rs 304.62 B in 2001-2. The cost of power supplied to consumers works out to be Rs 3.5 per unit, whereas the average tariff collected is Rs 1.95 /unit. The average agricultural tariff is Rs 0.42 per unit. The share of domestic and agricultural consumption in total energy sales was 50.1% in 2001-2 against 49% in 1996-7.

➤ The Rural Electricity Corp has recorded Rs 3.38 B net profit in 2001-2, same as the net profit in 2000-1 of

Rs 3.37B. The turnover has increased 17.26% in 2001-2 compared to 2000-1.

➤ **Power Tariffs** The average power tariff in the country has gone up from Rs 1.65 in 1996-7 to Rs 2.4 per unit in 2001-2. Power tariff is lowest in Sikkim at Rs 1.15 and high at Rs 3.67 in Assam. (THE HINDU 200702, BUSINESS LINE, RASHTRIYA SAHARA 220702)

**Twelve states accept relief scheme to SEBs** 12 state govts have accepted the financial relief scheme to SEBs aimed at one-time settlement of the boards' outstanding dues to central power utilities. Nine more states have also agreed to accept the scheme approved by the empowered group of CMs and the states are expected to sign the modified tripartite agreement. If the SEBs don't default on their current dues and adhere to the performance milestones, they would be paid by the central power utilities bi-annual cash incentive equalling 3% of the value of bonds applicable from the first year, 2.5% in the second year and 2% in the third and fourth years. Effectively, the incentive would add up to 19% of the total value of the securitised, tax free bonds, giving a benefit of about Rs 50 B to the boards. This is over and above Rs 71 B the SEBs would be subsidised with the waiver of 60% of the interest on outstanding dues. The disincentive for non-adherence to the scheme includes debit from state govts accounts with RBI of the future defaults of more than 16 days. (THE ECONOMIC TIMES 270702)

**MP to set up five power firms** The Madhya Pradesh cabinet has endorsed the creation of five separate independent companies for generation, transmission (one company each) and distribution (three companies) of power. The Eastern Power Distribution Company (Rewa, Jabalpur and Sagar divisions), Central Power Distribution Company (Gwalior, Bhopal, Hoshangabad and Chambal) and the Western Power Distribution Company (Indore and Ujjain) will be responsible for distribution in three regions of the state. MPEB will continue to function with its assets and liabilities. The MP regulatory commission has questioned the formation of the five companies and asked MPEB to furnish details of the same. (BUSINESS STANDARD 030702, 040702)

**India-Finland MoU** India and Finland have signed an MoU to share expertise in energy and industry. The Indian delegation under the leadership of the then Power Minister Suresh Prabhu signed the MoU with Finish minister for trade and industry. Finland has achieved considerable success in tapping and utilising the heat of coal from the ignition point to the optimum level required for electricity generation at its thermal power units and on using biomass for "decentralised generation". (THE TIMES OF INDIA 090702)

**Firms indebted to MPSEB** In Madhya Pradesh, 82 companies together owe more than Rs 5 B to the debt ridden MPSEB. There are 86 companies, which

individually owe over Rs 2.5 M to the cash strapped SEB. These companies include ACC (Katni Unit), J C Mills (Gwalior), Dhar Cement, Hukumchand Mills (Indore), Grasim Industries (Nagda Ujjain), Prism Cements (Satna), Diamond Cements (Narsinghar and Imali), J P Bela Cement (Rewa) and Century Denim (Khargone). (BUSINESS STANDARD 220702)

**10<sup>th</sup> plan targets for Rural Electrification** The Union Power Ministry has set a target to electrification to whole country up to 2012. The govt has set a target to electrification of 62 000 villages in during 10<sup>th</sup> plan. The remaining 18 000 remote villages would be provided electricity through non-conventional energy sources like solar, wind, micro hydel and biogas. (RASHTRIYA SAHARA 300702, Update 5:p 38)

## POWER POLICY

**Karnataka 10<sup>th</sup> plan doubtful** The achievement of projected capacity addition by Karnataka in 10<sup>th</sup> plan is highly doubtful. The tariff of the 290 MW Almatti project is too high at Rs 4.6 per unit, including Rs 1 per unit royalty to KBJNL. However, there are questions being raised if KBJNL should be allowed that royalty. But the state govt is already charging royalties from micro hydro operators in the state. Hence waiver for Almatti could create a precedent. Moreover, KBJNL is expected to raise debt services from this royalty. The 320 MW Mahadayi project is yet to finish EIA, get MEF clearance and is already in doubt due to objections of Goa. (BUSINESS LINE 160702)

**Kerala power tariff up** The Kerala Govt has imposed a 'thermal surcharge' of 50 paise per unit on all categories of power consumers and has also "rationalised" the tariff structure for various slabs in a bid to contain the mounting losses of KSEB. The surcharge and rationalisation measures will bring in Rs 350 M each, raising total addition revenue of Rs 700 M for KSEB. (BUSINESS LINE 290802)

## POWER GENERATION

**41 000 MW capacity addition target for 10<sup>th</sup> Plan** The power ministry has revised downwards the target for the 10<sup>th</sup> plan to 41 000 MW. Central public sector units, including the NTPC and NHPC would contribute over 50% of the new capacity at 22 832 MW. The state sectors had been set a target of 11 100 MW. Capacity addition from the private sector had been paged at over 7 000 MW. The minister said that the public investment would be the main source and that Plan outlay for the power sector had been hiked by 270% for 2002-3.

➤ **CRISIL disagrees** A study by the CRISIL has revealed that the 10<sup>th</sup> plan capacity addition target in the will fall short by 13 000 MW. While a govt set a target of around 41 000 MW, the study says that the actual addition will be in the region of 29 000 MW. (POWERLINE Aug 02 p-30, BUSINESS STANDARD 090702, Update 4, p 36)

**NTPC – TNEB pact for coal-based project** The TNEB and the NTPC have signed a MoU to jointly set up a Rs 40 B, 1 000 MW project at Ennore port. (BUSINESS LINE 130702)

## POWER FINANCE NEWS

### Foreign firms pulling out of power projects

According to Union Power Ministry, most of the foreign companies who had planned massive investments in Indian power projects have pulled out. Mirant Asia Pacific Limited has withdrawn from 6 x 660 Hirma Thermal Power Project. In the case of 1 070 MW Korba East Thermal Project the Daewoo Power (India) gave a termination notice to the MP govt citing inability of the SEB to provide payment security. The 420 MW Bakreshwar thermal power project in W Bengal where the joint venture company formed to implement the 4<sup>th</sup> and 5<sup>th</sup> stages has been wound up because of the exit of Ogden Energy Asia Pacific. The 400 MW Maheshwar HEP in MP also saw the pulling out of Bayerwerk View of Germany and Ogden Energy of the US. Earlier, Congentrix Energy Inc. had withdrawn from the Mangalore Thermal Power Project. Electricite de France, a French power company had withdrawn from the 1 082 MW Bhadrawati thermal project in Maharashtra, citing inordinate delay in getting clearance from various authorities and lack of proper arrangements for payment security. The foreign partner involved in 2X125 MW Gouripoer TPS of W Bengal Power Development Corp has also left.

➤ **PSEG to quit** The US based Public Service Enterprise Group has decided to quit the power business in India due to what it called local regulatory issues. PSEG has a 20% stake in the 330 MW PPN project in Tamil Nadu and a 74% stake in the 200 MW Tanir Bhavi Barge-mounted project in Karnataka, both Naphtha based projects commenced production in 2001. PSEG's total investment in India is around \$100 M. (THE HINDU 080702, BUSINESS LINE 200702)

**National grid funding plan firmed up** The Union Cabinet has approved the financing scheme for Rs 770 B national grid project and the power ministry is set to approach the Union Cabinet for an infusion of Rs 34 B for part financing the non-viable lines. As per the plan of the power ministry, Rs 380 B will be required for the 10<sup>th</sup> Plan, of which Power Grid Corp will generate Rs 160 B, while Rs 110 B worth of projects are expected to be executed by private players and the rest Rs 110 B for non-viable power highways to come from govt/PGCIL equity and debt. Rs 390 B will be needed during the 11<sup>th</sup> Plan period, of which Rs 270 B is to come from Power Grid Corp and the rest from private sector. The private players will be adopting the independent power transmission company route.

➤ **PowerGrid's East-South Transmission Line** The 1367 km East South (Talcher to Kolar in Karnataka) inter-connector transmission system – the largest

HVDC in the country and the fourth largest in the world – may have to shell out Rs 6 B extra as the project had enjoyed undue benefits assuming World Bank funding. However, since the project could not get WB funding as Talcher TPS (Orissa) of NTPC, which was the primary source of 2000 MW power from the east for transmission, failed to satisfy WB's R&R and environmental norms. This will increase the wheeling charges, which are already 20% of the tariff. The transmitted power is to be shared among Karnataka (466 MW), Tamil Nadu (636 MW), AP (499 MW), Kerala (330 MW) and Pondichery (69 MW). Transmission loss would be 2% upto Kolar and 7.5% by the time power reaches the distribution point. (BUSINESS STANDARD 130702, THE ECONOMIC TIMES 250702)

**REC to fund generation, transmission** Rural Electrification Corp has decided to fund generation and transmission projects of any size, thus easing itself out of the earlier restraint of having to finance only projects of 25 MW and below, besides sub-transmission projects in towns having a population of less than 100 000. REC also received the Power Ministry's nod to float a domestic initial public offering of Rs 2 B in next five months. (BUSINESS LINE 270702)

**PFC loan for 3 SEBs and GMDC** GMDC has been sanctioned a loan of Rs 5 B for constructing a 250 MW lignite based power project in Kutch. UP Rajya Vidyut Nigam has been sanctioned an amount of Rs 3.35 B for R&M of thermal power stations. MPSEB had sought Rs 1.19 B for its Marikheda HEP of 40 MW located in Shivpuri. Rs 1.83 B has been sanctioned to PSEB for R&M of Power projects. (BUSINESS LINE 140802)

**Lenders seek physical cover** Lending agencies like REC and PFC have now begun insisting on physical asset cover from the borrowers as the quality of payment security mechanisms like escrow deteriorates due to grid flight and rising T&D losses. Captive generation that leads to grid flight is so rampant that in Karnataka, for example, the captive generation is close to 2500 MW. (BUSINESS LINE 010702)

**DVC lines up Rs 1.70 B bond** primarily to replace high cost central govt loans. (BUSINESS STANDARD 030802)

## YOUR RESPONSES

UPDATE issues are very informative. The situation of land, water and environment in Gujarat is rapidly deteriorating. The politicians are all making issues out of non issues in their race for power and real problems of people are not on their agenda. If this goes on for long, Gujarat will regress by at least ten years.

Shamjibhai Antala, Dhoraji, Gujarat

Do continue to publish UPDATE as it helps people who are not fully involved in various relevant issues.

Jyotibhai Desai, Vedchhi, Gujarat

UPDATE is an invaluable publication. I am very glad to receive them and would like to continue as a subscriber.

Sunil Sen Sarma, Former Director, Geological Survey of India, Kolkata

Chhattisgarh and Action Research Team has identified 8 rivers as problem rivers which have increased the conflict among river basin people and those who polluted or controlled the river. E.g., 23 km stretch of Sheonath river has been sold to a private company. Jindal Steel is taking out water from Kelo River in Raigarh where people are not getting sufficient water for their uses. The iron-ore from Belladilla mines are dumping in Dakini river due to which water have become red in colour and not usable for people living in the basin. The people at Arang in Raipur district are facing problems since decades. Majority of people living in the basin are suffering from Filaria and no precaution measures are taken by the state. There are several different problems faced by different river basin habitats. We are planning to develop an integrated action plan to assure the peoples rights over their rivers.

Gautam Bandopadhyay, Raipur

UPDATE is informative. I liked the report of your interview on the Ganga Cauvery link in the Hindu of Oct 21, 2002. More systematic treatment of the issues involved based on critique of both K L Rao's proposal and Dastur's Garland canal is needed. It would be good if the UPDATE also gives a selection of properly argued and documented viewpoint from various perspectives. Please also give more emphasis to documentation.

Prof (Emeritus) A Vaidyanathan, MIDS, Chennai

UPDATE is an excellent effort and very useful to say the least. However, there is a sense of overload of information, which I think can be done away with. I also feel that there needs to be some structuring of the update.

Pankaj Sekhsaria Kalpavriksh, Pune

UPDATE Sept 2002 is a serious, in-depth update. Congratulations for publishing the comments of Dr. Anwaruddin Choudhury - consultancy on environment have turned into a big racket with EIAs conducted by managers rather than scientists of relevant background, only to serve the interests of power aspirants who wants to go ahead with ideas formed at remote levels far detached from the ground realities and serving the ends of hidden agendas. It gives a refreshing comfort to read the resolutions of Kerala workshop on implications and future of WCD report.

Gujarat wants to soak the entire parched state with water far in excess to its natural share by snatching it from the catchment areas occupied by people who cannot do not a voice among the decision makers. Learned planners and thinkers of this country talk in the same breath about Karnataka-Tamil Nadu dispute on Kaveri water and the possibility of building a Ganga Kaveri link. It is absolutely essential to set right the policies at the local levels.

Dilip Fauzdar, Delhi

UPDATE is such a unique collection of news/views on water! Please accept my congratulations for these efforts. I would like to share information with you, which may be useful for next issue of Update, that Chhattisgarh government has privatised water supply for industrial purpose. Now some contractors are planning to divert and store river and tank water for their clients, in the process many basic natural and human rights are being violated.

Pankaj Chaturvedi, Delhi

Thanks for the UPDATE issue, which I've been receiving regularly. What I like particularly is the range of information I could gather in one publication. This helps me draw a fair picture of the present dams scenario here in India. The NE feature is an additional benefit.

Ramananada Wangkheirakpam, Manipur

This Update is really good and can become more meaningful if developments on privatisation of water (efforts of MNCs vis-a-vis Govt and resistance shown by people) are more highlighted.

Pawan Rana, Uttaranchal