# Dams, Rivers & People

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A Memorandum to the Prime Minister of India

# LINKING OF RIVERS: NEED FOR RECONSIDERATION

**Introductory** The idea of the `linking of rivers', dormant for a long time, has acquired new prominence now, particularly in the context of the acute form that the Cauvery dispute took in the course of the year 2002, as well as the drought that afflicted several parts of the country in that year. In response to a public interest writ petition, the Supreme Court has desired that the project for the linking of the rivers of India be accelerated. The Prime Minister has announced the setting up of a task force to consider the modalities of implementing the project, and declared that it would be taken up "on a war footing". The Leader of the Opposition in the Lok Sabha has welcomed this undertaking.

The project has been the subject of much reporting and comment in the media in recent months. It has been presented by the Govt as a major initiative and the definitive answer to the future water problems of the country, and it has been so hailed by some. However, some others have expressed apprehensions. We, the signatories to this memorandum, feel that this decision is fraught with serious consequences, and that the Govt should carefully reconsider it before proceeding further. Without commenting on the Supreme Court's observations in this case, we shall set forth our reasons for urging a reconsideration of the decision by the Govt.

**Outline of Proposal** Our understanding of the project, derived partly from the Report (Sept 1999) of the National Commission for Integrated Water Resources Development Plan (NCIWRDP) and partly from presentations currently being made by govt agencies, is briefly outlined here for confirmation or correction.

Without going into the history of the idea of the linking of rivers of India, we note that the 'Ganga-Cauvery Link' proposal mooted by Dr. K.L.Rao and the 'Garland Canal' idea put forward by Captain Dinshaw Dastur were examined and found impractical, the former on the grounds of the very large financial and energy costs involved, and the latter because it was technically unsound; and that the proposal now taken up is based on the work that the National Water Development Agency has been doing during the last two decades after its establishment in 1982 in pursuance of the `National Water Perspectives' brought out by the Ministry of Irrigation in 1980. There are two main components in it, namely the Himalayan Rivers component and the Peninsular Rivers component. The Himalayan component envisages a number of links, including some within the Ganga system (Kosi-Ghagra, Gandak-Ganga, Ghagra-Yamuna, Sarda-Yamuna, etc); some between neighbouring rivers in the Brahmaputra system (Manas-Sankosh-Teesta); a couple between those two systems (Teesta-Ganga, and an alternative Brahmaputra-Ganga link); one long link from Sarda to Sabarmati through the Yamuna and Rajasthan; one from the Ganga to Subernarekha *via* Damodar and then on to Mahanadi; and a few others. The general idea is to transfer waters from `surplus' eastern rivers to `deficit' central, western and southern regions. The Peninsular Rivers component again involves a number of links, of which the most important would be those connecting Mahanadi, Godavari, Krishna, Pennar and Cauvery. The idea is to transfer the surpluses estimated to exist in the Mahanadi and the Godavari to the deficit southern basins (Cauvery, Vaigai). Other links in the Peninsular component would include Ken-Betwa, Parbati-Kalisindh-Chambal, Par-Tapi-Narmada, Damanganga-Pinjal, etc. Another idea is the partial diversion of certain rivers flowing into the Arabian Sea eastwards to link with rivers flowing into the Bay of Bengal (Bedti - Varda, Netravati – Hemavati, Pamba – Achankovil – Vaippar).

**Mandate of the Task Force** We note that the Task Force has been asked to examine not the soundness or viability of this project but the modalities of its implementation. Three main difficulties have been recognized: the formidable challenge presented by the accelerated time-frame indicated by the Supreme Court; the magnitude of the financial resources needed (roughly and tentatively estimated at Rs 560000 crores); and the problem of bringing about the necessary political consensus on the transfers involved. The Task Force appears to be concentrating on these three tasks at present. However, there are some prior questions that need to be asked: Why has this project been proposed? How did it emerge? How does it fit in with the national planning process? Is it necessary and feasible, and is it likely to be beneficial on the whole? As these questions seem beyond the mandate of the Task Force, we propose to raise them here.

**Sudden Emergence** The project appears to have suddenly emerged into prominence. If the Govt had been contemplating a monumental project of this kind, there would have been some indications. There were none. The Ninth Plan made no reference to it. Even the Tenth Plan (which lays special emphasis on water and wishes to be regarded as a `Water Plan') refers to many important approaches, policies, programmatic initiatives, and so on, but says nothing about any river-linking project. The Prime Minister's important Address to the National Water Resources Council (1 April 2002) did not mention it. It seems clear that the Govt were not seriously thinking of any river-linking project. The NWDA's proposals were non-starters for various reasons. The Govt's own initial submissions to the Supreme Court were very cautious and lukewarm. The Supreme Court's direction (if its observations can be so regarded) and the Govt's enthusiastic response to it

have changed all that. A project that was not on the anvil has suddenly become the most important undertaking of the Govt. This seems to us to be a bypassing of the planning process.

**National Commission's Observations** Not very long ago the high-level National Commission for Integrated Water Resources Development Plan (NCIWRDP), the first national commission on water, set up in 1996, submitted its Report (September 1999). Its Terms of Reference specifically included `Inter-Basin Transfers' as an item. It reviewed the NWDA's studies. It did not discuss the proposed Himalayan links in detail because the data are classified as confidential, but did observe that the costs involved and the environmental problems would be enormous; that the further expansion of irrigation in the desert areas of Rajasthan would need examination from all angles; that the NWDA's Himalayan component would require more detailed study; and that the actual implementation was unlikely to be undertaken in the immediate coming decades. On the Peninsular component, after a careful examination of the water balances of the various basins, the Commission observed: "Thus there seems to be no imperative necessity for massive water transfers. The assessed needs of the basins could be met from full development and efficient utilization of intra-basin resources except in the case of Cauvery and Vaigai basins. Therefore, it is felt that limited water transfer from Godavari at Ichampalli and Polavaram towards the south would take care of the deficit in Cauvery and Vaigai basins….Though surplus is available in Mahanadi also, the transfer from that river would require much longer link and is in any case not required for the immediate future…." (The Commission then takes note of some uncertainties that may affect the above judgment and says that further studies as to the future possibilities of inter-basin transfers need to be continued.) The decision to embark on this massive project "on a war footing" seems difficult to understand in the light of those observations of the National Commission.

**Rationale of Project** However, there is now a project, and we must consider its rationale. The project is claimed to be the answer to the country's problems of recurring floods and drought in different areas; the generation of hydroelectric power is also put forward as a justification.

Neither flood control nor hydroelectric power calls for a linking of rivers. In the case of hydroelectric power, the usual practice is to postulate a `potential' in some rivers or areas (for instance, Narmada, Brahmaputra, the North-east of India, Nepal) and propose large projects (Sardar Sarovar, Dihang, Subansiri, Tipaimukh, Karnali, Pancheswar, and so on) to exploit that potential. Each such project will have to be looked at carefully, but what needs to be noted in the present context is that while the need for hydroelectric power may lead to the formulation of particular projects in specific locations, it would not by itself take us to the idea of linking rivers. (Incidentally, the linking of rivers or inter-basin transfers would in the generality of cases *require* much energy – normally in excess of what the project might generate – but in this case we are told that the project will be a net generator of large quantities of power: a figure of 30000 MW has been mentioned. That strains our credulity and will need careful examination with reference to each link.)

Similarly, the problem of recurring floods in certain rivers or areas may lead (rightly or wrongly) to the formulation of specific projects with flood control as one of the objectives (or a primary objective) – for instance, the DVC projects, a high dam on the Kosi, and so on - and will not by itself call for a linking of rivers. It must also be noted that opinion on flood control has changed over the years. It is now generally recognized that big dams play only a modest role in flood-moderation; that even in those projects (not many) where flood cushions have been built in, that cushion tends to get eaten into partly by excessive silting and partly by the more powerful demands of irrigation and power-generation; that considerations of the safety of structures sometimes necessitate the release of waters causing `man-made' floods downstream; that by and large, the old notion of `flood control' has to change to the newer ideas of learning to live with floods and minimizing damage; and that this requires a relatively greater reliance on non-structural than on structural measures. By now, this has almost become conventional wisdom. Even if all the river-linking proposals are implemented, the contribution that this will make to the mitigation of the flood problem will not be substantial. Dr. Bharat Singh, a doyen among engineers and the former Vice-Chancellor of the Rourkee University, has observed: "Any water resources engineer will immediately discard inter-linking of rivers as a flood control measure".

As regards drought, we have the answers already. Rajendra Singh has shown in Alwar District in Rajasthan that rainwater-harvesting can be practised successfully even in low-rainfall areas. Earlier, Anna Hazare had brought about a transformation through water-harvesting (along with other measures) in Ralegan Siddhi (which is also a low-rainfall area). The Madhya Pradesh Govt has initiated large Statewide programmes of water-harvesting and conservation. In the water-scarce parts of Gujarat, some good NGOs have remarkable achievements in this regard to their credit. Dhan Foundation has been doing good work in the southern States. The large numbers of tanks in Tamil Nadu, Karnataka and Andhra Pradesh were remarkable water-management systems that have gone into decline, and efforts are on to restore and rehabilitate them. Similar efforts are also needed, and are in progress, in respect of other traditional systems

such as ahars and pynes in Bihar, johads in Rajasthan, and so on.

In brief, the primary answer to drought has to be local; it is only thereafter, and in some very unpromising places, that the bringing in of some external water may need to be considered. Besides, the river-linking project, if implemented, will take water only to a small part of the arid or drought-prone areas; large parts of such areas will remain unserved and will have to meet their needs through the local augmentation of water availability. It was in recognition of the importance of such local, community-led initiatives of rainwater-harvesting and watershed-development that the Prime Minister strongly urged the promotion of such initiatives on a nationwide basis in his Address to the National Water Resources Council on 1 April 2002.

(Incidentally, the project as now outlined essentially envisages the addition of waters to certain existing rivers. The additional waters will thus go to areas that are already being served to some extent by that river or by a canal from a reservoir on that river. How will this benefit the uplands and plateaux that are unserved by the existing rivers or are drastically water-short? A glance at the two maps showing the proposed links does not provide a clear answer to this question. However, it is being claimed that irrigation will be extended to additional areas. This may well be true in the sense that areas unreached earlier in the vicinity of a river or within the command area of a project may now receive some irrigation, but will the waters reach the country's drylands?)

A further point to be kept in mind is that it is not primarily drinking water needs but the large demands of irrigation that lead to proposals for long-distance water transfers, though the waters so transferred may also be used to meet drinking water requirements. Water transfers for irrigation may be proposed either for providing additional water to areas already under irrigation or for extending irrigation to arid or `rainfed' areas. In both cases, difficult questions arise.

In irrigated areas (for instance, the Cauvery basin), the question is whether large demands for additional irrigation water should be unquestioningly accepted and met through supply-side solutions such as large dams or inter-basin transfers, or a serious attempt made to improve water-use efficiency in irrigated agriculture, get more value out of a given quantum of water, reduce the water-demand, and minimize the need for supply-side projects. In the context of the prevailing low efficiency of water-conveyance in canal systems and water-use in irrigated agriculture, bringing in more water from another basin would really amount to the provision of more water for being wasted. It would also mean that there would be no motivation at all for changing cropping patterns and shifting from water-intensive crops to crops that need less water; on the contrary, the tendency to grow water-consuming crops would receive strong encouragement. (It may be added that cropping patterns and water-use practices that lead to or aggravate water-scarcity are often the results of Govt policies relating to agriculture and water, and what is called for is the rectification of those policies rather than the importation of water.)

In arid or drought-prone areas, the introduction of irrigated agriculture of a kind appropriate to wet areas may be unwise. `Development' in arid areas should perhaps take other, less water-intensive forms. The slogan of `making the desert bloom' is not necessarily a sound one. It can be argued that the Rajasthan Canal project was not a good idea but a misconceived one. These are difficult but important questions that need careful consideration.

In both irrigated and rainfed areas, the bringing in of external water may also have other secondary consequences: the need to bring in farmers from elsewhere and the resulting social tensions (as in Rajasthan); increased incidence of conditions of water-logging and salinity (a concomitant of irrigated agriculture in many places); the possibility of the repetition of the `Green Revolution' patterns of agricultural development and the related phenomena of monoculture, loss of bio-diversity (disappearance of indigenous varieties of seeds of plants and grains), the problems arising from chemical fertilizers and pesticides, the loss of micro-nutrients from soils, and the replacement of healthy indigenous varieties of foodcrops by high-yielding, commercially viable, but nutritionally deficient crops; social inequities of diverse kinds; and so on. These are not unavoidable consequences, but they are dangers that have to be kept in mind.

Subject to all those caveats, the idea of taking water from `surplus' to `deficit' basins may seem *prima facie* a good one. That indeed is the principal driving force behind the project, and that is also what gives it its popular appeal in water-scarce States. However, there are many serious difficulties with that plausible proposition, which need to be noted.

## Some Difficulties

### Gigantism / Altering Nature

To start with, there is the fundamental objection, not to the idea of `inter-basin transfer' *per se* (though that aspect does need consideration), but to the grandiose nature – the gigantism - of the undertaking. This will be a massive intervention in nature, an ambitious attempt to alter nature. That it is to be compressed into a short span of time may aggravate the intervention but that is a secondary point, the main one being that it amounts to nothing less than the redrawing of the geography of the country. It appears to us that this is a severe case of

technological hubris of a kind that (we thought) had been discredited and was a thing of the past.

Criticisms of gigantism are sometimes responded to with the answer that no gigantism is intended; that the project will proceed carefully and slowly, in a piecemeal manner, from the minor and relatively less problematic links to the more difficult and ambitious ones. Is such a careful, exploratory, step-by-step approach in fact intended? This seems inconsistent with what we have been seeing and hearing in recent months: the Supreme Court's desire that the project be accelerated and the time-frame compressed; the Prime Minister's announcement that the project will be taken up on a war-footing; the setting up of a Task Force; the references to the order of investments involved; the publicity surrounding the project; and so on. It appears that the Govt wants to make dramatic announcements, and at the same time claim that it is adopting a slow, careful, modest, exploratory approach. The general impression in the country is certainly that a massive project has been undertaken. If that is not the case, the Govt should make the position clear.

## Strange Idea

There is in fact an oddity about the proposition that we have tended not to notice. One can understand if the planners start from an identification of the needs of particular areas, proceed through a consideration of options and alternatives, and finally arrive at a decision to link two or more rivers as the only or the best option in a given case. Instead, the present project *starts* with the proposition that the rivers of India must be linked, and then proceeds to consider possibilities of storages, links, transfers, etc. What is the basis for that *a priori* proposition (even if it is an old one)? How did we arrive at this strange idea that all the rivers of India – or the major ones – must be linked? The analogy sometimes put forward with the linking of highways or with a national power grid is inapt and misleading. Human creations or productions such as highways or power can be manipulated by humans. That does not necessarily apply to rivers. Rivers are not human artefacts; they are not pipelines to be cut, turned around, welded and re-joined. They are natural phenomena, integral components of ecological systems, and inextricable parts of the cultural, social, economic, spiritual lives of the communities concerned. (So too are related features, both natural and manmade, such as lakes, wetlands, tanks, beels, ahars and pynes, and so on.)

## Serious Consequences

The project is potentially fraught with serious consequences. It will necessarily involve dams, reservoirs, diversion of waters, canal systems, and so on. By now there is adequate knowledge of what all this entails: violent disturbance of pristine areas and of the lives of (tribal) communities living there, disruption of the habitats and movement routes of wildlife, loss of bio-diversity (flora and fauna), changes in river morphology and water quality (arising from the stilling of flowing waters), submergence of forests and agricultural lands, changes in the micro-climate, public health consequences, displacement of people and their livestock and the related problems of resettlement and rehabilitation, reduction of downstream flows, the consequent alteration of the river regime (reduction of the capacity of the river to cope with pollutants and regenerate itself; reduction in nutrient content in downstream flows; diminution of groundwater-recharging, reduction in freshwater outflows into the sea), and the impacts of these on aquatic life, riparian communities and their livelihoods such as agriculture or boat-plying, and on estuarine conditions (including estuarine fish populations) and possible salinity incursions); and so on. These impacts and consequences have been observed in many projects, and will need to be studied carefully in the case of each of the proposed links.

(Incidentally, much harm has been done in the past by the tendency to regard only water abstracted from the stream as `used' and water flowing in the stream and particularly into the sea as `wasted'. To minds so conditioned the fact that floods occur in some areas and drought is experienced elsewhere immediately suggests that water must be transferred from the former to the latter places. Behind this lies an ignorance of the multiple purposes served by flowing water - even floods - and the importance of water flowing into the sea, and a failure to recognize the consequences of a diversion of flows. Rivers must flow if silt is to move and nutrients are to reach the plains, the deltaic region, and mangrove areas such as the Sunderbans. Such flows and nutrients also enter the coastal waters and contribute to the increase of marine wealth, whether it be shoals of fish or algae and other organisms which hold the key to the future nutritional, medicinal and other needs of our country and even of humanity at large. Before diverting waters and reducing downstream flows we must make sure that the alluvial deltas will not die, forcing the migration of populations and causing distress in the coming generations. Rivers must have enough water to support riverports, inland navigation and riverine fauna and flora, and to check the incursion of salinity in coastal areas. The concept that no water is to be allowed to "go waste" into the sea needs to be seriously challenged on hydrological and meteorological grounds.)

It has been argued that similar projects have been undertaken elsewhere without catastrophic consequences, but that is a questionable statement. Water-resource projects are part of the kind of `development' that the world has been pursuing, which has in fact had many catastrophic consequences. But

leaving that aside and confining ourselves to projects on rivers, it is well-known that old-style planning in the former Soviet Union led to the diversion of two rivers that were flowing into the Aral Sea, resulting in the virtual death of that sea. That is now recognized as a great environmental disaster, perhaps the greatest ever, and desperate attempts are being made to reverse it. With the `linking of rivers' project we may be headed for other unforeseen disasters and may discover this too late. A degree of caution seems warranted before the Govt embarks on this enterprise. (It may be added that there is a move in some countries away from the past history of interference with the natural flows of rivers towards a restoration of the original flows to some extent.)

Those who advocate caution are apt to be accused of timidity and exhorted to look at China, which has embarked on the massive Three Gorges Project. That is not necessarily a good project; the disasters that it will bring will be seen in the future. The opposition to Three Gorges in China is muted because dissent is not easy in that country. Those who are envious of China's ability to `get things done' must reflect on how far they are prepared to go in emulating that system.

**Announcement in Advance of Examination and Clearance**

This is a `concept' that consists of some twenty or thirty projects. For each project, some small and some big, a proper feasibility study will have to be prepared as an inter-disciplinary exercise, fully internalizing economic, social, sociological, human, environmental and other aspects *ab initio.* Thereafter, the projects will have to be examined and evaluated, again in an inter-disciplinary manner, and cleared by the appropriate agencies. Thorough Environmental Impact Assessments, comprehensive Cost-Benefit Analyses covering direct and indirect financial, economic, environmental, ecological, social and human costs and benefits (quantifying these wherever possible), qualitative assessments of non-quantifiable considerations, and based on these, rigorous investment appraisals, will need to be undertaken. We do not know what the outcome of that process will be: all projects may pass the test; all may fail; or some may survive a stringent scrutiny while others may not. In advance of that process, a project has been announced and expectations raised in the general public. The presumption is that the project or projects will be found acceptable and cleared. We fear that this may reduce the whole process of examination, evaluation and clearance to a mere formality, a mockery. With the conclusions already presumed and announced at the highest level, it seems difficult to believe that the Govtal agencies concerned (the CWC, the Technical Advisory Committee, the Ministry of Environment and Forests and its Committees, the Task Force that has now been set up) will be able to undertake a serious and objective examination. The pressure on them to be `positive' will be very great.

Incidentally, we are told that NWDA has prepared feasibility studies for some five or six links, and that these have been "ratified by engineers, sociologists and economists". If indeed there are feasibility studies of some of the proposed links, we would strongly urge that they should be put into the public domain for engineers, geographers, environmentalists, economists, agronomists, soil scientists, sociologists, social anthropologists, financial analysts, and others outside the Govt to examine and offer their comments. This massive undertaking is too important a matter to be left entirely to the internal processes of the Govt.

**Cutting Across Basins**

As hinted earlier, there is some difficulty with the very idea of `inter-basin transfers'. These generally involve the carrying of water across the natural barrier between basins (which is what makes them basins) by lifting, or by tunnelling through, or by a long circuitous routing around the mountains if such a possibility exists in a given case. Rivers or streams may also have to be crossed in some cases. All this may mean heavy capital investments and continuing energy costs in operation. Such apprehensions have been sought to be set at rest with the explanation that the flows will be largely by gravity with lifts (not exceeding 120 metres) at a few selected points, and that the need for a transfer of water through natural barriers will be obviated. We wonder whether a number of river systems (basins) can be linked largely by gravity with a few modest lifts and some command-area adjustments, obviating the need to cross natural barriers. Perhaps this will be possible in some cases, but the feasibility of such an approach in all cases seems *prima facie* doubtful. This, like the claim referred to earlier that the project will be a net generator of large quantities of electricity, needs to be looked at very carefully, case by case.

**Intra-Basin and Inter-Basin**

The Constitution talks about inter-State rivers but makes no reference to inter-basin transfers. It neither permits nor prohibits them. Leaving that question aside, it appears to us – subject to correction - that such transfers can be made only with the consent of the States concerned. There are two points here.

The first is that we have not so far been able to persuade States *within* a basin to share river waters (e.g., the Cauvery Dispute); instead of resolving such *intra-basin* disputes through the better, more economical and more cooperative management of the resources of the basin, should we try to bring water from another and more distant basin? Further, despite some talk of integrated, holistic planning for a basin, the

idea has made no headway because of strong resistance from the States. It seems to us that we should reach the stage of basin-planning first before talking about inter-basin transfers.

Secondly, even if we assume that the conflict *within* a `water-short' river-basin will be eased by the importation of external water, such an effort may initiate new conflicts *between* basins. The project has already led to strong objections from several States. The NWDA's assessment that surpluses are available in the Mahanadi and Godavari basins (accepted by the NCIWRDP) is not shared by the Orissa and AP Govts. There is irony in the proposition that the answer to the difficulty of persuading Karnataka and Tamil Nadu (co-riparian States) to share Cauvery waters equitably lies in the even more difficult course of persuading Orissa to spare Mahanadi waters for non-riparian States! There is also considerable opposition to the idea of the eastward diversion of west-flowing rivers. It may be argued that we should not allow ourselves to be deterred by such political difficulties, but is it really necessary to generate several new inter-State conflicts?

We are aware that efforts are now being made to bring about a political consensus on the river-linking project. We hope that this is not being looked at as a matter of political bargaining or *quid pro quo* or compromises or inducements. Any short-term 'political consensus' brought about through such means may not be sustainable in the long run. What is needed is a genuine harmonization of long-term interests, needs and concerns.

**Some International and National Implications**

In so far as some of the links in the Himalayan component are dependent on dams in Nepal or transfers from Manas, Sankosh and Brahmaputra, Nepal, Bhutan and Bangladesh will need to be consulted. We have no doubt that the Govt is aware of this. (Any major diversion from the Brahmaputra seems unlikely and we do not propose to discuss this further except to say that the sensitivities of the North-eastern States must be kept in mind. It seems hardly necessary to add one more element of discord in an already difficult situation.)

A link between the Himalayan and Peninsular components seems envisaged (Ganga-Damodar-Subarnarekha-Mahanadi). Bangladesh is likely to view this with apprehensions and raise objections. Under the India-Bangladesh Treaty of December 1996 on the sharing of Ganga waters, India has undertaken to protect the flows arriving at Farakka, which is the sharing point. Bangladesh may contend (rightly or wrongly) that a diversion of waters from the Ganga to other rivers will not be consistent with that undertaking. Besides, it is a proposition accepted by both India and Bangladesh that the Ganga is water-short in the lean season and needs to be `augmented', though the two sides have different notions on the means of augmentation: that is a debatable proposition, but if it is in fact true, there seems to be no scope for diversion from the Ganga. India may argue that only the flood flows of the Ganga will be stored and diverted, and that the lean season flows (which are what Bangladesh is concerned with under the Treaty) will not be affected; but Bangladesh might say that if the flood flows can be stored, the stored waters should be used for the augmentation of the lean season flows of the Ganga itself for being shared at Farakka, and not diverted to other rivers. Within India, Bihar has already a strong sense of grievance that its interests in respect of the waters of the Ganga system have not been given due consideration; and West Bengal has only reluctantly agreed to the large allocations to Bangladesh under the Ganga Treaty and has been pressing the needs of Calcutta Port. Neither State will look kindly upon any diversion of Ganga waters.

In the preceding paragraph, attention was drawn to the difficulties that would need to be dealt with *if* waters are to be transferred from the Ganga. However, it was recently stated by a senior official of the Ministry of Water Resources that "at no point would waters of the Ganga be transferred to any of the Himalayan or Peninsular rivers." If no transfers are envisaged, there is nothing more to be said. However, speaking subject to correction, the proposals of the NWDA did seem to include some transfers from the Himalayan rivers westwards and southwards. It is that kind of expectation that gives the project its popular appeal, particularly in the south. If such transfers are not in fact intended, the Ministry should make that clear to all.

**Pre-empting of Resources**

We referred earlier to a bypassing of the planning process. This would also mean a pre-empting of resources, and a distraction of attention from the things that need to be done. Plan outlays are barely adequate even for the completion of projects already undertaken. One estimate – that of the NCIWRDP - of amounts needed for completing spill-over projects was Rs 70,000 crores in the Tenth Plan and Rs 110,000 crores in the Eleventh Plan (Report, 1999). That leaves no scope for new major projects, and necessitates a severe selectivity even in regard to the continuance of what are called `on-going projects'. From the Sixth Plan onwards the stress has been on consolidation rather than on new starts. Against that background, it seems strange to embark on a major river-linking undertaking. The rough figure mentioned in the Supreme Court in this context was Rs 560,000 crores. That figure will no doubt go up substantially in the course of actual implementation, but even if we ignore that point, the pre-empting of resources of this magnitude for this project will render the whole planning process

meaningless. We may be wasting a good deal of time in pursuing this chimera, and distracting ourselves from finding time and money for more modest, worthwhile and urgent activities, such as extensive water-harvesting all over the country (wherever feasible) and the onerous but important task of rehabilitation of tanks in the South and other similar traditional systems elsewhere. Even more important is effective demand management through improved efficiency and economy in water use, whether in agriculture or in industry or in domestic and municipal uses, so as to minimize the need for supply-side solutions. These ought to be our priorities, but none of this is likely to receive much attention, given the preoccupation with the gigantic river-linking project.

Incidentally, apart from the pre-empting of resources, the huge costs involved in the linking of rivers and long-distance water transfers will make the water at the receiving end very costly indeed. There is hardly any possibility of recovering even a fraction of those costs from the users, who will doubtless argue that this is infrastructure development and that the state must bear the cost. However, the possibility of private sector investment is also being explored, and the question arises whether the investors will be able (or should be allowed) to charge full commercial prices. The Enron case comes to mind. Moreover, the question of private sector investment also raises the issue of entrustment of control over natural resources into private (and perhaps even foreign or multinational) corporate hands. However, there is not enough information for a proper discussion of these aspects here.

**Conclusion** We must hope that the Task Force will consider not merely the `modalities' of the `linking of rivers' but also all the questions raised above. Any headlong rush in the pursuit of this chimera will be disastrous. Specifically, the following suggestions are placed before the Task Force and the Ministry:

- take people into confidence as to what the Govt plans to do; publish a White Paper;
- make the National Commission's Report (1999) as well as the various studies and pre-feasibility and feasibility reports of the NWDA widely and easily available to the public;
- hold hearings, invite comments; make the declared commitment to the principles of `people's participation' and `stakeholder consultation' real;
- hold discussions with knowledgeable people and institutions outside the Govt (economists, engineers, geographers, ecologists, sociologists, agricultural scientists, scholars and institutions concerned with water, agriculture, irrigation, and problems of rain-fed areas or arid zones, management specialists, development studies institutions, voluntary agencies and other civil society institutions, and so on), and pay serious attention to their questions and apprehensions;
- instead of starting from an *a priori* proposition about the linking of rivers, proceed from the water needs of each area, consider all the available options, and choose the best;
- focus on efficient, harmonious, sustainable intra-basin water management first before thinking of importing external water; reach the stage of basin-planning before considering inter-basin transfers;
- where a river-linking or long-distance water-transfer proposal seems *prima facie* worth considering, get a thorough, professional feasibility report prepared in a fully inter-disciplinary manner, internalizing not merely techno-economic but also environmental, human, social, equity, `gender' and other relevant aspects and concerns, and put it through a comprehensive, inter-disciplinary, rigorous and stringent process of detailed examination, appraisal and approval;
- let such a project or projects emerge from and be an integral part of the planning process, rather than be foisted on that process and pre-empt attention and resources from other necessary and urgent activities; & take up "on a war-footing" (in the Prime Minister's words) a national project of extensive, community-led rainwater-harvesting (wherever feasible) and watershed development, as also of the revival and re-activation of traditional systems of water harvesting, conservation and management (tanks, ahars and pynes, johads, etc), in pursuance of the Prime Minister's clarion call at the meeting of the NWRC on 1 April 2002.

Dr.R.N.Athavale
B.S.Bhavanishankar
Dr. J Bandyopadhyay
Dr. Amita Baviskar
Prashant Bhushan
Darryl D'Monte
Prof H M Desarda
Shripad Dharmadhikari
V.B.Eswaran
Savita Gokhale
Rama Govindarajan
Biksham Gujja
Radhika Gupta,
Sanjoy Hazarika
Ramaswamy R. Iyer
Jasveen Jairath
S.Janakarajan
Nalini Jayal
K.J.Joy,
Eshah Shah
Mahesh Kant
Ashish Kothari
Smitu Kothari
Ravi Kuchimanchi
Benny Kuruvilla
Dr. Kuntala Lahiri-Dutt
Sharacchandra Lele
Ajit Menon
Ajit Mozoomdar
Harsh Mander
Sunita Narain
S.Parasuraman
Aravinda Pillalamarri
Ravi Pragada
V.N.Rajagopalan
R. Rajamani
T. Ramachandradu
Capt. J.Rama Rao
R.K.Rao
Sudhir Rao
Sriram Ramaswamy
T.S.Sankaran
Sarita
Dr. N.C. Saxena
Dr Sudhirendar Sharma
Vinod Shetty
Dr. Vandana Shiva
Shekhar Singh
K.C.Sivaramakrishnan
Com. Sureshwar Sinha
Girish Srinivasan
Kannan Srinivasan
Sandhya Srinivasan
Himanshu Thakkar
A.Vaidyanathan
Shiny Varghese
M.P.Vasimalai
MajGen S Vombatkere (retd)

# RIVER LINK IN PARLIAMENT

*Following information is gathered from the various answers given in the Parliament over the last few years on the issue of rivers and river linking proposals relevant to current debate. This is with the hope that the information given in the Parliament must be authentic and accurate. The question number and date of question in respective houses of Parliament is given at the end of the section, the answers being given by the respective ministers of the time.*

**National Scene** The average annual precipitation received in the country in the form of rainfall and snow is estimated to be of the order of 4000 $km^3$. Of this, the average annual run off in the various river basins is of the order of 1869 $km^3$. The utilisable quantum has been estimated as 690 $km^3$ for surface water and 432 $km^3$ for ground water, making total utilisable as 1122 $km^3$. Against this, the present utilisation is estimated at about 605 $km^3$. Balance water could be assumed to be flowing unutilised to the sea mainly in Ganga, Brahmaputra, Mahanadi, Godavari and Narmada.

**NWDA Studies** NWDA has completed 137 water balance studies of basins/sub-basins, 71 water balance studies at diversion points, 74 toposheet studies of storage reservoirs, 37 toposheet studies of link alignments and 31 pre-feasibility studies of links out of which 30 links have been identified for preparation of feasibility reports. Feasibility reports of five links have been completed. The total grants-in-aid released to NWDA till date is Rs 1.049 B. The link proposals envisage additional irrigation benefits of 35 M Ha.

A preliminary assessment indicates that it would be possible to make use of about 200-250 BCM of additional water by transferring water from surplus basins to water-short basins, which can in turn generate additional irrigation potential of about 35 M Ha (22 M Ha in Himalayan component and 13 M Ha in Peninsular component; 25 M Ha from surface waters and 10 M Ha by use of groundwater) and 34 000 MW of power (the last three figures as stated in GOI affidavit in Supreme Court in Oct 2002).

Tentative estimated cost of the proposed identified links of NPP is put at Rs 3300 B at 1995-6 price level and Rs 5600 B at 2002 price.

In National Water Development Agency studies, a minimum lean season flow of 10% of the total inflow at diversion structure after meeting downstream requirements is being provided to maintain the environmental and ecological needs of the river regime.

**Ganga Basin** The mean annual run off in river Ganga in India is estimated to be 501.6 BCM (it became 525 BCM in reply to question no 134 on 181102 in Lok Sabha). Some of the major tributaries of river Ganga are Ramganga, Yamuna, Tons, Gomati, Ghagra, Son, Gandak, Kosi and Mahananda. An assessment of the quantity of Water that can be utilised and the quantity that is being utilised has not been made separately for each tributary of Ganga. For the basin as whole, the quantity of water that can be utilised annually is estimated to be 250 BCM. During the year 2000, the utilisation was estimated to be 150.764 BCM for irrigation 7.9 BCM for domestic use and 5.87 BCM for industrial use.

**Ganga Water for Rajasthan** Govt of Rajasthan submitted a proposal in 1984 for diverting 1133 cusec of Ganga water ex-Hardwar and 566 cusec of Ganga water ex-Bijnor for 100 day during Monsoon. The study conducted by CWC to explore the possibilities to divert floodwaters of Ganga for use in Rajasthan revealed that sufficient water was not available in Ganga near these two places for more than 20-30 days in a year for diversion to Rajasthan.

There is no agreement to supply water to Rajasthan from river Ganga. Rajasthan is being supplied water from rivers Yamuna, Sutlej, Ravi & Beas as per different agreements. Rajasthan is not being supplied the allocated share of Yamuna water due to constraints of capacity of conveyance system, non-completion of new canal system in Haryana and Rajasthan and re-modelling of existing canal systems. Shortage in supply of water to the State from Ravi, Beas and Sutlej River is on account of less inflow in the rivers, reduced carrying capacity of Bikaner canal and lower available storage in the reservoirs.

**Brahmaputra Ganga Link Through Bangladesh** The Central Water Commission in 1982 had prepared a Feasibility Report on Jogighopa Barrage and Brahmaputra-Ganga Link Canal Project flowing through Bangladesh by gravity, as the first phase of development/augmentation of the flows of the Ganga during dry season by diversion of Brahmaputra waters to the Ganga. The second phase of the proposal envisages creation of backup storages by construction of two dams on major northern tributaries of the Brahmaputra River, viz., Dihang & Subansiri. The proposal was placed before the Indo-Bangladesh Joint Rivers Commission. However, due to reservations expressed by the Government of the Peoples' Republic of Bangladesh, the proposal was not pursued further.

**Manas Sankosh Teesta Ganga** According to pre-feasibility studies carried out by NWDA, Manas-Sankosh-Teesta-Ganga (MSTG), Subernarekha-Mahanadi, Ganga-Damodar-Subernarekha and

Farakka-Sunderbans links of National Perspective Plan envisage providing irrigation to an area of 1.11 M Ha W Bengal.

The field survey and investigations for techno-economic evaluation of the project are under progress. However, the survey and investigations in the 114 km reach of the link canal from Manas to Sankosh falling under Manas Tiger Reserve and 24 km from Sankosh to Teesta falling under Raidak reserve Forest, Buxa Tiger Reserve & Goburbasra Reserve Forest, could not be taken up due to denial of permission by the MoEF, Govt of India. As per the pre-feasibility report, the tentative estimated cost of link canal project is Rs 116.70 B at 1994-5 price level, which envisages Head Works, Canal System, Canal Power House and Navigation.

Since March 1997, the Centre has taken up the works of the geo-technical investigation comprising of field investigations and Laboratory tests for characterisation of foundations of structures for preparation of the report of Teesta-Ganga portion of MSTG link Canal. This Link Canal Project is found to be techno-economically viable as per pre-feasibility study done in 1994.

NWDA had prepared pre-feasibility report of MSTG Link for transferring the surplus flows of Manas and Sankosh rivers, tributaries of Brahmaputra River and intermediate rivers up to Teesta into the river Ganga upstream of Farakka. Part of this surplus water is proposed for augmentation of river Ganga to meet the lean water requirement of Calcutta Port. At present the above link project is at Survey and Investigation stage for preparation of feasibility report, which is programmed to be completed by the year 2003. MSTG Link Pre-feasibility Report provides for enroute irrigation to the extent of 0.65 M Ha.

**Sarda Yamuna Rajasthan Link** The NWDA has completed the pre-feasibility studies of Sarda-Yamuna Rajasthan link. As per the pre-feasibility report prepared by NWDA Yamuna-Rajasthan link envisages 0.24 M Ha of irrigation benefit to Rajasthan. Survey and investigation for preparation of DPR of the link has been taken up by NWDA and is programmed for completion by 2007.

**Benefit to Karnataka Drought Areas** The average annual surface water availability in the west flowing rivers from Tapi to Kanyakumari including the west flowing rivers of Karnataka and inter state-rivers has been assessed as 200.9 BCM by CWC. Owing to hilly terrain, most of the water of the rivers flows unused in the Arabian Sea. As per the study conducted by CWC, drought prone areas in the State of Karnataka has been assessed as 57 645.54 $km^2$. Under the Peninsular Component of the NPP, NWDA has a proposal of diversion of west flowing rivers to benefit the deficit/drought prone areas of Karnataka through the Bedti-Varda and Netravati-Hemavati Links. As per the pre-feasibility reports, the irrigation benefits to Karnataka from Bedti-Varda and Netravati-Hemavati links are 60 000 Ha and 34 000 Ha respectively.

**Godavari Krishna Link** As per Award of Godavari Water Disputes Tribunal, 80 TMC of Godavari water at 75% dependability can be diverted from Polavaram Project in to Krishna River above Vijawada anicut for projects upstream of Nagarjuna Sagar. Out of this, 35 TMC of water is for Maharashtra and Karnataka and balance 45 TMC is for Andhra Pradesh.

**Mahanadi Godavari Krishna Pennar Cauvery Vaigai** The Peninsular Component of the NPP envisages inter-linking of Mahanadi-Godavari-Krishna-Pennar-Cauvery-Vaigai. As per the water balance studies of various river basins of the peninsular Component conducted by NWDA, Mahanadi and Godavari river basins are surplus in water, whereas the river basins namely, Krishna, Pennar, Cauvery and Vaigai are deficit. It is, therefore, proposed to transfer the surplus water of Mahanadi which in turn will be receiving water from the Himalayan component and Godavari basins to Krishna basin by interlinking Mahanadi to Godavari and Godavari to Krishna. The water, thus received in Krishna basin is proposed to be transferred to Pennar, Cauvery and Vaigai basins.

**Lok Sabha Questions** (3/ 230701,134/ 191101, 3979/ 200801, 2098/ 080300, 2027/ 021202, 7 & 16/ 181102, 6893/ 130502, 1097/ 300701, 1241/ 261102, 1728 & 1760/ 030303)
**Rajya Sabha Questions** (217/ 031202, 350/ 170796, 1054/ 271101, 233/ 080800, 684/ 270201, 310/ 240701)

## GOI in SC

Below are some relevant new information from the Govt of India's affidavit in the Supreme Court of India.

NWDA was set up in 1982 as an autonomous society under the Societies Registration Act, 1860 under the Ministry of Water Resources to carry out the water balance and other studies on a scientific and realistic basis for optimum utilisation of water resources of the Peninsular Rivers System for preparation of feasibility reports for interbasin transfer of water.

- In 1990 NWDA was also entrusted with the task of Himalayan Rivers Development Component of the National Perspective.
- Under Peninsular Component, feasibility reports of the following six links have also been completed: Ken – Betwa Link, Par – Tapi – Narmada Link, Pamba – Achankovil – Vaippar Link, Godavari (Polavaram – Krishna (Vijaywada) Link, Krishna (Srisailam) – Pennar (Prodattur) Link and Krishna (Nagarjunasagar) – Pennar (Somasila) Link. Currently the surveys and

investigations for preparation of feasibility reports of 18 links are under progress.

**Mans Sankosh Tista ganga Link** This does not involve any lift. Surveys and investigations were taken up for preparing feasibility report. The reach from Tista Barrage to Ganga was taken up by NWDA while the reach from Manas to Sankosh and Sankosh to Tista was entrusted to CWC by the Ministry of Water Resources. The topographical survey work of Tista – Ganga reach by NWDA is almost complete whereas in the case of the other reach, CWC could nto take up the surveys in the Manas-Sankosh and a portion of the Sankosh-Tista reaches, because of the denial of permission by Ministry of Environment and Forests since these reaches fall under Manas & Buxa Tiger Reserves / other Wild Life Sanctuaries, in spite of concerted efforts made by CWC and Ministry of Water Resources to obtain the same. Besides, the length of canal, which falls within Bhutan territory, has also not been taken up for survey & investigations, as the required permission from the Royal Govt. of Bhutan is yet to be obtained. (Relevant excerpts from the GOI affidavit in the Supreme Court on Oct 25, 2002 in the WP (Civil) 512 of 2002 Re Networking of Rivers)

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# RIVER BASINS IN INDIA

- The entire country has been divided into twenty river basins
- Twelve major basins with area exceeding 20 000 sq km each
- Eight composite river basins combining suitably the remaining medium and small river systems for the purpose of planning and development.

## India's Macro Water Scene

| | **Particulars** | **All India figures** | **Peninsular Rivers** |
|---|---|---|---|
| 1 | Annual flow in the river systems of India | 1869 BCM | 584 |
| 2 | Utilisable comprising | 1122 BCM | |
| 3 | Surface water | 690 BCM | 325 |
| 3A | Live storage by small dams | 3 BCM **Hugely underestimated** | |
| 3B | Live storage from future small dams | **NOT ESTIMATED** | |
| 3C | Live storage capacity by large dams up to 1995 | 176.73 BCM | 105.81 |
| 3D | Live storage from dams under construction | 75.42 BCM | 50.51 |
| 3E | Dams under formulation/ consideration to create | 132.32 BCM | 25.57 |
| 4 | Replenishable Ground water | 432 BCM | |
| 4A | Developed from replenishable groundwater | 154 BCM | |

## The assessment of water utilization

| | | |
|---|---|---|
| 1 | Utilization of water for different purposes | 605 BCM |
| 2 | Utilization for irrigation | 501 BCM |
| 3 | Ultimate Irrigation Potential | 140 M Ha |
| 4 | Irrigation potential has been created by 1999-2000 through plan investment | 95 M Ha |
| 5 | Investment through plan for creation of irrigation potential | Rs 500 B |

In Indus, Krishna, Cauvery, Mahi and Sabarmati river basins over 80% of utilizable flow is already being used.

Taking into consideration the population of the country (as per 1991 census) the average per capita availability below 750 CM is considered as scarcity condition. Based on this criteria, 6 River Basins, namely Cauvery, Pennar, Sabarmati, East flowing rivers between Mahanadi & Godavari, East flowing rivers between Pennar and Kanyakumari & West flowing rivers of Kutch and Saurashtra including Luni fall in water scarcity category.

## MAJOR RIVER BASINS (BCM)

| SN | River Basin | Important rivers of the Basin | Catchment Area M Ha | Average annual water availability (BCM) | Live storage capacity of Large dams completed 1995 (BCM) | Per Capita Water Availability (CM) |
|---|---|---|---|---|---|---|
| 1 | Indus | Sutlej, Beas, Rabi, Chenab, Jhelum | 32.13 | 73.31 | 13.83 | 1749 |
| 2a | Ganga | Yamuna, Chambal, Betwa, Ken, Son, Ramganga, Ghagra, Gandak, Kosi | 86.15 | 525.02 | 36.84 | 1471 |
| 2-b | Brahmaputra & Barak | Subansiri, Bhorelli, Manas, Buri, Dehang, Dhansiri, Kopili, Tista, Jaldhaka, Torsa, Gumti, Muhari, Fenny, Karna-Phulli, Kaladan, Imphal, Tuxu, Nantaleik | 23.61 | 585.6 | 1.10 | 16589 |
| 3 | Brahmani | Karo, Sankh, Tikra, Baitarni, Salandi, Matai | 5.18 | 28.48 | 4.76 | 2915 |
| 4 | Mahanadi | Seonath, Jonk, Hasdeo, Mand, Ib, Tel | 14.16 | 66.88 | 8.49 | 2513 |
| 5 | Godavari | Parvara, Purna, Manjra, Pranhita, Indravati, Sabri | 31.28 | 110.54 | 19.51 | 2048 |
| 6 | Krishna | Ghatprabha, Malprabha, Bhima, Tungbhadra, Musi | 25.89 | 78.12 | 34.48 | 1285 |
| 7 | Pennar | Jayamangli, Kunderu, Shgileru, Chitravati, Papagni, Cheyyeru | 5.52 | 6.32 | 0.38 | 651 |
| 8 | Cauvery | Harangi, Hemavathi, Arkavathi, Simsha, Lakshmnathirtha, Kabbani, Suvarnavati, Bhavani, Noyil, Amravathi | 8.12 | 21.36 | 7.43 | 728 |
| 9 | Tapi | Bhokar, Suki, Mor, Harki, Manki, Guli, Aneri, Arunavati, Gomai, Gomati, Valer, Purna, Bhogvati, Vaghur, Girna, Bori, Panjhra, Buray, Amravati, Shiva, Ranagavati, Nesu | 6.51 | 14.88 | 8.53 | 1007 |
| 10 | Narmada | Burhner, Banjar, Sher, Shakkar, Sudhi, Tawa, Ganjal, Chotta, Kundi, Goi, Karjan, Hiran, Tendoni, Kolar, Man, Uri, Hatni, Orsang | 9.88 | 45.64 | 6.60 | 3109 |
| 11 | Mahi | Som, Anas, Panam | 3.48 | 11.02 | 4.76 | 1052 |
| 12 | Sabarmati | Sei, Wakal, Harnav, Hathmati, Watrak | 2.17 | 1.35 | 3.81 | 360 |

### COMPOSITE RIVER BASINS

| SN | River Basin | Important rivers of the Basin | Catchment Area M Ha | Average annual water Availability (BCM) | Live storage capacity of large dams completed 1995 (BCM) | Per Capita Water Availability (CM) |
|---|---|---|---|---|---|---|
| 1 | Subarnrekha | Kanchi, Karkari, Kharkai | 2.92 | 12.37 | 0.66 | 1307 |
| 2 | W Flowing rivers of Kutch-Saurashtra including Luni | Shetrunji, Bhadar, Machhu, Rupen, Saraswati, Banas | 32.19 | 15.1 | 4.31 | 683 |
| 3 | W flowing rivers from Tadri to Kanyakumari | Kodiyar, Pamba, Periyar, Chaliyar | 5.62 | 113.51 | 10.24 | 3480 |
| 4 | West flowing river from Tapi to Tadri | Netravati, Sahrawati, Kalindi, Mandori, Savitri, Ulhas, Vaitarna, Ambika, Purna | 5.29 | 87.41 | 7.10 | 3383 |
| 5 | E flowing rivers: Mahanadi to Pannar | Rushikulya, Bahuda, Vamsadhara, Nagawali, Sarda, Tandara, Eluru | 8.66 | 22.52 | 1.63 | 953 |
| 6 | East Flowing Pennar-Kanyakumari | Kunteru, Swarnmukhi, Araniar, Kortalaiyar, Kanyakumari Cooum, Adyar, Palar, Gingi, Ponnaiyar, Vellar, Varshalei, Vaigai, Gundar, Vaippar, Tambarparni | 10.01 | 16.46 | 1.42 | 366 |
| 7 | Area of inland drain in Rajasthan | -- | 6 | -- | -- | -- |
| 8 | Minor river Basins draining into Bangladesh & Mayanmar | -- | 3.63 | 31 | 0.31 | 14629 |

(RS Questions 149/ 230797, 338/ 121200, 310/ 240701)

**RIVER LINK NEWS**

# HOW OPPOSITION IS MOUNTING

**Experts in Nepal Question River Link Plans** Nepalese water resource experts and the civil society have demanded that Nepal spell out its vision on 'regional grid, energy trading and rights of upper riparian state'. Surya Nath Upadhyay, Chief of the Commission for Investigation of the Abuse of Authority, says sharing of water should be dealt with a broad vision for economic development. He says, "we should be clear about our rights as an upper riparian sovereign country". India is introducing the River Linking mega project to overcome the problem of water scarcity. If India links the rivers, obviously it will use Nepal's big rivers such as the Mahakali, Karnali, Koshi and Gandaki and cause massive floods during the monsoon in the lowlands in Nepal, say experts. "What will Nepal, as an upper riparian country, do if India constructs big canals out of Nepalese rivers?" questions Dr. Janak L. Karmacharya. (THE RISING NEPAL 200103)

**Supreme Court helping hand for Centre?** In recent months, the Supreme Court has given the Vajpayee govt more than a helping hand to get around vexed inter state water problems, be it the construction of the Sutlej-Yamuna link canal, the sharing of Cauvery waters between Karnataka and Tamil Nadu, or raising the height of the SSP, or the 'suggestion' on the river linking issue. Yet, no consensus could be reached between the states involved. Not just that, they have openly flouted the Court's directive and the Centre's cajoling. (THE HINDU 020203)

**Bengal says NO** The W Bengal Irrigation minister has written to Union Water Resources Minister, protesting the networking of rivers as it will pose a potential threat to the state. He has written that W Bengal will be affected by floods if Brahmaputra and Ganga are linked. He has written that W Bengal being at the tail end of the Ganga basin, it is a deficit state during January to May. (THE STATESMAN 230103)

**Karnataka Skeptical** The state Minister for Water Resources is doubtful if the centre can implement the river link plans. He said, "There were many small rivers in the region which could be linked to benefit the States, but the attitude of the Centre indicated that it did not have the political will to do so". He said many had doubts about the practical problems in implementing such a huge project, particularly in view of the destruction of forests and migration of people. Recalling the success stories of Tarun Bharat Sangh, he said water scarcity could be tackled by harvesting rainwater and adopting other conservation measures. He urged the Prime Minister to amend the constitution to make rainwater harvesting and water conservation a fundamental duty. (THE HINDU 010503)

**Linking river will destroy gene pools** The proposal of linking rivers will not help in controlling flood and drought, it would rather destroy gene pool of different rivers, said Rajendra Singh. Giving examples of Yamuna-Sutlej interlinking project, Singh asked what have we gained except disputes between states. (THE ASIAN AGE 130303)

**Connecting Rivers, Disconnecting Lives** Wherever large canals are built for inter-basin transfers, irrigation colonies will spring up and reservoirs will drown biodiversity. If the proposal to link rivers ever sees the light of the day, the first effects will undoubtedly be felt by the tigers of the Satpuras and the same fate will befall the elephants of the Eastern and Western ghats. Scores of other species, including the Great Indian Bustard and uncounted number of lesser life form would perish. In past projects of much smaller proportion, such as Indira Gandhi canal and Chilla canal has adversely affected grasslands and crucial wildlife and human habitats. The need of the hour is to respect natural drainages, regenerate forests, undertake soil and moisture conservation programmes on decentralised basis and restoring traditional water harvesting systems. Whilst the scrutiny of state's past record in spending on this front and commitment in budgetary allocation doesn't inspire confidence that they are willing to undertake the much needed mission, the absurd full of sound and fury that have been embraced amounts to declaring war against lives. (SANCTURY ASIA Feb 03)

**Prof Vaidyanathan raises several questions** A closer examination of linking rivers idea raises several questions: First, it is based on the presumption that there are large surplus flows in some basins and that the physical transfer is feasible in terms of physical engineering., and can be accomplished economically without creating any adverse impact. On what basis and who determines the surplus basins and magnitude of surplus. Estimates of surplus made by central agencies such as national Water Development Agency are hotly contested by the States. A more serious difficulty arises from the fact that most of the flow in practically all rivers occurs during the South-West monsoon. For instance, over 80% of the annual flow in Kosi river is between may and November and almost three-fourths between June and October. Moreover, since the surplus ocurs in the rainy season and the demand is in the dry season, it is not enough to merely transport (carry) the water from one point to another. And if along with Linking rivers, there is a push for building large storages, we would need to knowthe quantum of water to be stored, and the likely impact on habitat and environment.

All we have been offered are some maps published in the media, purportedly from the Hashim report. The

maps and the sketchy accounts in the media and official pronouncements tell us little on these aspects. Taking this maps into account, what gets reflected is that instead of surplus flows flowing to bay of Bengal via the Ganges and Brahmaputra and the Mahanadi, they will flow to the sea through the Krishna, the Godavari, whatever!

There are also good reasons to be skeptical about the state of preparation on the interlinking projects. A mega projects of such complexity calls for preparatory work of far greater dimension. Regrettably, apart from a few sketch, very little information on the specific schemes, details of their design, environment impact assessment, displacement and likely Cost-Benefit Assessment is available in the public domain. Even in case of the report of the Hashim Commission, the annexure to the report, in which the details have reportedly been discussed, are considered secret. (THE HINDU 26 & 270303)

**Opposition in Assam** The Asom Gana Parishad and other parties have opposed the central Govt's plan to link the Brahmputra with other rivers in the west of the country on the grounds that its focus is not to solve the flood problem and it would deprive people of the state of water. The Asam Jatiyatabadi Yuba Chatra Parishad has also threatened to launch massive agitation if the centre executes the interlinking plan. (The Ecologist Asia, Jan-March 2003)

**River linking criticised by scholars** Dr Manik Kar while presenting his paper *Floods and disastrous effect of earthquake in North East India: a case study of the Brahmaputra Valley* maintained that linking of river basin to another river basin would not be possible due to high terrain in the region. He also predicted that the project if implemented would bring dangerous consequence in future management of flood. (ASSAM TRIBUNE 100303)

**TN Case** TN CM has stated that the NWDA had already completed necessary investigations for the diversion of west-flowing Pamba-Achankoil rivers (22 tmcft) linking Vaipparu in the East to help the drought-prone areas in Ramanathapuram and Tirunelveli districts. Pointing out that the NWDA has assessed the deficit at the Grand Anaicut on Cauvery as about 250 tmcft, she said that by interlinking of rivers, it was necessary that the requisite augmentation at the anaicut was so planned as to meet the requirement of the Cauvery delta area which was the granary of TN. (Newstodaynet.com 170403)

**Linking Rivers have serious consequences: WWF** World Wildlife Fund DG has warned that linking rivers like pipelines without looking at the ecological impact could lead to serious repercussions. A river is more than just water; there is a lot of bio diversity in it for it sustains the livelihood of all species living in and around it. (THE HINDUSTAN TIMES 100203)

**PM Speak** While launching Haryali watershed programme, Prime Minister said that smaller rivers would be linked first whose water was going into the sea. *Only those rivers, which can be linked, would be linked.* The bigger rivers would be taken up later. (THE HINDU 280103)

**Prabhu speak** At a CII Round table on interlinking rivers, Task Force Chair Suresh Prabhu said private participation would be sought for the project. He also did not rule out participation of international funding agencies. (THE ECONOMIC TIMES 120203)

**Task Force News Sub-Groups for preliminary studies** The first meeting of the Task Force on River Linking appointed five sub-groups to study the economic viability, social issues, ecology, engineering and international dimensions. IIM (Ahmedabad) will be an advisor of the task force on organizational structure to implement the project. The Task Force has submitted first report on April 30, 2003, but the report is not in public domain. (THE HINDU 070103)

**SC Order on May 5, 2003** Pursuant to order dated 20th Jan, 2003, an affidavit dated 5th May, 2003 has been filed by Mr. BP Pandey, Deputy Commissioner, Ministry of Water Resources, Govt of India, annexing thereto the resolution dated 13.12.2002. It seems that in last about four months three meetings of Task Force have been held on 6th Jan, 2003, 27th March, 2003 and 28th April, 2003. In the last meeting the first Action Plan as per Govt Resolution was considered and adopted. Now as per Action Plan-I the schedule for implementation is 10 years from the start. It stipulates that the work on the links can be started from 2007. It is envisaged to be completed by say end of 2016. Further it envisages that the group of Task Force of interlinking rivers will examine the two schedules and is expected to arrive at a reasonable and predicable implementation schedule in due course. According to Action Plan -I the said Task Force has laid emphasis on demonstrative value of starting work on a link or two, as soon as possible. The process of preparation of Detailed Project Report for an inter basin link need to cover also, Detailed EIA, EMP and R&R Plan for project affection persons. We find no substance in the apprehension that the Task Force will not implement the law. We have also no doubt that in case the other experts in the field provide necessary inputs to the Task Force, it will give it due consideration the same deserves. For the present, we would direct posting of the matter after six months.

# A SPIRITED RESPONSE TO RIVER LINK SUPPORTERS

Chittaroopa Palit, NBA

Looks like the river link supporters have no idea/ experience about large projects and their impacts. That is why they can suggest that projects are opposed because of rare butterflies. That is a caricature, usually used by those who either have something to benefit from the project or those who are ideologically affiliated to the govts in question - Congress/ BJP/ RSS, etc. or who live such elitist lifestyles that they have NO IDEA about the huge displacement of millions of people- farmers/ adivasis, etc that take place because of such Projects. The conservative official figure of those displaced by Big dams in India in last 56 years is 40 M, and these affected people are all around us. Most of them are farmers, agricultural workers, fisher people, the same people who will be displaced once again in the name of river link project. Are they the real India that they suggest will develop from projects such as interlinking of rivers?

It is also important to take a scientific view of such Projects. First, the need, the feasibility and optimality of the project have to be established in a participatory way. An objective evaluation of the possibility of land based rehabilitation has to be proved. Because cash can only put people on the roads and cannot enable them to replace livelihoods. Out of the millions of people affected by the 29 Narmada Projects in Madhya Pradesh, not a single oustee has been given land till now. I should know because I with 3 others fasted for 29 days last year so that only 1000 families out of these should be given land. But it did not happen.

If rehabilitation and provision of agricultural land is difficult, we must use options and technologies that are as minimally land displacing as possible. Let us have a moratorium on all land and people displacing projects including riverlinks UNTIL the backlog of those already displaced are rehabilitated.

We need to first do an objective assessment of capacity utilisation. The figures for large dams in MP again are thought provoking - 4 % capacity utilisation in Bargi, 18% in Sukhta, 53% in Barna and 54% in Tawa. The CAG of India examined the Sukta dam under utilisation in one report. The Govt reply to their question as to why the dam was being so hideously under-utilised was that there were 1247 wells in the command prior to dam construction and that even after the dam was constructed people continued to use their wells. The reply also said that the dam was partly built for kharif use, but the local people insisted on using rainwater in the kharif instead of the dam waters. This is the way that things are planned. In this instance, the local people did not need the dams at all. They had not been asked in the first place. So we have to examine whether this Project has a need centric approach or an impoundment centric approach. If there is need which are the communities who need it and where?

There is the crucial question that Suresh Prabhu was able to bring out in the power sector to his credit - the question of losses - that almost 50% of electricity generated is lost. So do you continue to make newer and newer electricity projects without attempting to plug the leaks or do you work at making the available capacities utilisable? I believe that we should have a MORATORIUM on all large and high cost water projects unless capacities of existing projects are utilised well over 70%.

On the question of river linking, if the real purpose of the Project is to make water available for the people, and not business for deshi videshi contractors, then we do not need river linking at all. What we need is a Employment Guarantee scheme at the national level, that is linked to water and soil conservation works that can be planned and implemented locally. If after the local resources are tapped there is still a real need for water in certain areas, some medium projects and then some larger projects including inter basin transfers can be discussed but NOT BEFORE THERE HAS BEEN AN EFFORT TO CONSERVE AND UTILISE THE WATER AVAILABLE IN THE BASIN ITSELF. And there were experiences in this country that were showing the way - the recharging of Ruparel and Arvari In Rajasthan, recharging of thousands of wells in Saurashtra, etc. That was how the local people who needed the water were demonstrating that they were capable of conserving it. Without any help from engineers and corporate and dam builders, thank you.

There has been no attempt to do this. River-linking is a euphemism for the large-scale alienation of water from the common people, including the privatisation of water. We are are all seeing where privatisation of power has got us - IPPs like Enron and Maheshwar and state experiences like Orissa have proved to be utter failures. They have violated the very norms of efficiency that the market is meant to ensure and have only churned out inefficiency and high cost power that nobody in this country can use. Privatisation of common water sources will be even worse- one can live without power but without water?

Let us face it, the criticism of the river linking project is overwhelming & reasoned. If the proponents have any data based defence of the river-linking project, I would be grateful if they could share it with us. Till then ...

(110403, discussion on riverlink@yahoogroups.com)

# National Citizens' Meeting in Delhi concludes: River Link Proposals ill conceived, not in national Interest

A National Citizens' meeting was held in Delhi on May 17 2003 in Delhi with participation from Assam, Bihar, Goa, Kerala, Madhya Pradesh, Maharashtra, W Bengal, Delhi and Uttaranchal, including eminent persons like Shri LC Jain, former member, Planning Commission, Shri Ramaswamy Iyer, former secretary, Union Ministry of Water Resources, Medha Patkar of Narmada Bachao Andolan and Shekhar Singh of Centre for Equity Studies. The one day meeting in Delhi was organised by Toxics Link, the Ecological Foundation and the South Asia Network on Dams, Rivers & People.

Criticising the govt including the President and also the Supreme Court for taking up a project whose feasibility and optimality is not known even by the govt's own admission, the speakers warned of the dangers of taking up the project for short sighted electoral gains. Shri LC Jain said that the River Linking is not required for drinking water projects, nor is it going to benefit the drought prone areas. Dinesh Kumar Mishra of Barh Mukti Abhiyaan said that the project cannot benefit the flood affected areas.

Shri Ramaswamy Iyer, member of the National Commission for Integrated Water Resources Development Plan, showed how that govt appointed commission was sceptical about the necessity or feasibility of River Linking proposals. Shri Raghunandan of Delhi Science Forum said that the strange thing about the costliest of project being undertaken is that neither are the benefits of the project shown to be viable, not is it clear who will get these claimed benefit and who will pay the price in terms of social and environmental costs. Shekhar Singh of Centre for Equity Studies said that Rivers do not carry water alone. The proposal is even more dangerous as attempting to link up veins of different persons without trying to find out the blood groups of the individuals. He said consequences will be disastrous. Rejecting the concept of surplus water in the rivers, he said that water belongs to the untreated catchments of those same basins where people are still thirsting for water.

Medha Patkar of Narmada Bachao Andolan, after touring the country under Desh Bachao Desh Banao campaign, asked if the govt has set up a contractor force or a task force, as the Suresh Prabhu led Task force is busy disbursing contracts, without an iota of transparency, accountability or public participation. Giving and open challenge to Suresh Prabhu to prove in any credible way any of the claims of the benefits that he his repeating as if to just prove that his claims are the truth, she demanded that the govt first make all the reports prepared so far public and then the right of free, prior and informed consent of all involved before taking up any project. Till this is done, govt should not put any public resources on the river linking work.

The participants decided to take the message of the meeting to far and wide corner of the country and educate the people about the dangers of the River Linking plans. Asking if the President would wait for his glass of water till the River Link water is available, Jain said that the need of water for the people is urgent and there are much most cost effective, less destructive, quick and sustainable solutions available, as is evident from the Prime Ministers' statements on need for rain water harvesting.

(The papers received for the meeting and information package circulated at the meeting is available with SANDRP)

**Karcham Wangtoo: Biased, shoddy EIA and Boycotted Public Hearing** The people of villages in and around the proposed 1000 MW privatised (to be built, owned and operated by Jaiprakash Associates) Karcham Wangtoo project has strongly opposed the project, the biased and shoddy environmental Impact Assessment report (done by NEERI) and violations inherent in the process of public hearing. The largest private HEP so far is starting on very weak foundations and is bound to bring disaster if allowed to go ahead. At the Public Hearing held at Karcham and Tapri on June 18, 2003, hundreds of people present said that the public hearing process is violative of the letter and spirit of the EIA process as the EIA and EMP were not available to the local people in Hindi, the language they can understand. The over 450 page long EIA report was only available in English, which none of the local people can use. Till two days before the public hearing earlier slated for May 28, people did not even know about the hearing. On June 18, 2003, people have demanded that first proper EIA should be got done as the current EIA is shoddy, incomplete and biased piece of work, each of the villages in the area should get copies of the full EIA in hindi at least a month before the next date of hearing and till then no work on the project should be allowed. (More details in next issue of DRP.)

# KALI BESEIGED

Dr Sudhirendar Sharma

*A dam project on which the Ernest & Yung Consulting firm earned a flak for plagiarising the EIA report. Subsequent contract to TERI for the same did not have better credentials. Knowledgeable locals contend that no one actually visited the dam site nor met with the local population. People have now taken it upon themselves to save the Kali River.*

"It is perhaps our last chance to save the river Kali," says environmentalist Pandurang Hegde. Announcing the launch of a peoples' campaign to save the river in Bangalore recently, the seasoned campaigner pointed out the need to stop the disposal of liquid effluents of a paper mill and to avoid building of 7th dam on the river.

"No other river in the country has been under as much ecological stress as Kali, " contends Hegde. The river is home to six hydel projects and the Kaiga Nuclear Power Project. Thanks to the large obstructions along its course, the Kali flows uninterrupted for just about 18 km along its 184 km course in the Western Ghats.

Once the proposed 7th dam comes up at Mavalangi, downstream of the first reservoir at Supa, the river will cease to flow. Even today, the storage in the reservoir affects the flow in the river. For instance, the water from the Supa reservoir is released only to sustain the desired level of water for peak-hour production of power at the subsequent hydel installations downstream.

Power generation at all the hydel projects along Kali has been severely affected, draining the economy of the state. An official of the Karnataka Power Corp questions govt's move at building yet another HEP under such conditions.

But the govt is bent upon impounding the waters of Kali yet again to enhance the installed capacity of 1500 MW by just another 18 MW. Once completed, the joint venture between the KPC and a private player the Murdeshwar Power Corp will produce power at an incredibly high cost of Rs 110 M per MW against Rs 7 M per MW by the KPC.

Clearly, there are serious questions about the huge costs. However, villages like Barade will continue to grope in darkness. Says Shaba, a local resident, "If six projects could not get us electricity we doubt if seventh will!" Ironically, the total electricity requirement in Uttar Kanara is 17 MW.

Originating at Kushavali, on the border of Karnataka and Goa, the Kali drives its name from the dark colour of its managese-rich waters. The river meanders through the unique biodiversity of the Western Ghats along its short course of 184 km in the Uttar Kanara district of Karnataka before joining the Arabian Sea at the strategically important port-town of Karawar.

The river is the lifeline to some 40 M people in the district and supports livelihoods of tens of thousands of people including fishermen on the coast of Karwar. Among other fauna, the Kali offers a perfect natural corridor for wild elephants and black panthers. Once completed, the proposed dam will not only submerge the corridor but 110 Ha of lush green forest too.

However, the authorities contend that no forest areas will be submerged. Rafting along the course of the river till the proposed site is revelation enough that nothing but rich forest and a unique biodiversity stand to lose existence in the process. Already, the six projects on the river have submerged over 12 800 Ha of forests in the region.

In addition to the proposed HEP, the river is threatened by the continued discharge of untreated effluents from the West Coast Paper Mill at Dandeli. Since the flow in the river has been restrained on account of dams and diversions along its course, the farming and the fishing communities have felt the enhanced impact of accumulated pollutants in the river.

Many farms irrigated with the Kali waters near Dandeli get layers of paper pulp upon drying. Farmers have little clue as all attempts at getting an audience from the authorities have gone unnoticed. So agitated are the farmers and people living around the paper mill that they have threatened to block all the pipes that discharge untreated effluents into the river.

Kali might be a lesser-known river than the famous Cauvery and Krishna in Karnataka but is no less significant in terms of the contribution it makes to the livelihoods security of people and the ecosystems it sustains in the Western Ghats.

Researchers have confirmed that this short west flowing river, whose farthest point by crow flight along its course is just 32 km from the sea, cannot withstand any more interventions both to fulfill its ecological functions as also to ensure livelihoods security to people. However, current developments along the river may eventually choke and dry the annual flow of 9,000 MCM in the Kali.

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# ADB in Sirsi Triggers Rural-Urban Divide

Dr Sudhirendar Sharma

**Sirsi**: Twice in the recent past the agitated people from over twenty villages have sent back the engineers who had come to survey the location for putting up a barrage to divert water from the river Agnashini. The barrage is part of the Rs 640 M Asian Development Bank's assistance for augmenting water supply to Sirsi, a small taluka town in Uttar Kanara district of coastal Karnataka. Organising themselves into a Water Users Association, the villagers are up in arms against any attempt at manipulating the river.

Says the association chairperson M S Hegde, "The river is lifeline of hundreds of villages along its course and any diversion of water will throw life out of gear." The association is demanding that the project document be made public and that they be included in any decision-making process. Till their demands are met, the association will resist any attempt that might subvert their fundamental right over the natural resource. So far, neither the project authorities nor the ADB has come to the negotiation table.

The ADB has started given increasing reasons to reinforce the notoriety that till recently was the bastion of the World Bank. With a bustling multi-sector portfolio it is becoming akin to 'destruction' or anti people attitudes. Last year it doled out loans of US $ 1.5 B. Cumulative loans to India from ADB are in excess of several B dollars.

One of its projects, the Karnataka Coastal Environment Improvement Plan, is brewing into a controversial odyssey for the peaceful village communities living along the river Agnashini. Meaning 'evil cleansing', the river traverses some 25 km from the beetle-nut town of Sirsi. Originating from Manjugani in upper reaches of Uttar Kanara district, the river drains into the Arabian Sea after meandering some 110 km in the district.

An estimated Rs 340 M out of the Rs 640 M for Sirsi, has been allocated for augmentation of town's water supply. From a barrage on the river at village Muttamurdu, the project intends to pump 16 MLD water for the town. "The river doesn't have any surplus to meet needs of the urban dwellers," contends Mrs Netrawati Gowda, member of the Zila Parishad.

The project authorities are using such sentiments to trigger a 'rural-urban divide'. In a country where just the promise of water can win votes, how can politicians stay behind from such developments? To hype a demand for the project, the municipality has resorted to creating artificial scarcity by cutting down on regular hours of supply. Attempt is to convince the people of Sirsi that the project is for their survival.

## WHY IS ADB SO ADAMANT FOR BUILDING THE DAM?

On Dec 5 2002 the Sirsi Municipal Council general meeting did not take any decision regarding water supply to Sirsi town from the Aghanashini River. The meeting debated on options including supplying water to Sirsi by constructing a dam or drawing water directly from the river. The people of villages around Marigadde Bridge have consented to providing water to the town directly from the river without a dam. The Rs 200 M-ADB scheme stresses the need for construction of a 6 m dam at an expense of Rs 320 M to supply 16.5 MLD water to Sirsi.

Municipal Council Member Arun Kodkani who visited the spot said Sirsi needed only 4 MLD of water. Water supply to Sirsi could be made possible without construction of a dam, he said. Municipal Council President Ms Mohini Bailur echoed Mr Kodkani's view.

Sirsi with a population of 65,352 (2001 census) has ten tanks, which are rich water resources. They include Kotekere, Devikere, Shankarahonda, Anehonda, Haluhonda, Basettikere and Bellakkikere. In addition to these tanks there are 5800 wells. Almost all the tanks, barring Shankarahonda and Haluhonda (which have been desilted recently) have become dumping grounds for waste. A part of the waste and drainage water pollutes water of River Varada. Another part of the sewage water joins Haluhonda and pollutes water at the base of River Aghanashini itself.

In 1969 the Sirsi municipal authority began to lift drinking water from Aghanashini River, 7 km from the town. For the last 33 years a 175 HP pump on Aghanashini River has been pumping 8 MLD. Now, Sirsi requires 16 MLD, it is claimed. The matter of constructing a dam is strongly opposed by villagers on both sides of the river. They have formed a Aghanashini Jalanayana Hitarakshana Samiti for the cause. The Samiti agrees that water can be lifted as it is done now. It only opposes the construction of the dam, which it feels will affect agricultural activities of the area. The Samiti has suggested that the remaining 8 MLD of water be used from the neglected tanks in Sirsi itself. This is less expensive and can contribute to a cleaner Sirsi. Aghanashini watershed covers about 8600 Ha upto Marigadde Bridge. There are 24 villages in the course of the river upto Sonda. Most of the people in the area depend on the river for agricultural activities. The Samiti says, construction of the dam will also lead to shrinkage in forest area. The idea of constructing a dam on Aghanashini river, only 7 kms from the birthplace is not commendable, the Samiti feels. (Deccan Herald 251002, 061202)

**THE ADB PROJECT OF KARNATAKA**

In Dec 2000 the State Cabinet approved a Rs 10.62 B Karnataka Urban Development and Coastal Environmental Management Project with ADB assistance. The 10 urban centres included in the project are Mangalore, Ullal and Puttur in Dakshina Kannada, Udupi and Kundapur in Udupi District and Bhatkal, Ankola Sirsi, Dandeli and Karwar in Uttara Kannada. The Karnataka Urban Infrastructure Development and Finance Corp is the nodal agency. Of the project cost of $ 251.4 M, the ADB would provide a loan of $ 175 M. The State Govt will re-lend the full ADB assistance along with its own contribution of Rs 3.5 B to the urban local bodies as an admixture of loan and grant. The overall loan and grant components would be 31 % and 64 % respectively, 5% to come from the local bodies.

A Cabinet Sub Committee, headed by the CM is to be formed mainly to oversee and monitor the progress of the project. A Coastal Research Management and Conservative Plan will be formed. An industrial pollution control and environmental monitoring programme will be put in place. One of the important components of the project is provision of drinking water and introduction of comprehensive metering of the distribution system. A new water tariff structure for domestic and industrial users will be formulated for recovery of cost. A project monitoring unit at Mangalore and project implementation wings at Karwar, Udupi and Mangalore will be opened. The Karnataka Urban Water Supply and Drainage Board Act will be amended to enable the Board to take up investigation, formulation and implementation of water supply and sewerage. The 4 year project is to be completed in 2004.

**Mangalore worries** Over 40 NGOs have joined hands to monitor and question the project. What is worrying the NGOs is that, according to estimates, the Mangalore City Corp will have to pay the ADB a total of Rs 4.345 B over 25 years starting from 2006 at a yearly average of Rs 173.8 M. As per the repayment schedule, the Corp has agreed to pay Rs 258.3 B in the first year of repayment that progressively comes down to Rs 73.8 M in the 25$^{th}$ year. The City Corp is said to have signed an 'on-lending agreement' for Rs 2.86 B of which Rs 1.16 B is in the form of a grant from the Centre and State Govt, Rs 1.40 B a loan at 13.5 % with the rest being the direct burden of the Corp. The grant component is actually tax-payer's money, recycled through the Centre and State Govts.

At present, however, the total annual revenue of the City Corp is hardly Rs 330 M -- which means that the money required to repay the loan would have to be earned through increased user charges on basic amenities such as water. This, they feel, will, in the long run, cause a manifold increase in the cost of living. Incorporated in these costs, is the money to be paid to Binnie Black and Veatch, a management consultancy firm that has to be paid in dollars.

**State Finances** There will be a three-fold increase in water charges and municipal taxes if the Govt goes ahead with the ADB project. Moreover the project costs 10 times more than the annual revenue of the local urban body of each town, according to a group of NGOs who question the rationale of raising funds with an ultimate tax burden of 13.5 % from the ADB and have tried to read the writing on the wall in places as distinct as Bolivia and Coimbatore. The Bolivian experiment with privatisation of water supply, which led to riots and the present crisis in Argentina, should act as some kind of deterrent for foreign-funded projects with privatisation as agenda. (THE HINDU 211200, THE BUSINESS LINE 230301, 280102)

However, little do they realise that once completed they will have to cough up more to keep their taps running. How else can the municipality repay the loan? The current annual earning of the municipality from all sources is Rs 10 M whereas it will need to repay Rs 35 M a year upon project completion. An increase in water tariff is clearly on the cards.

But people of Sirsi are oblivious of the built-in implications of the project. Neither have the project details been ever discussed with the local population. Ironically, community participation is restricted to implementation alone. Peoples' involvement is rarely sought during the design stage of the project. The Water Users Association is clear that it has a significant role to play in all stages of the proposed project.

Convinced that the project stood to benefit neither of the parties involved, the Water Users Association commissioned an independent study to resolve the issue. The study had concluded that at less than half the cost of the proposed project the problem of water scarcity of Sirsi could be overcome. Revival of traditional tanks and wells alongside rehabilitation of community commons was recommended in the study. The municipality, not so strangely, has shown little interest in the study.

But the villagers are relentless in their campaign to keep the river free of any restrictions. "We are justified in protecting our rights," argues Venkatesh Hegde, Chairperson of the Zila Parishad. "The onus of any violation of human rights and ecological obligation of the river rests with the ADB," say the villagers.

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## Chalakudy River Basin Meeting

A one day workshop on the various problems related to water scarcity in the Chalakudy River basin in Kerala attended by over 90 participants including representatives from river basin panchayats, blocks, municipalities, local NGOs, concerned citizens, Govt officials and the media came out with future plans for working together towards the protection of the Chalakudy River.

As a first step, all the local body representatives present at the workshop decided to pass resolutions on the urgent need to review the Parambikulam Aliyar Inter-State, Inter- Basin River Diversion Treaty pending since 1988. The inter- state river diversion and the non-release of due share of water into the Chalakudy River basin all these years has severely affected the river flow and water availability of the downstream populations. Violation of riparian rights was also pointed out. It was decided to conduct more regional level workshops to spread awareness among the river dependent communities on the need to conserve water, protect the river from pollution, involve in issues affecting the river, need for watershed approach to river protection etc.

Chalakudy Puzha Samrakshana Samithi gave an account on the present status and problems faced by the Chalakudy River focusing on problems related to water scarcity and water quality in relation to deforestation and degradation of the catchment, dams, pollution, tourism, canal irrigation, loss of fish diversity and fish wealth and livelihoods, sand mining etc. The problems arising from the non-review of the Parambikulam Aliyar Treaty, the huge water loss incurred by the Chalakudy River and the State as a whole were presented. He stressed the need for the Panchayaths to come forward and demand the review of the Treaty and the due share of water.

The discussion session witnessed a number of local body representatives coming forward to share the present water scarcity scenario in their panchayaths and the failure of the canal and lift irrigation schemes. The indisciminate dumping of the pollutants from the Ocein Plant at Kathikudam situated in Kadukutty Grama Panchayath directly into the river without any treatment was highlighted by many representatives apart from the pollution caused due to Sri Sakthi Paper Mills at Kanjirappilly, Pariyaram Grama Panchayath and the two Water Theme Parks on the way to Athirappilly waterfalls. The continuing heavy sand mining from the river inspite of complaining to higher authorities like the DGP has turned out to be a cause for frustration to the panchayaths. The increasing saline water ingress into the coastal and backwater panchayaths like Kuzhur, Mala, Puthenvelikara, Poyya has created problems for agriculture and drinking water availability the panchayats point out. The lowering water level in the river has made many Lift Irrigation schemes defunct. The watershed development initiated by Ayyampuzha Grama Panchayat in Ernakulam District is notable.

**THE TREATY** The major tributaries of the Chalakudy River (144 km) are: Karappara River originating from the Nelliampathy hills in the northern part of the catchment, Parambikulam Aar (rivulet), Thoona kadavu Aar and Peruvarippallam Aar originating from the Parambikulam Plateau lying in the north east and Sholayar River from the Anamalai Hills in the east. The Parambikulam -Aliyar Treaty involves three river basins namely, Chalakudy, Periyar and the Bharathapuzha arising from the high elevation Anamalai Hills of Tamil Nadu. The water of the Neerar tributary of the Periyar is dammed by the Upper Neerar Weir and Lower Neerar dam and diverted towards north into the Tamil Nadu Sholayar Dam in the Chalakudy basin. The Tamil Nadu Sholayar water is in turn diverted to the Parambikulam Reservoir situated further North West. The water from the Parambikulam reservoir is diverted via a 2 km tunnel further north into the Thunakadavu reservoir and water from the Peruvaripallam reservoir is also diverted into the Thunakadavu reservoir in the south via an open canal. The water diverted from all these reservoirs into the Thunakadavu reservoir is further diverted to east to generate power at Sarkarpathy Power House in Tamil Nadu. The Parambikulam, Thunakadavu and Peruvarippallam Dams were constructed in Kerala by the Tamil Nadu Govt in 1960s. The water released after power generation at Sarkarpathy is again taken via a contour canal to Aliyar and Thirumurthy dams in TN for power generation and irrigation. Aliyar and Thirumurthy dams were constructed in TN in the Aliyar and Palar tributaries of the upper area of Bharathapuzha River.

The PAP treaty was signed in 1970 between the erstwhile Kerala and Tamil Nadu Govts with effect from 1958. Though the treaty was to be reviewed in1988, neither a review nor a change in the treaty under the changed circumstances of increasing water scarcity in Kerala has been attempted.

Due to massive diversion for PAP (19.3 tmc feet) from the tributaries of the Chalakudy River and the degradation of the catchment the water availability in the river has reduced drastically affecting the drinking and irrigation water availability in the down stream panchayats. The reduction in the downstream flow has increased the saline ingression and raised the salinity level in the wells in the downstream panchayats. The Projects commissioned in the Chalakudy river earlier to the PAP namely, Poringalkuthu HEP and Thumboormuzhi Major Irrigation Scheme are unable to operate optimally due to this diversion.

Latha, Unni, Madhu,
Chalakudy Puzha Samarakshan Samiti

## DAMS

**Protests Against Tipaimukh** Mass protest rallies under the banner of the Committee Against Tipaimukh Dam at Tamenglong Headquarters, Luangba (Nungba) and Luangmai (Noney) on Jan 25th denounced the MoU signed between the Govt of Manipur and the NEEPCO for construction of the HEP at Tipaimukh along Manipur-Mizoram border. Nearly 650 villagers took part in the rally held at Luangmai (Noney). Addressing the meeting, social activists expressed deep concern for the villagers who would be affected by the proposed dam. The protestors demanded cancellation of the MoU the Manipur govt had signed with the NEEPCO. The committee also held protest rallies across Tamenglong district. The Committee Against Tipaimukh Dam's convenor, Aram Pamei has strongly deplored the statement made by Manipur CM regarding the proposed Tipaimukh Dam during a peace rally of Meira Paibis on Feb 2, terming the CM's statement as going against the interests of the Manipuri people. In taking up the project, the losses shall be greater than the gains, CATD said. It cast doubt on the motive of the Govt behind the reason for stating that the MoU signed earlier between NEEPCO and Manipur Govt would be changed again. (BUSINESS STANDARD 240103, THE HINDU 260103, POKHNAPAM DAILY 070203)

**Protest against Sukhtel** People of 56 villages to be displaced due to the proposed Lower Sukhtel Dam in Bolangir district in Orissa have decided not leave their lands, villages and forests and fight against the project. (HINDUSTAN TIMES 230203)

**Tehri: Curbs on Felling for Power Line** In a major victory for the people of Uttarakahnd and due to efforts of a few committed people of Chipko movement, the Central Empowered Committee set up by the Supreme Court has asked the Power Grid Corp and the State Forest Dept to restrict felling of trees for 800 KV Tehri – Meerut transmission lines. These directions were issued after a public hearing conducted by CEC in response to a PIL filed by Uttarakhand Jan Jagriti Sansthan in Oct 2002 in the Supreme Court. The move brings down the number of trees about to be chopped off to 6000 from the 30 000 odd targeted earlier. The CEC recommends that the focus has to be on the value of standing tree and not timber asking PGC and state Forest Dept to go for felling only on three strips of three m each and to increase the height of towers to reduce the number of trees to be cut. Some 14 000 trees were already clear felled for the construction of PGC planned power corridor through 36 km of dense forest that is unique for its Sal and Chir Pine trees. CEC has also sought re-enumeration of Sal trees in the area. In the Rajaji NP case, it has directed them to first cut trees in spots where tower foundations are to be laid and then to mark the conductor spots to minimize the clear felling.

## Bhavani weir

**MoEF Stops Construction** A high level team from the Union Ministry of Environment and Forests found that Kerala has committed serious "violations" in the weir construction across the Bhavani near Mukkali. The Ministry has ordered stoppage of weir construction and directed Kerala to hold an inquiry and take action against officials responsible. MoEF's decision to withhold clearance given on 22.10.99 to Kerala highlights the disquiet over the potential ecological impact of the diversion on the Nilgiris Biosphere Reserve, after complaints of tree felling.

**TN Opposition** The issue rapidly emerged as a confrontation point between Kerala and Tamil Nadu. The complaints by TN's farmers against diversion and the Kerala govt's charge that TN is not honouring its commitments in Inter-State water sharing agreements seemed to drown the concerns raised by environmentalists and Opposition leaders in Kerala, that the water diversion may further erode the already denuded forests. The confrontation rose when the TN CM wrote to her Kerala counterpart that the diversion was being done even when the Cauvery issue is pending before the Tribunal, and secondly, the water is to be diverted outside the Cauvery basin. However Kerala contends that it wants to utilise only 0.718 TMCft of water for providing drinking water to 25 000 people in Mannarkkad and to irrigate 2000 Ha, although as per 1973 inter-state agreement under the Siruvani Drinking Water Supply Scheme, it could utilise 2.5 TMCft of Bhavani water after construction of the Suruvani reservoir. The Cauvery water Disputes Tribunal heard the TN plea seeking directions to restrain Kerala from executing the constructing a weir across river Bhavani and directed TN to file a detailed supplementary affidavit, after senior counsel for Kerala said that the application was bereft of details.

**TN Diverting Bhavani river water** Meanwhile the Kerala govt has collected evidence of six illegal diversions of Bhavani river above the Attappady Hills flowing to Kerala, resulting in acute water shortage in the tribal belt. The TN govt has allegedly diverted the waters of Vargar and Kodungarapallam to the Kuntha hydel cum irrigation project, making both the rivers dry. No waters of Upper Bhavani, East Vargarpallam and West Bhavani is flowing into Kerala as TN has built projects on these, stopping Kerala's right of 50% water from these rivers. Kerala also accused TN of not giving Kerala its due share of water from the Parambikulam Aliyar Project. The latest example of the TN move is construction of Mekkara Dam at a cost of Rs 1 B to divert Kerala water from Pamba and Achankoil rivers without so much as consent of Kerala. (THE HINDU 210103, 290103, 010203, 060203, 090203)

The whole case also exposes the environmentally destructive face of Power Grid Corporation.

- **Tehri Risks** Sunderlal Bahuguna warned Supreme Court that even if the wall of Tehri dam is strong enough to take seismic shocks, there is fear that the hills around the reservoir may collapse into the dam, which can lead to catastrophic floods in the downstream area.
- **Double Displacement** Some 90 families displaced by Tehri dam are not threatened to be displaced again, this time for Airport, but have refused to budge. (THE INDIAN EXPRESS 010203, 220103, *RASHTRIYA SAHARA* 290103, THE TIMES OF INDIA 020203)

**Seismic Monitoring stand still at Idukki** Seismic monitoring in Idukki district, which hosts the largest arch dam in Asia and is one of the nine reservoir-induced earthquake-prone areas in the country, has come to a standstill following the closure of all but one of the 12 observatories. Without the functioning of a minimum of three observatories, monitoring of tremors is virtually impossible as it follows the triangular method where shocks absorbed in three centres are required for analysing the epicenter of shocks and the possible shocks in future. KSEB sources said that the recent closure of two observatories, at Thonithady and Painavu, was due to shortage of technical staff to man the stations. Sources confirmed that equipment worth millions of rupees are idling away in various observatories. Since 1986, five earthquakes occurred in Idukki and nearby regions and the one that hit Meladukkam on Dec 12, 2000, had the highest intensity (5.0 on the Richter scale) ever recorded in Kerala. (NEW INDIAN EXPRESS 070103)

**Minister seeks report on Koyna oustees** Minister of revenue and rehabilitation ordered his ministry to submit an in-depth plan for 115 residential villages, specially created for Koyna dam oustees in Satara, Solapur and Sangli, in two months. The minister issued this order after a meeting with the representatives of the Koyna Dharangrasta Sangram Sanghatana. (THE TIMES OF INDIA 010103)

**Dam staff sans pay** Over 5000 workers participated in a rally held at Shahpur Kandi by employees of various unions of the Ranjit Sagar Dam to protest against the failure of project authorities to pay their salaries for Jan and Feb 2003. There are about 13000 employees working on the Ranjit Sagar Dam and the total salary bill not paid to them so far amounts to Rs 110 M. They also demanded absorption of 7000 workers of the Ranjit Sagar Dam who are threatened to loose their jobs if construction of Shahpur Kandi Project is handed over to a private company (Jai Prakash Industries). (THE TRIBUNE 190203)

## NEWS FROM THE NARMADA VALLEY

**No progress at SSP River Bed Power House?** A look at the status of reports published by Sardar Sarovar Nigam (latest one in BISUNESS STANDARD 010503) raises questions as to what is going on at the riverbed powerhouse of SSP. As on 31.12.01, it was claimed that 89.42% of underground excavation is complete. Then as on 31.3.02 that figure went up to 89.83%. Believe it or not, the figure came down as on 31.12.02 to 89.59% and now has again gone up to 90.00% as on 31.03.03. Meanwhile the figure for open excavation claim remained stagnant at 96.91% during this entire period. Something is surely amiss here.

### SSP in Gujarat Finances

Out of Rs 78.6 B annual plan for 2003-4 the highest allocation of Rs 14.65 B will go to irrigation & flood control, including Rs 9 B (61.5%) for SSP.

**Annual plan of 2002-3 cut by Rs 16 B** Gujarat has reduced its annual plan for 2002-3 by Rs 16 B. While a substantial portion of Market borrowings to fund SSP is eaten away by debt payment, it keeps pushing the heavy investment Drinking Water Pipeline Projects that are estimated to cost more than entire annual plan. During 2001–2, the annual plan was of Rs 76 B, but at the end there was a shortfall of Rs 22.9 B.

**Coffers empty, but SSP needs Rs 165 B** The SSNNL has assessed its needs at Rs 165 B over the next four years from the Gujarat govt. At a presentation to CM officials said, "the liabilities of SSNNL were likely to rise with every passing year. If we had to pay Rs 4.5 B in last fiscal, the figure is Rs 15 B this year. Till now, we have garnered Rs 7 B, but we are yet to gather Rs 8 B to pay for the matured bonds. The due amount would be Rs 50 B in 2007. Giving a break up of the next four years' need, the CM was told that the corp would need a minimum Rs 35 - 40 B per year. If the state and central budgetary support do not match the expectation, the only option would be to increase the user charges. A file before the CM puts an average price of Rs 6.4 per KL of Narmada waters for farmers, upto Rs 20 per KL for industries, with some 50 top industrial houses having approached govt. Already farmers of Kheda, Baroda and Bharuch districts are charged Rs 425 per Ha compared to Rs 380 in case of water from other projects. (THE TIMES OF INDIA 200103, BUSINESS STANDARD 050203, THE HINDU 280203)

**Narmada battle finds echo at UN** In a hard hitting speech, NBA activist Medha Patkar urged the UN Commission on Human Rights to make a "forceful and urgent intervention" arguing that UN intervention has become the need of the hour since the Govt had "reneged" on its commitment before the Supreme Court of resettling and rehabilitating the tribals

displaced by the Narmada project. In its ongoing annual session, Patkar pleaded with the UN body to send its Special Rapporteur on indigenous people, to India to study the plight of the tribals affected by the construction of SSP. (THE INDIAN EXPRESS 120403)

**Independent Report on Displacement & Submergence** The report of fact-finding mission to probe into the rehabilitation of the people displaced by the SSP and Maan dam projects due to 2002 submergence was released on March 31. The mission was sent to the Narmada valley by Habitat International Coalition and Housing and Land Rights Network. In its report, the fact finding mission found that submergence owing to the 2002 monsoons and the raising of the height in May 2002 has destroyed the crops and homes in SSP affected villages in Maharashtra and Madhya Pradesh, rendering the villagers homeless. As a result the people face a severe food and drinking water shortage. In Jalsindhi, Jhabua dist., MP and Domkhedi, Nandurbar dist., Maharashtra, the team witnessed the destruction of homes and standing crops. The team also reported brutal repression of democratic protests by the local villagers and activists of the NBA against the forced submergence.

The evidence collected by the fact finding team regarding the Maan dam irrigation project is even more damning. The report states that the residents of Khedi Balwadi village launched a satyagrah demanding land-for-land and full rehabilitation before submergence. Even as the oustees were on dharna and fast, on May 17, 2002, school buildings were razed in the submergence villages; all hand pumps were removed, electricity connections were severed and transformers lifted away and trees were chopped down in an attempt to make living conditions miserable and coerce the villagers to abandon their homes. On July 20, 2002, several hundred police personnel surrounded the village and forcibly evicted people from their homes.

The mission recommended an immediate moratorium on any increase in the height of Sardar Sarovar Project until all displaced families were suitably rehabilitated. (THE TIMES OF INDIA 010403, FRONTLINE 250403)

**Omkareshwar awaits CCEA nod** PIB meeting held on 230103 recommended the 520 MW Omkareshwar HEP for the consideration of CCEA. PIB had cleared the Rs 22.7 B (including Interest During Construction around 3.34 B) project for execution of Unit 1 and Unit 3 works (i.e. merely power component) at March 02 price level, in its meeting held on 110702. (NHPC site, status of clearance as on Feb 03)

**Narmada Sagar** The CEO of NHDC, a joint venture of MP govt and NHPC claimed, "We are committed to take the dam to 238 m height and start power generation by Oct 2003, but we are helpless as R&R work remains tardy and slow". "Of the 87 villages, R&R work has been completed in only 20", he added. Besides R&R work, a 57-km stretch of railway line, connecting Mumbai and Kolkota, falls in the submergence area. Unless, it is diverted, NHDC will not be able to stick to its deadline. According to sources railways have set Aug 2004 as deadline for shifting its stations and diverting the line. The estimated cost of the project has been rising steadily. In 2000, it stood at Rs 43.55 B.

- The NHDC CEO may be misleading the people, as according to the NHPC Action Plan for 2003-4, the dam is to reach 232 m by March 2004. (BUISNESS STANDARD 280203)

**Tardy progress of Narmada canal in Rajasthan** Till Oct 2002**,** Rs 21.2 B has been spent on Narmada canal project in Rajasthan which envisages to build 74 kms long Narmada Branch Canal and 1403 km long distributory network to irrigate 0.73 M Ha land, in 74 villages in Jhalore and 15 villages in Barmer district, originally estimated at Rs 18.73 B (add to it Rs 28.41 B to be paid to Gujarat, as Rajasthan's share in expenditure for construction of canal in Gujarat, the estimated total cost stood at Rs 46.75 B) and projected to cost no less than Rs 139.2 B at 1999-2000 prices and still there is no sign of works reaching any significant stage. These are some examples of prioritised expenditure incurred: Rs 72.22 M wasteful expenditure on residential colonies without any logic. Rs 60 M doubtful and hasty expenditure on siphons on Sukhadi river. CAG report for Rajasthan (civil) for the year ending on March 1999 had criticised the irrigation dept for tardy progress and wasteful expenditure on Narmada canal project. (*GUJARAT MITRA* 080602, *RAJASTHAN PATRIKA* 290103)

**MEDIA BLOOMERS NHDC may be asked to complete SSP?** The Narmada Hydroelectric Development Corp claims that it is likely to be handed over the Sardar Sarovar Project hydro station. It claimed that Gujarat govt and Union Power Ministry wanted the project to be completed as soon as possible and the MP CM Digvijay Singh had no objections to NHDC implementing the project. Unfortunately, this paper has been frequently releasing such trial balloons. In the past it has been claiming that Maheshwar project could be taken over by NHDC. (BUSINESS STANDARD 150103)

## HYDRO PROJECTS

**Private Power Forgery Scandal** A former Himachal minister has accused the state govt of having caused loss of millions to the state exchequer due to hasty decisions. Alleging that Shimla based Everest Power Company - with whom state hastily signed an MoU for the execution of 100 MW Malana-II HEP – has forged signatures initially of a China based company to grab the project and later that of L & T. He alleged that instead of punishing the guilty, the state govt was all set to give clearance to the agreement. (THE TRIBUNE 050103)

**NTPC to construct Lohari Nagpala, Tapovan HEP** After taking up the 800 MW Kol Dam project in HP, NTPC has signed an MoU with Uttaranchal for construction of 520 MW Lohari Nag Pala project on Alaknanda river located 60 km from Uttarkashi and 360 MW Tapovan Vishnugad project on river Bhagirathi near Joshimath, Chamoli, the feasibility studies for the projects are yet to be done. NTPC signed the MoU to take up the projects at a cost of Rs 50 B as part of its diversification plan. French Consultancy Company EDF, which is advising NTPC on Koldam is also sought to be roped in for technical advise for these new projects. (THE TIMES OF INDIA 040103, 160103)

**Privatisation of Uttaranchal HEPs** Uttaranchal has chalked out a programme to privatise 60 identified HEPs. 47 small projects with a capacity upto 25 MW and 13 others with capacity of 25-100 MW have been earmarked for private developers, the total capacity of 60 projects being 763 MW. These include Bagoli and Singoli Bhatwari on River Ganga in Chamoli district with capacity of 64 MW and 50 MW respectively. (INDIAN EXPRESS 020103)

**Alstom Machines for Vishnuprayag** The French major equipment supplier Alstom has bagged a Rs 2.5 B contract from Jaiprakash Powre Venture Ltd for supply of equipments for the Rs 19 B 400 MW Vishnuprayag private project to be completed in Dec 2006 in Uttaranchal. (BUSINESS LINE 080203)

**CEA clears Lower Subansiri** The Central Electricity Authority has accorded techno-economic clearance to the 2 000 MW Subansiri Lower HEP to be executed by the NHPC. "We are now awaiting the environment clearance", sources said. The cost of the project (at Dec 02 prices) has been pegged at Rs 64.18 B plus a foreign exchange component of $39.65 M (i.e. Rs 18.64 B). PIB memo has been circulated by MoP among various scrutinising agencies on 10/02/03. PIB meeting is to be fixed. Actual expenditure on the project till Jan 2003 is Rs 4.731 B. While, the standing committee on IBWL has desired that bio-diversity study of the area has to be conducted, and MoEF has directed BSO and ZSO to undertake bio-diversity studies and submit the report by 150303, NHPC is asking MoEF to consider the proposal for forest clearance pending bio-diversity studies. The project submerges 571.30 Ha forest land in Assam and 3183 Ha in Arunachal Pradesh (including 42 Ha of Tale Wildlife Sanctuary). In the name of "delay in implementation", the Prime Minster's office has set up a five-member committee under the leadership of the cabinet secretary to go into various details and suggest ways of speeding up the process of completion. (BUSINESS STANDARD 160103, BUSINESS LINE 220103, POWERLINE 0103 & 0203, NHPC site, status of clearance as on Feb 03)

**Bihar HEPs** The Bihar govt is planning to complete the restructuring of the Bihar State Electricity Board and develop HEPs. The state awaits a clearance from CEA for setting up a 450 MW HEP at Indrapuri in Rohtas district at a cost of Rs 20 B, for which a Japanese firm has shown interest. The govt is also preparing plan for a 240 MW HEP at Telarkund in Kaimur district at a cost of Rs 10 B. Half a dozen small HEPs would shortly add 20 MW capacity, when existing hydel capacity in the state is 16.5 MW. (THE HINDU 200103)

**Baglihar** J&K CM said that the Rs 46 B Baglihar HEP on the river Chenab would begin generation by Dec 2004. He said over Rs 14.6 B had been spent on the 1st phase of the project. Work on the Rs 17.5 B 2nd phase had also begun, he added. The state govt is seeking Rs 27 B from FIs to complete 1st phase. The first phase of the project was sanctioned without financial closure and the state govt has said it will investigate how this happened. (BUSINESS STANDARD 050203)

**Haryana to get 64 MW more from NJP** Haryana will get an additional 64 MW following an agreement valid for 35 years between the Haryana Vidhyut Prasaran Nigam and Sutlej Jal Vidhyut Nigam for the purchase of power to be generated from the 1500 MW Nathpa Jhakri HEP in HP. (BUSINESS STANDARD 100203)

**Global bid for Shahpur Kandi Project** The Punjab Govt has decided to call international bids for setting up Rs 18 B 268 MW Shahpur Kandi HEP. (Source?)

**NHPC Claims and Realities** NHPC claims that it will add 4357 MW capacity during tenth plan and planning com has sanctioned Rs 322.26 B for this, including equity of Rs 142 B. NHPC has demanded short cuts in clearances processes. It has demanded that the pre PIB clearances should be done away with. Unfortunately for NHPC, in the first fifteen months of tenth plan it could not add any capacity and its deadline of Chamera II commissioning by May 2003 has passed without fulfilment of its promises. (INDIAN EXPRESS, *RASHTRIYA SAHARA* 280203)

**NHPC VIOLATION Bids invited for Teesta L Dam III** NHPC, through an adv. (THE HINDU 150103) has made global invitation for pre qualification bid for Hydro Mechanical and Electro Mechanical works of 133 MW Teesta L Dam 3 in W Bengal, even as the environment and forest clearance is still awaited.

## SOUTH ASIA

**Save Damaan Movement** We have recently established Damaan Bachao Taralla (Save Damaan Movement). Damaan is in fact an area lying between the right bank of the Indus River and Sulamin Mountain Range. Local communities of this region are facing destruction and violations of their basic rights due to simulatneous implementation of three projects, namely, the Chashma Right Bank Irrigation Project, Gomal Zam Dam and Kachhi Canal Project. Last two projects have recently started. Chashma Right Bank Lift Project is also to be started. (Mushtaq Gadi, Pakistan)

**Protests against KGA Transmission Line** Locals in Nepal have protested against the transmission of 132 KV electric line of the Kaligandaki 'A' HEP from Butwal to Sunauli, India stating that the project has had adverse impacts on their lives. The transmission project scheduled for 2003-5 has impacts on large number of households, claimed locals. "Keeping in view that 73 high tension wires to be constructed under the project largely affect the densely populated areas along the route, we have formed a struggle committee to seek an alternative route," said the Chairman of Electricity Transmission Line Struggle Committee. ETLSC has also suggested an alternative route along the bank of Tinau rivulet to the Nepal Electricity Authority. The proposed high tensions also affect crops. (KATHMANDU POST 090103)

**People's Rivers Commission** Coastal Development Partnership has taken the initiative to form a Peoples' River Commission comprising NGOs, CBOs, Civil Society Initiatives and Activists in Bangladesh, India and Nepal in order to influence the govts concerned to form a Joint River Commission of the three countries for optimum utilization of the waters of the Ganges. CDP and Action Aid Bangladesh, held a meeting with a Network of several NGOs active in W Bengal and held discussions with them. They assured their support, as their area too, had suffered vast devastation by the flood of 2000, which had affected the Southwestern border districts of Bangladesh. (CDP Newsletter Jan 03)

**Baglihar** Talks between India and Pakistan regarding Islamabad's reservations about the design of 450 MW Baglihar HEP on river Chenab in J&K ended in a deadlock with Pakistan deciding to invite a "neutral expert" to resolve the issue. Pakistan has serious objections to the construction of Baglihar as well as Krishnaganga project on Jhelum by India. Pakistan's main concern regarding the project design is the provision of gated spillway. The argument being that as a result of the project, Pakistan would be deprived of 7000 cusecs of Chenab water everyday. While India maintained that it was run of the river project and the gate structure was within the parameters of 1960 Indus Water Treaty, Pakistan insisted that it is in violation of the treaty. An official statement issued at the conclusion of the three-day meeting said: "Due to the reluctance of India to resolve the issue at the level of the Permanent Indus Commission, in accordance with the article IX (1) of the treaty, Pakistan will be left with no option but to invoke article IX (2) of the treaty for the appointment of a neutral expert for resolution of the issue." (THE TIMES OF INDIA 030203, 080203, BUSINESS STANDARD 040203THE HINDU 060203)

**Mangla dam height fuels discontent in PoK** Tension is mounting inside the Pakistan occupied Kashmir over the efforts of Pakistan's Federal Govt to increase in the height of Mangla Dam by 30 ft. Reports indicate that resentment among the people, especially in Mirpur and adjoining areas of Jhelum, has escalated following fears of huge human displacement. Sources said 50 - 100 thousands people are likely to be displaced. Doubtful of Pak govt's rehabilitation commitments, in the light of past experience, residents of Mirpur have threatened direct action to stop the dam's expansion. (THE HINDUSTAN TIMES 100203)

**Pak Dam washed away** Torrential rains played havoc with most parts of Balochistan as hill torrents swept away an earthen dam near Quetta and livestock, and demolished dozens of houses. (DAWN 180203)

**Pak seeks assistance from Japan** Minister for Water and Power has sought assistance from the Govt of Japan for big water storage and HEPs such as the Basha-Diamar Dam. Japan has sponsored a feasibility study of Munda HEP. (POWERLINE Feb 03)

**Bangladesh concerned over low Ganges flow** Bangladesh's share of Ganges flow fell short of the schedule set by the 1996 water treaty in the entire month of January and the first ten days of February, and made water experts worried about the country's share during the next two months and a half of this dry season. A highly placed source told that they wrote to their counterpart in New Delhi about denial of Bangladesh's share of water as per the treaty and sought remedial measures. Dhaka has so far received no reply. Bangladesh is at the lower reaches of the Ganges, Brahmaputra and Meghna river basins, but is yet to be consulted by upper riparian India about the $ 110 B plan to inter-link rivers. Experts in Bangladesh question as to whether enough water would be left in the 53 common rivers for Bangladesh to share after India unilaterally implements its present plan to divert water of Himalayan rivers towards its southern states.

"Are the fresh water wetland ecosystems and the coastal and marine ecosystems of Bangladesh dependent on flows of these rivers destined to be doomed?" they ask. (NEW NATION - Bangladesh 160203, 170203)

**New Indian embankment to affect Nepal** Ongoing construction of a new embankment to replace an old one along Mahali Sagar in Siddharthanagar district of India close to the Nepal-India border would inundate around 400 Ha of land in Kapilvastu district in Nepal. The local people have asked authorities concerned to raise the issue of inundation to the Indian counterpart, but to no avail. (KATHMANDU POST 180203)

**Afghanistan's war-ruined ecology** The Environment Minister of Afghanistan said that the internationally acclaimed Sistan wetlands were almost dry. Satellite Imagery shows that 99% of the wetland has dried recently, since 1998. UNEP's post-conflict environment assessment shows that only 20 % of Afghanistan have access to safe water. There are no conifer forests in protected areas, there has been 52% loss of forest cover. (THE TIMES OF INDIA 070203)

## AROUND THE WORLD

**Three Gorges: serious human rights abuses** International Rivers Network released an eyewitness report on the resettlement and human rights problems of the Three Gorges Dam in China. More than 6 40 000 people have been evicted to make way for the giant dam and its 632 km reservoir on the Yangtze River. The displaced have not been compensated according to international standards. The resettlement process is fraught with corruption and human rights abuses. Protests are widespread, and the police have used excessive force to quell these protests. IRN warns that the pressure on the local population will increase when submergence in the reservoir area starts in April 2003. A letter endorsed by over 100 international NGOs calls on the govts of Germany, Sweden, Switzerland, Brazil and Canada - all of whom are helping fund the dam – to demand that the Chinese authorities respect human rights, and suspend submergence until resettlement problems have been resolved. (IRN PR 200103)

**UN Report** The United Nations is publishing a report on the quantity, quality and availability of global water supplies that relies on graphics rather than text to deliver its message. The report, Vital Water Graphics, illustrates problems such as the world's growing waste of water, the reduction in freshwater supplies, and the sharp fall in size of the Aral Sea, Lake Chad and the marshlands of Mesopotamia. In 2000, agriculture and domestic use each wasted 800 BCM of water, and industry 400 BCM. By 2025, the report estimates, those figures will have risen to 1000, 1100 and 500 BCM respectively. The report says global water use has more than tripled since 1950, and one person in six has no regular access to safe drinking water. The number of children who die every day because of unsafe water is estimated at 41000. (BBC ONLINE 270103)

**Water is *Big Business* for WB** The WB foresees a significant increase in the need for financing water resource infrastructure in the developing world. John Briscoe, Senior Water Advisor to the WB told a round table meeting in Tokyo that 16% of the institution's annual $ 20 B in loans is related to water projects, divided more or less equally between treatment, irrigation, hydropower generation and other uses. "We expect these numbers to increase... to 24% over the next 3-4 years. It is a big business for us." (WORLD BANK'S PRESS REVIEW 300103)

## WATER PRIVATISATION

### The Myths vs. the Reality

The WB and the International Monetary Fund, both of which have included schemes for commercialising and privatising water in their recent conditionalities for loans to developing countries, have significantly advanced the process of creating markets for water.

The arguments for such privatisation are the standard ones heard in most cases of state withdrawal from service provision. Private agents are supposed to be inherently more efficient and cost effective than public service providers. Private agents are also supposed to be able to charge prices that more closely reflect the "true" value of this resource. The experience of the last decade has given the lie to these arguments quite comprehensively. Consider, first of all, the issue of cost effectiveness. Almost all the studies conducted comparing the relative costs of public and private water utilities have found that the public providers have lower costs per unit. On the other hand, it is found overwhelmingly that privatisation tends to increase the prices paid by consumers, dramatically. In England prices rose by 106% between 1989 and 1995, even as the profit of the water companies shot up by 692%. In Paris, the privatisation of water services meant an increase in consumer prices by 300% between 1984 and 1997. In Bolivia, where the govt was forced to sell the public water system to the multinational Bechtel owing to pressures from WB, the experience was even more disastrous. Not only were water prices doubled, local residents were even forced to buy permits to gather rain water on their own property. Public anger, culminating in the famous protest at Cochabamba, forced the govt to backtrack & revoke the privatisation law. While Bechtel is suing the Bolivian govt for breach of contract, a citizen-govt partnership in Cochabamba has organised the universal, fair & reliable provision of water.

Nor is it the case that private water suppliers necessarily provide safe water. In Delhi, a non-governmental research organisation recently found that all the major suppliers of supposedly safe bottled drinking water provided water that contained unacceptably high levels of pesticides and other chemicals. In spite of all this adverse international experience, the effort to privatise water is actually gaining momentum in India. It looks, as if once again, we will fail to learn from other examples, and be forced to go through the agony resulting from indiscriminate privatisation of public services, before we are also forced to backtrack and reverse this undemocratic tendency.

➢ **Privatisation disaster in Delhi** As we edit this issue of DRP, five workers of Rithala Sewage Treatment Plant being managed by French Company Degremont have died on June 25, '03 and a case for death due to negligence of the French company has been registered. (*Jayti Ghosh* in FRONTLINE 280203)

**ADB has no answers?** It seems ADB has no answers to the criticism of its Privatisation agenda. In response to ADB's article in *The Hindu*, when Shripad Dharmadhikary of Manthan Adhyayan Kendra wrote a point to point to reply on Jan 28, 2003 in the same paper, ADB had no answers. And how could it have when it privatisation showpiece of Manila collapsed a few months earlier? (THE HINDU 280103)

**Suez unit abandons water deal in Atlanta** A unit of French utility giant Suez SA agreed to abandon one of the largest privatisation efforts in US history, a takeover of the city's water system that generated only half as much savings as expected and created a mess for consumers. The divorce came within just four years into a 20-year contract widely seen at its start as a model for bringing profit-driven management into municipal services usually regarded as bloated and overly bureaucratic. The deal's flop could slow privatisation efforts elsewhere. Water users blamed the private operator for an epidemic of water main breaks and brown tap water, deficient maintenance, delays in water-meter installation and a surge in unpaid bills. (WALL STREET JOURNAL 270103)

**'No' to privatisation: Oscar Oliviera** Oscar Oliviera's story of resistance elicited a special response at the Asia Social Forum. Oscar representing Coordinator for the Defense of Water and Life went on to recall how people organised to oppose the handing over of Cochabamba's water and sanitation system to Aguas del Tunari, - a consortium of private companies, including the American giant Bechtel – by Bolivian govt under pressures from the WB. He said that the cancellation of the contract with Aguas del Tunari was a significant moment but not the end of the story. People decided to set up an alternative enterprise, which is neither private nor state-controlled. It consists of a board of seven directors, three of whom are chosen through secret ballot by the people of Cochabamba. Of the rest, one represents workers' unions, two are from the municipality and one represents professional organisations. The new enterprise, functioning over past two years, has successfully supplied piped water to over half the population of Cochabamba. "We don't want to privatise, but we don't want the state either. Private enterprises are for rich people and state enterprises are basically private enterprises of a political party. We want an enterprise based on the four pillars of transparency of management, efficiency, participation of people and social justice."

➢ **Citizens denied part in Bechtel Vs Bolivia suit** A secretive trade court has announced that it would not allow the public or media to participate in or even witness proceedings in which Bechtel is suing the people of Bolivia for $ 25 M. Aguas del Tunari, is suing Bolivia over the company's failed effort to take over the public water system of Bolivia's third largest city, Cochabamba. After taking over the water system in 2000, the company imposed massive water rate hikes, which resulted in widespread protests countered by military force that killed one person and wounded 175. Oscar Olivera said, "Now the WB is not only imposing its ideas and programs on us, it is also preventing the people affected from participating in a case that directly affects our lives. This is profoundly undemocratic." Said Martin Wagner, an attorney for the US-based law firm, Earthjustice "It is inexcusable that a panel considering an issue as fundamental as the right to water should be able to exclude the very people whose rights will be affected by the case." (THE HINDU 090103, EARTHJUSTICE PR 120203)

**Struggle against privatisation** "Multinationals are attacking right of livelihood by measuring and selling drinking water", speakers expressed concern at a seminar *Irrigation and Drinking Water Privatisation* organised by AP Rythu Sangam as part of Asian Social Forum. Giving a call to fight these water multinationals, speakers criticised that govts are retreating from the responsibility of providing drinking water to the people. The attempts being made by the Hyderabad water Works for privatisation of drinking water were condemned. (PRAJASHAKTI 060103)

**MNC go packing** Following the footsteps of UK majors, Anglian water and Biwater, the latest to pack up hopes and all but exit the country is Ondeo India Services after its prolonged wait since the mid 90s came to nought. The last straw was uncertainty and litigation dogging management contract it jointly bagged from Bangalore Water Supply and Sewerage Board. If Biwater left amidst charges of irregularities, Anglian Water like Ondeo was worn out in Bangalore and jinxed by Panaji's political instability two years ago. (BUSINESS LINE 270103)

**WATER POLICY**

## The Story of destruction of The Chhatisgarh Rivers

If one were to tell the story of Chhatisgarh Rivers, these words may strike as refrain. Facing the recurrent drought of late 19th and early 20th century, the British govt decided to construct Admabad Dam on river Tandula near Balod and Rudri dam by siphoning Mahanadi river. In 1915 works on Rudri Dam reached completion. The work on Madamsalli Dam got over after a decade in 1926. But the canal system to harness irrigation water from both reservoirs got built only in 1954. Korba Thermal Power Station became the first industry to lay claim on river water and the river Hasdeo was dammed to quench 'thirst' of power station. On the heels of it, river Bango also got dammed. Today these dams supply water to NTPC that produces 3450 MW power. To meet with the ever-growing demand of water for Bhilai Steel Complex, a water grid was brought into effect by diverting water from Dhamturi and Raipur districts. While many of the dams had an avowed aim to enhance irrigation, almost 2/3 of its water is kept reserved for Bhilai Steel Complex. In 70s when NMDC started iron mining in Beiladela, the water of Shankhani river turned as red as blood. While the urban water supply project fail to ensure water security, Industrial Development Corporation has effected 22 years contract to supply water to Neko Spunge Iron Complex. The Corp. went ahead to build an anicut on river Kharun some 15 kms from Raipur, by abusing the rules and regulations in 1997. When community protested against this move, the anicut was handed over to co-operative sector so that other industries can also lay claim to water, but community has lost its water right at the end of the day. In the early 90s an iron spunge factory – Jindal Strips Ltd. (known as Jindal Power & Steel today) – started drawing large amount of water from river Kelo. Today the downstream community organised under the banner of Kelo Nadi Sangharsh Samiti is struggling to regain water rights. Within one kms radius of the dam built on river Shivanath in co-operation with Bhilai Steel Complex, stands today a dam built by a private firm Radius Waters. It submerges the wall of previously built dam. Today, the organised struggle against the privatisation of river water has made the govt to scrap the project, but its needed that the struggle widens to revert water rights to the people. (*SARVODAYA PRESS SERVICE* 140203)

## Manufactured Water Scarcity

Water management expert, Mukund Ghare, has warned that scarcity of water will limit growth of cities in the future. Addressing a workshop on 'Water problems of Maharashtra', organised by the Advanced Centre for Water Resources Development and Management, president of Action for Agricultural Renewal in Maharashtra, Ghare said the need for water was bound to grow in the years to come and proper distribution of water was necessary to meet this demand. He blamed politicians for giving in to populist demands of building big dams, which he said, had never filled to capacity post 1990. According to statistics regarding the state's water problems, nearly 62 % of the land in the state was dry. "Although there are at least four water-related schemes per village on an average, water scarcity exists. At many places, hydrological cycles are being disturbed, creating water scarcity", he observed. Ghare blamed the state for loss of moisture in soil say in the situation aggravated because of the govt's policy of giving second preference to industry after drinking water, as against the national policy of farming as the second choice. "This has eroded a majority of the land and has complicated the problem of ground water," he added. (THE TIMES OF INDIA 200103)

**AP evolving appropriate policy** The Water Conservation Mission that was constituted in 2001 to provide innovative thinking has initiated a consultation to prepare the AP Water Vision. The analysis of the policy process by John Soussan and V. Ratna Reddy says that the earlier approach of small-scale watershed based on traditional village systems managed to halt severe degradation of land and water resources. But this process has been slow. A lesson learnt from past experiences in AP is that watershed development is not influenced by watershed policies alone. Power tariff, the guaranteed purchasing schemes for rice and changes to agricultural subsidies and protection measures greatly influence the ways in which the benefits from watershed development are used. Future development of watershed development policy needs both reflect and influence the wider policy environment, including especially agricultural, poverty relief and other linked policies. (EPW 040103)

**Wetlands Survey** A 3-year study by the Salim Ali Centre for Ornithology and Natural History barring Goa, Kerala and Orissa has listed 510 wetlands. Majority of wetlands identified and listed were between 2 and 56 Ha size. The study showed that 46 bird species (34 of them endangered) were fully dependent and 14 others were partly dependent on the wetlands. (THE HINDU 110203)

**New Water cess bill** The Lok Sabha has passed the Water (Prevention & Control of Pollution) Cess (Amendment) Bill 2000. The Bill proposes a three-fold rise in the cess to be paid by all industries consuming more water than the prescribed minimum limit. The change would help state PCBs garner additional Rs 14 B. The govt collected Rs 630 M cess during 1999-2000. 80% of collection would go to state PCBs and rest is to remain with CPCB. (THE HINDU 190203)

## ISSUES ABOUT RIVERS

**Rivers Cleaning project runs out of time** Deadlines for projects under the National River Conservation Plan are fast approaching, but State govt agencies and local bodies have made little progress in implementing them. Three plans being implemented are Rs 17 B Chennai Waterways project; Rs 3.62 B work in rivers in Tiruchi, Erode, Bhavani, Kumarapalyam and Pallipalayalam; and Rs 5.75 B clean-up projects in Karur, Kumbakonam, Mayiladuturai, Thanjavur, Madurai, Tirunelveli and Srirangam. If the deadlines are not met – the Chennai project deadline ends in nine months and for the five towns' project in Dec 2005 – the funds will no longer be available. The Central Pollution Control Board made it clear that it would take a serious view of the issue. Union Environment secretary said that the states' failure to act on the projects, totalling Rs 17.92 B will be construed as lack of interest. Officials say the states have not even prepared the DPR for proposals worth Rs 3 B. The Planning Commission has set 2007 deadline for cleaning the country's major rivers and govt wants to link up the rivers! The states that lag behind include TN, UP, Bihar, Jharkhand, Orissa, Rajasthan, Punjab and Uttaranchal. (THE HINDU 030103, THE TIMES OF INDIA 040103, *RASHTRIYA SAHARA* 050103)

**Saints protest Ganga Pollution** Under a month long protests and agitations by seers and Saints against the polluted water of Holy river Ganges, the govt had to release fresh water from Narora dam to provide some fresh water in the river at Allahabad on the occasion of Maghi Mela. They have demanded stoppage of release of all pollutants into the river. They also expressed apprehensions that due to Tehri dam, Ganga no longer had any fresh water. A survey by Eco friends showed that 57 drains falling into Ganga and Yamuna at Allahabad bring 210 MLS of wasterwater. (THE HINDU 130203)

**W Bengal seeks central funds** The W Bengal govt would ask the Centre to provide adequate funds to check erosion along the banks of major rivers in the state. Speaking at a convention *Centre's Indifference in Controlling Riverine Erosion in the State*, CM said in spite of acknowledging the fact that erosion along the banks of the Ganga was assuming dangerous proportions in the state, the central govt was not doing anything. (BUSINESS STANDARD 200103)

**TN SHRC worried about Cauvery pollution** The Tamil Nadu State Human Rights Commission has recommended to the state govt to take steps on war footing to prevent leather and dyeing industries situated in and around Erode and Karur Districts from polluting Cauvery river by discharging effluents. According to sources, about 119 dyeing industries are functioning around Karur, where as in erode 181 dyeing units and 46 leather industries are functioning. (THE INDIAN EXPRESS 310103)

**Millions exposed to arsenic** New cases of arsenic poisoning in the Ganga basin suggest that the region's 449 M residents could be exposed to dangerous levels of the element in their drinking water. A survey published in *Nature* estimates that around 36 M people in Bengal delta are drinking contaminated water, and 150 M are at risk. The new findings suggest that the Bengal delta "may be only a tip of the iceberg", says Dipankar Chakraborti of Jadavpur University. Half of the wells surveyed contain five times the accepted safe limit of arsenic; 1 in 5 wells have 30 times the safe level. Last year, arsenic contaminated ground water was reported in Nepal, as well. "Arsenic rich deposits could cover much of the basin… Countless rural villages with hand pump wells could be affected", warned Chakraborti. (INDIAN EXPRESS 170203, IANS 280203)

**Yamuna inAction Plan** A performance review of the Yamuna Action Plan blows holes in many aspects of its functioning. Officials acknowledge that it did little to actually clean the river since it left out a 22 km Delhi stretch that contributes to 80% of the river's pollution. In the review, IIT Roorkee has pointed out the problem areas: drains still dump wastewater in river, sewer cleaning is erratic, frequent power cuts stall the works and treated effluent remains unutilised. It identified Muzaffarnagar, Yamunanagar, Agra and Faridabad as main problem areas. The report card laments that everybody has failed on the public participation and awareness front.

- **TOI Comment** If this is the sorry state of Ganga and Yamuna, the two main rivers, what happens to the great river link project? (THE TIMES OF INDIA 030203)

**Pampa Action Plan delayed** Implementation of the Pampa Action Plan is likely to get delayed as the DPR based on the guidelines of the National River Conservation Programme is yet to be submitted by the State govt to the MoEF. Based on the pre-feasibility report submitted by the state govt, the Centre had approved the Pampa Action Plan. However, there hasn't been any move to prepare the DPR nor to constitute the committees, which is a pre-condition for sanctioning the project. The State PCB had submitted a pre-feasibility study involving a total investment of Rs 2.72 B. Under the NRCP, the Centre would be implementing 152 projects involving a total investment of Rs 33.29 B in 16 states covering 27 rivers. (BUSINESS LINE 070203)

**Sand Mining from Kerala Rivers** According to Kerala River Protection Council, due to unsustainable sand mining from riverbeds in Kerala, the riverbed level at many places have gone below sea level and salinity

ingress at the delta of the rivers is the result. The worst affected rivers are Manimala, Pampa, Achenkovil and Kallada in Pathanamthitta district and Periyar and Bharatapuzha. Whereas CWC gauging station results show that sustainable mining can be 41 truckloads per day, in reality the mining is upto 851 truckloads per day. (BUSINESS LINE 100203)

**Larji HEP Waste dumped in Beas** The Tribune investigation into the ecological profile of Beas is a sad comment on the level of commitment of successive govts. It is clear that no one in authority had bothered to draw a roadmap for preventing truckloads of pollutants from being dumped into the river by the construction companies Continental Companies & Satyam Constructions and also HPSEB, in charge of 126 MW Larji HEP in Mandi district in HP. The Rs 9.5 B project construction is spread over 5 kms. (THE TRIBUNE 090203, 110203)

**UP asked to report on Gomti pollution** Taking up the delay in setting up the oxidation ponds to treat the industrial waste now flowing directly into Gomti, the Supreme Court has asked the UP govt to file a Status Report within two weeks. A SC bench passed this order after CPCB counsel submitted that no steps had been taken to implement the orders of the court, passed almost a year ago. On August 16 last year, the Court rejected the plea of "lack of resources" by the state govt and asked it to implement orders for the construction of oxidation ponds in the towns of Pilibhit, Lakhimpur, Sitapur and Barabanki. (BUSINESS STANDARD 110203)

## INTER STATE DISPUTES

**AP seeks tribunal for Krishna** The Andhra Pradesh govt has submitted a petition to the Centre seeking constitution of a tribunal to regulate sharing of the Krishna waters among three riparian states of AP, Karnataka and Maharashtra. The major demands in the petition filed by AP are; periodic and timely release of water from projects, say Almatti, permission for construction of a parallel canal from Tungabhadra Dam to cover up the loss suffered by the State from the dam due to siltation, giving AP a 'right' over surplus waters in place of 'liberty' due to which it is not able to obtain clearance for new projects, and bringing Rajolibanda Diversion scheme as also the Riachur (Left) canal of Tungbhadra Dam under the purview of the Tungbhadra Board. (THE HINDU 230103)

**Sutlej Yamuna Link canal** The politics over the SYL canal issue in Haryana continued to dominate political discourse. First, Haryana CM said that as per SC verdict, the construction of SYL canal is a certainty and it is for the Union Govt to get it accomplished and he was joined by leader of the Opposition in state assembly. The review petition filed on Jan 13, by Punjab govt aims at proving the futility of the Supreme Court verdict, in it's entirety. Union Minister of State for water Resources, said the govt was working out a contingency plan. However, no definite date for restarting work has been decided. On Feb 25 the Supreme Court served a notice on the Centre and Punjab Govt to reply to the petition of Haryana govt. (THE TRIBUNE 010203, 070203, 190203, 250203, THE HINDU 020203)

**Chhatisgarh's ultimatum to Orissa on Mahanadi** The Chhatisgarh govt will consider regulating the flow of the Mahanadi to Orissa if Orissa fails to implement a CWC agreement, settling a dispute over sharing the water of Indravati, said the water resource minister for Chhatisgarh. As per agreement, the state had agreed to a share of 8.19 TMC and Chhatisgarh has been demanding 9.39 TMC water during summer. "The Union Minister for Water Resource had convened a meeting on Feb 4, to find an amicable solution but Orissa officials didn't attend it", sources said. The Indravati met the water requirement of the Bastar region. The flow got reduced after the upper Indravati Multi Purpose Project was built on the river in Kalahandi district in 1998. The problem has arisen because of the water getting increasingly diverted from the Indravati into Kolab river, just before the river enters Chhatisgarh. Chhatisgarh CM sought an intervention of the Centre to implement the agreement on sharing the Indravati river water between Chhatisgarh and Orissa. Meanwhile, Secretary in the Water resources Dept, Orissa refused to acknowledge any dispute between the two states claiming that "as per the agreement, we were to provide Madhya Pradesh 45 tmc of water and we are giving them more than that depending on availability". The Orissa CM who had received a letter from his Chhatisgarh counterpart pleading for release of more water to solve the drinking water problem of Jagdalpur area, has responded positively, official sources said.

- **Row over Ib river project** Chhatisgarh has refused to co-operate with Orissa for the Rs 11.44 B inter-state Ib river project unless the latter resolves the controversy over the Indravati river. Both the states had high level discussions after the centre decided to look into the matter, but they did not yield any result due to the "adamant" attitude of Orissa, Chhatisgarh govt officials alleged. (BUISNESS LINE 070203, 120203, 190203, 250203, BUSINESS STANDARD 110203)

**Panels to Resolve Dispute on Ravi** Punjab and J&K have decided to set up two high level committees to resolve disputes related to sharing of Ravi water, and a host of other issues. J&K CM said J&K was entitled to 1150 cusecs of water from the Ravi as per an agreement but currently gets only 700 cusecs. "The shortfall of 450 cusecs is affecting irrigation in the state", he said, requesting Punjab CM for an interim arrangement. (BUSINESS STANDARD 260203)

## IRRIGATION OPTIONS

**AP districts to adopt low-cost technologies** Increased benefits to farmers of rain-fed areas through soil moisture conservation, top soil preservation, assured water supply and higher productivity and production are aims of Chittoor, Mahabubnagar and Medak districts, following the attempts at adoption of low-cost technologies. To ensure that farmers of all the rain-fed areas covering 7100 watersheds in the states derive maximum benefits on a sustainable basis, a training programme has been launched under the "neeru-meeru" scheme at the ASCI. The scheme is aimed at building the capacity of field functionaries by making each trained group responsible for the application of the technologies in three districts. (BUSINESS LINE 240103)

**Haryana Kandi Project** To check soil erosion and to restore degraded land under Kandi Project, Haryana govt spent Rs 114 M in the first nine months of 2002-3. The project was being carried out in the five watershed areas including Tangri, Markanda, Nakti, Chautang-Saraswati and Sukhrao falling between Shivalik Hills and Indo Gangetic Alluvial plains. (BUSINESS LINE 310103)

## IRRIGATION

**CAG on Bhakra Nangal**

### Is this good enough performance?

In the year 1975-6 Comptroller and Auditors General of India undertook studies in audit of twenty irrigation projects in different part of the country, of which twelve were large projects. The study pointed out that the area irrigated was about 64% of the area planned to be irrigated. In Bhakra Nangal command area in Punjab, while over all performance varied from 64 - 67%. The new area to be irrigated under the Bhakra Nangal Project in Punjab was 0.433 M Ha; the area irrigated annually (average for 5 years 1971-2 to 1975-6) was about 0.285 M Ha. Utilisation of potential was in the range of 58 to 72% in the Bhakra Main Line, 77 - 88% in the Sidhwan branch, about 50% in the Bist Doab canal and 60 - 78% in the new area under Sirhind Canal. One of the main reasons for non-utlisation of the full irrigation potential was reported to be installation of a large number of private tubewells. The performance in case of restricted perennial irrigated area was 54.6% of projected area of 196.1 Thousand Ha.

The total area to be irrigated under the project in Haryana was 0.717 M Ha; of this 0.081 M Ha were in the restricted perennial zone (where water is made available for the entire year except during July - August) and 0.636 M Ha were in the perennial zone. Utilisation of potential (average for five years 1971-2 to 1975-6) was about 88% in the restricted perennial zone. One of the main reasons reported for non-utilisation in full of the irrigation potential in the restricted perennial zone was installation of a large number of private tubewells.

In Punjab, betterment levy collected was Rs 62.4 M (just 14%) against Rs 439.7 M assumed in the project report. Receipts from the water rates from the project area did not cover even the working expenses during the period 1971-2 to 1975-6.

In Haryana, betterment levy collected was Rs 170.5 M (29%) against Rs 578.1 M assumed in the project report. Receipts from the water charges did not cover even the working expenses in 1974-5 and not even interest charges in 1975-6. The actual crop pattern showed a large variation from what was originally envisages; a substantial area came under relatively more water intensive crops like paddy.

In Rajasthan, betterment levy assumed in 1959 was Rs 181.7 M and what was collected by 1975-6 was Rs 24.1 M that is just 13.3%. The receipts from project did not cover interest charges in any of the years under review.

The audit noticed that nineteen working plans (12 for Sutlej basin and 7 for Beas basin) were prepared for afforestation programme, with an aim to conserve soil in the catchment area and to arrest siltation; however the details of the works done in these sub-catchments were not available with the concerned dept. of the state govt as no records showing the details of sub-catchments treated and expenditure incurred had been maintained prior to 1975-6. The following table gives the silt deposit per MAF of water inflow into the Gobind Sagar reservoir according to the capacity survey done by the Bhakra Management Board.

**Silt Deposit in Gobind Sagar Reservoir**

Acre Feet / MAF of water inflow

| Year | '59-63 | '63-65 | '69-70 | '70-71 | '71-72 | '72-73 | '73-74 | '74-5 |
|---|---|---|---|---|---|---|---|---|
| Silt Deposit | 2218 | 2796 | 2832 | 1220 | 2008 | 1718 | 2814 | 2889 |

(Supplementary Report of the CAG of India for 1975-6, Union Govt (Civil))

**CAG Report**

### Scandal in Gujarat

CAG has indicted Dept of Animal Husbandry and Dairying, Ministry of Agriculture for defective execution of works which resulted in non-accrual of intended benefits even after lapse of four years and incurring expenditure of Rs 5.86 M on Lift Irrigation Project to irrigate fodder seed farm situated in 200 Ha in Dhamrod (Dist. Surat, South Gujarat). The civil works of the project was entrusted to Gujarat Water

Resources Development Corp. The work was started in May 1994 and completed in August 1995, the work related to installation of pumps, motors and electrification was carried out during another two years and completed in Oct 1997. During the testing, leakage on account of bursting of pipelines due to technical defects and inferior workmanship was noticed. Though the broken pipes were replaced several times, the problem of leakage continued due to bursting of pipeline frequently. In response to question no 3290 on April 21, 2003 in Lok Sabha, the Union Minister of state for water resources accepted that the project is yet to be successfully tested till date. (CAG report No. 2 of 2001 (Civil), Lok Sabha Question 4290/210403)

**CAG Report**

## The Kakrapar Project Scandal

Narmada, Water Resources and Water Supply Dept of Gujarat govt has come under heavy criticism in CAG report for Gujarat (Civil) for the year ending on March 31, 2001. CAG has exposed the financial irregularity of senior officers of Surat Irrigation Circle who indulged in execution of lining works of canal at abnormally high rates on the plea of urgency, which proved to be fictitious when probed. The Dept approved Rs 9.267 B in July 2000 for lining work of Kakrapar left Bank Main Canal and its branch canals to increase velocity, prevent seepage and to increase irrigation facility for 18022 Ha. Superintending Engineer of Surat Irrigation Circle, on the ground of urgency of work, invited tenders by short notice on 28 July 2000. Govt accepted the tenders valuing Rs 11.53 B as against estimated Cost Rs 6.679 B in Nov 2000 and the works were completed in Jan 2001 at an expenditure of Rs 11.55 B. Audit scrutiny revealed that the said expenditure by executing the works hastily at an abnormally high rates, resulted in extra expenditure of Rs 4.85 B and creation of liabilities of Rs 8.21 B. In 10 out of 18 packages Tendered Cost of accepted tender was more than *80% above* Estimated Cost. Out of 18 packages, in three cases single tender was received and accepted, which were *above EC by 48 - 85%.* In four packages, only two tenders were received and *were above E*C by 25 - 85%. CAG opines that fiction of urgency was unjustified, claims of additional irrigation unfounded and acceptance of abnormally high tenders without re-invitation of tenders uncalled for.

"Lining work to existing unlined canals of KLBMC project was planned (Apr-May 98) to be taken up in phased manner with the assistance of NABARD during 2000-03. NABARD sanctioned Rs 9.32 B only in March 01 but no fund was allotted by Govt before taking up the work. Thus, there was no budget provision during the year 2000-'01 and hence no urgency to accept abnormally high tenders without re-invitation of tenders.

Further, the works provided for increasing irrigation facility for 0.018 M Ha. "*Scrutiny revealed that in Navsari and Surat divisions though 99% irrigation potential created out of total CCA of 0.216 M Ha.; average yearly actual utilisation of CCA during 1998-2001 was only 0.023 M Ha in Navsari and 0.059 M Ha in Surat. While utilisation of even the existing potential was low because of well/bore irrigation, khar land, grass land, non-agricultural land and insufficient rain in the area, there was hardly any justification for creation of additional irrigation facilities and thus Administrative Assistance for creation of so much CCA was uncalled for. Thus, the plea for coverage of additional area and that too on urgent basis was doubtful. The haste in incurring the expenditure totally unjustified*".

Further, CAG noticed that in sharp contrast to this case, works of similar nature executed by EE, Kakrapar RBMC Division during March 2000 and August 2000 incurred the expenditure at the rates below EC by 0.32 - 4.56% and were completed satisfactorily. In the light of this CAG reported the matter to Govt in July 01 calling for investigation to fix accounting for causing huge extra expenditure on the exchequer. (CHAPTER 4, CAG REPORT FOR GUJARAT (CIVIL) FOR THE YEAR ENDING 310301)

**Tardy progress, cost escalation** Despite the allocation of Rs 554 B, i.e. 6.5% of the total Plan outlay to irrigation and Flood control during 9$^{th}$ Plan, the pace of implementation of projects remained less than adequate. According to the Planning Commission Steering Committee report, 159 major irrigation projects – of which 76 projects belong to pre-Sixth Plan category – would spill over into 10$^{th}$ Plan. 62 of the 242 spillover medium irrigation projects belong to pre-Sixth Plan category. The accretion to gross irrigated area has slowed down during the second half of nineties – it increased from 71.4 M Ha in 1995-6 to 73 M Ha in 1998-9. Survey of irrigation projects by the Centre for Monitoring Indian Economy shows the slow completion rate for the irrigation projects and weak trend in new irrigation investment. According to CMIE, projects worth Rs 11.7 B were launched during 2001 and 2002 together, i.e. less than the figure of Rs 15.07 B for the year 2000. CMIE data reveals that during the six-year period of 1997 to 2003 irrigation projects worth Rs 65.88 B were completed. (THE ECONOMIC TIMES 030103)

**Irrigation in 10$^{th}$ Plan** Rs 120 B has been earmarked for a restructured Irrigation programme in 10$^{th}$ Plan. At a consultative Committee meeting, Union Minister for Water Resources said that the Centre gave Rs 14.8 B assistance during the year to the states. (THE STATESMAN 170203)

**Centre to set up 3rd Irrigation Commission** The Union Water Resources Ministry has proposed to set up the 3rd Irrigation Commission along side a series of reforms in the water sector, including rationalisation of water rates, formation of the controversial River Basin Organisation. These issues were on the Agenda notes for the 12th National Conference of Water Resources Ministers held on Feb 5. (DECCAN HERALD 050203)

**Funds dry up in AP** Despite the Andhra Pradesh govt's claims of spending Rs 100 B for improving irrigation infrastructure, the area under canal structure has constantly been declining. According to the Economic Survey report for 2002-3, the area under canal system came down to 2.089 M Ha in 2001-2 from 2.286 M Ha in 1998-9. Whereas, the area under well irrigation system increased from 2.595 M Ha to 2.618 M Ha in the same period. Though the govt had enhanced the budgetary allocation for irrigation sector by Rs 37.7 B the actual spending on major irrigation projects would either be meagre or nil. According to the annual plan, the Godavari Utilisation Authority would get Rs 10 B under which three major irrigation projects Devdula, Yellampalli, Dummugudem figure. The Devdula was granted Rs 5 B against the project cost of Rs 180 B. The Bheema Lift Irrigation Scheme, though was granted Rs 49.6 M in 2002-3 could not get a single pie in revised estimates and is given a raw deal in 2003-4 with nil budgetary allocation. Pulichintala has been allocated Rs 10 M. The Galeru – Nagari and handri – Neeva got Rs 25 M and Rs 140 M respectively. (DECCAN CHRONICLE 240203)

**Unfinished irrigation schemes in Haryana** Farmers in the districts of Yamunanagar, Kurukshetra, Kaithal, Karnal and parts of Ambala are feeling the pinch of abandoned irrigation schemes. In the early eighties three irrigation schemes were formulated. The schemes included Dadupur – Nalvi scheme to provide irrigation in 88 villages; Dharmura barrage on Markanda river to enhance artificial recharge and provide irrigation during dry season and Jaspur barrage on Tangri river near Naraingarh. Technical, administrative and financial approval was accorded, but the schemes are lying abandoned, and farmers in the area have taken to deep tube wells, leading to rapid depletion of groundwater. (THE TRIBUNE 100203)

**Chhatisgarh CM faces scam charges** The Lokayukta of Chhatisgarh has issued notices to CM and five top officials, including Chief Secretary, in what is alleged to be Rs 1 B irrigation scam. The original complaint alleges that the cost of completion of the Hasdeo Bango irrigation project on a turnkey basis was arbitrarily raised from Rs 0.7 B to Rs 1.73 B to benefit the contractor. Interestingly in the late seventies, CM, then the collector of Raipur, was embroiled in a controversy over embesslement in the rehabilitation package for the oustees of the Kodar Irrigation Project. (OUTLOOK 240203)

**Gandak project gathering dust** Rs 13.4 B for reclamation and development of salt and alkali affected soil of Gandak Command Area covering Saran, Siwan, Muzaffarpur, Vaishali, Gopalganj, E and W Champaran and Samastipur has been gathering dust in the Planning Commission since Aug 2001. After an assessment of the area by the Natural Remote Sensing Agency, Indian Council of Agricultural Research and State Depts, the salinity-affected soil in Gandak Command area was estimated to be 0.22 M Ha. The Gandak Command Area has several small rivers originating from Himalayan range and they have high percentage of calcium, magnesium, hydrocarbon, sodium and other chemicals. (THE HINDUSTAN TIMES 100103)

**Maharashtra Bonds Downgraded AGAIN** The ratings assigned to bond programme of Godavari Marathwada Irrigation Development Corp, Konkan Irrigation Development Corp, Maharashtra Krishna Valley development Corp, Tapi Irrigation Development Corp and Vidarbha Irrigation development Corp were downgraded to LC (SO), indicating substantial risk, from LBBB+ (SO) by ICRA. The rating of Maharashtra Water Conservation Corp has been downgraded to LBB (SO) from LA (SO). These state backed irrigation Special Purpose Vehicles would have to shell out Rs 35.50 B towards repayment of principal and interest in 2003-4, Rs 21.07 B in 2004-5 and Rs 23.2 B in 2005-6 on various bond issues. They would also need Rs 36.90 B for payment of outstanding dues to various contractors, and for land acquisition and rehabilitation, all at one go. On the top of these liabilities, the cause of worry is that they would need Rs 273.43 B for completing 866 projects. (THE ECONOMIC TIMES 190103, THE FINANCIAL EXPRESS 030203)

**NABARD warns Maharashtra on Dues** Close on the heels of defaults by various state-backed co-operatives, the NABARD has cautioned Maharashtra govt over Nabard's dues worth Rs 7.5 B which it had lent to 14 loss making Land Development Banks. Recently, Maharashtra closed 15 of the 30 LDBs in the state for their poor financial performance. NABARD, being one of the principal lenders, wants the state, as a guarantor to these banks, to repay. (THE ECONOMIC TIMES 100103)

## GROUND WATER

**Sonepat** Following groundwater mining by farmers and industrialists of Sonepat district of Haryana, the district is left with a mere one-third of its reserves. According to one survey, in shallow aquifer zone, a meagre 40 sq km area in the district has clean and potable water, while 58 sq km has below standard water and 2 sq km has totally saline water. Compared

to this in deep aquifer zone, a meagre 24 sq km area has clean and potable water, while 9 sq km has below standard water and 67 sq km totally saline water. Experts believe that the industrial establishment in Panipat district can adversely affect the district. In Haryana, 41 out of the 110 blocks are dark or overexploited.

➢ In some parts of Punjab and Haryana ground water mining has led to a peculiar phenomenon – the water table is rising and falling simultaneously at the same place. Dera Bassi is the most visible example where the level of water in shallow aquifer is rising and the level in the deeper aquifer is falling. CGWB is advising recharge of deeper aquifers. In Punjab 93 of 138 blocks are dark or overexploited, the figure of the same being 41 blocks in Haryana of the total of 110 blocks. (*HINDUSTAN* 130103, THE TIMES OF INDIA 300103)

**Contamination in Delhi Groundwater** The Delhi Jal Board says only 7 – 8% of its water comes from the groundwater, 90% from the Yamuna and Ganga. "We dilute groundwater with surface water in our treatment plants". CGWB chairman said that CGWB checks groundwater for fluorides, nitrates and salinity contents six times a year. He admits that Delhi has poor lab facilities. However, when we take cognisance of the fact that a large number of people, especially in the South Delhi have illegal borewells, the picture starts appearing really grim. A French research institute study last year said that nearly 40% of Delhi depends on groundwater. Of the estimated water consumption of 904 MGD, 120 MGD are supplied by govt tubewells and 274 MGD comes from private tubewells. In Jan 2000, the Central Ground Water Board and the Central Pollution Control Board had conducted a joint survey to find how bad the Delhi's groundwater was. They only measured inorganic compounds like fluorides, nitrates and check salinity, and excessive content of all three was found to be the biggest problem. CGWB Chairman admits Delhi has poor lab facility to test pesticides. Traces of hard metal and other contaminants were also found in some samples. Residues of pesticides were detected from samples drawn from places near agricultural areas like Alipur, Kanjhawala, Shahdara, Najafgarh and Mehrauli. (THE ECONOMIC TIMES, THE TIMES OF INDIA 060203, THE INDIAN EXPRESS 070203)

## URBAN WATER SUPPLY

**Rajkot** With Nyari-2 and Lalpari dams going dry and just 10 days stock remaining in Aji-1 dam, water crisis is looming large over Rajkot. Municipal Commissioner has pleaded to the govt to release sufficient quantity of water from Machhu. Waterworks committee chairperson says; "one can ritually demand water from Machhu, but since the canal to bring water is damaged and Rs 0.5 - 0.7 M is needed to repair it, there is hardly any chance". Bhadar dam, which provides water to Rajkot, Gondal and Jetpur, was on the verge of drying up. A large quantity of water was released during the elections in the Dhoraji-Jamkandorna, to farmers of the region. The dam had just 738 MCft of water.

➢ **Contaminated 'Narmada' water** Though Narmada water is here, what flows through the taps is foul-smelling, yellowish water. Rajkot Municipal Corp received as many as 30 such complaints in one day. City Engineer says, ''the contamination is due to suspended solids found in the 500-km-long canal". (THE TIMES OF INDIA 200103, 290103, THE INDIAN EXPRESS 090403)

**TN launches Veeranam project** Rs 7.2 B WB supported Veeranam project for 180 MLD drinking water for Chennai was launched near Cuddalore. The project is to be completed by June 2004. The project seeks to store the water in the nearby Kollidam river in Veeranam tank from where water would be pumped to Chennai. State CM assured the local farmers that their water requirement would not be affected as a result of such a diversion. The MDMK described the scheme as 'not feasible' and said the implementation of the scheme was a waste of public money, as the lake did not have enough water. The lake would get water from Vadavar, a tributary of Cauvery, only if Karnataka released water in the river. When the state was facing a finance crunch, the scheme with such massive investment was not at all necessary, he said. If implemented the project would affect the farmers in the district, said, President, Kolidam Lowerdam irrigation farmers association. (BUSINESS STANDARD, THE TIMES OF INDIA 040203)

## WATER SUPPLY OPTIONS

**Rs 245 B plan for RWH** The Central Ground Water Board has formulated a Rs 245 B master Plan and a proposed action plan for harvesting rain in the country. The plan envisages the construction of 2 25 000 artificial structures in the country and 3.7 M roof top harvesting units (to be done by people, state to give incentive of house tax rebate) in cities. For Delhi, the plan envisages construction 15 000 recharge structures at the cost of Rs 2.25 B. According to CGWB chairman, in 2002, out of 100 M ha irrigated land, 54 M ha is irrigated by groundwater. (CENTRAL CHRONICLE 060103)

**RWH helps a village near Mumbai** Thanks to Rainwater harvesting, Vishala village near Kasara, not very far from Mumbai. Even as the area faces third consecutive drought, the village is facing no water scarcity. The same village till recently had to buy water at the rate of Rs 25 per barrel. (*DAINIK HINDUSTAN* 050503)

## RURAL WATER SUPPLY

### Right to safe potable water
### A fundamental right

The Rajasthan High Court has ruled on January 24, 2003 that the right to receive potable, safe drinking water is a fundamental right guaranteed by article 21 of the Constitution. The failure of the state to provide this "makes a mockery of that right which stood conferred more than five decades back. Passing their order on a civil writ petition filed in 1992 on the high presence of fluoride, chlorine and TDS content in water available in Sirohi district, the judge said "people deserve a life worth living, free from diseases which can be prevented by the State by pressing into service modern technology". Petition filed 11 years ago by Sanyam Lodha, now a Congress MLA, alleged that potable water supply projects were making tardy progress, and the verdict delivered suggested application of *modern technology* to expedite the drinking water schemes in the district and complete the schemes by August 2003. In a significant order, the Punjab and Haryana High Court directed the state of Punjab to provide potable water to all the primary schools within a year. (THE HINDU 310103)

**Gujarat eyeing ADB assistance** In line with the Water Infrastructure Network planned under Vision 2010, where the state has earmarked Rs 750 B towards setting up the water grid. Gujarat Water Authority has a Rs 450 B programme for this. Though the state had been trying hard to get private sector participation, it appears as if it may finally look to ADB for a speedy completion of the Saurashtra water grid. The ADB, which is at present executing $ 75 M water distribution network in Kutch under the rural water supply component of Gujarat Earthquake reconstruction and Rehabilitation Programme, may soon be approached by the State to revive the water transmission system of Saurashtra. The 200 km trunk route pipeline, which will take off from Paddhari on the recently laid Rajkot - Jamnagar main line will cost Rs 25 B. (BUSINESS LINE 140103) CHECK FIGURES

## FLOODS

**Centre to constitute Flood Commission** The central govt has decided to form Flood Management Commission. The Commission will review the works done by state govts on the recommendations of National Flood Commission 1980. The commission will ensure effective implementation of steps being undertaken for flood control and will suggest new measures to the govt. (*RASHTRIYA SAHARA* 050103)

**Canal breach: Panipat** Crops in 12 Ha of land got damaged in Panipat, as the link canal of Thermal Feeder Channel breached. The affected farmers alleged that irrigation dept officers encouraged the illegal lifting of sand on banks of canal, which caused the breach. (*DAINIK TRIBUNE* 110103)

- **Rohtak** Over 40 Ha of agricultural and over 100 houses were inundated due to a 30 ft-wide breach in the Dulhera minor near Ismaila village. One dalit labourer died of shock when floodwaters entered his house. Some areas were submerged under 6 ft water. The wheat crop spread over 20 Ha was damaged while cracks developed in many houses. Here again removal of soil from near the banks of minor during construction of roads was alleged to be the reason for weakening of the canal. (THE TRIBUNE 030103)
- **Sonipat** Two consecutive breaches in Juan minor canal in Sonipat district of Haryana, on Jan 10 and again on Jan 15, inundated fields in Juan damaging wheat crop in 60 Ha. (*DAINIK HINDUSTAN* 170103)

**Schemes for Assam** The Centre has cleared several flood control and anti-erosion projects including a proposal to protect Dhubri and South Salamara areas in Assam. (ASSAM TRIBUNE 281202)

**Rs 1.06 B Project for Swan river** The Swan river, known as sorrow of Una in HP, has a total catchment area of 1 200 sq km and a length of 65 km in HP. There are 73 tributaries in the catchment area, which mainly comprises the fragile Shivalik hills with hardly any vegetative cover. During monsoon, the runoff from the barren hills in the catchment brings tonnes of silt into the river, raising the bed of the river, leading to increasing width of the river bed. Approximately 10 000 Ha of agriculture land is affected by floods and nearly 2 000 Ha of fertile land is not being cultivated because of fear of floods. Over the last decades estimated loss to crops and property was Rs 1.67 B, in addition, 50 persons and 236 cattle have perished. The Rs 1.06 B Swan river flood management and integrated land development project has been started. Over 86% of the amount will be spent on the construction of 16.67 km long embankments along the banks of the river. (THE TRIBUNE 060103)

## FISHERIES

**AP** Shrimp farmers in AP are in crisis as the export consignments from N America and Europe are being returned due to high pesticides content. Over the years 0.18 M Ha in the seven coastal districts have been converted for aqua farms at an investment of Rs 87 500 per Ha, giving returns of Rs 187 500 every six months. (BUSINESS STANDARD 070203)

**Punjab** The central govt has allocated Rs 12 M to promote fisheries in Punjab. 5 244 families have been running fisheries while around 20 000 persons were involved indirectly. (THE HINDU 190103)

**Uttaranchal** In the last 50 years, dams were built, water was diverted for generation of power and

irrigation; spawning beds were destroyed by large-scale removal of gravel. None of these activities took into account the damage being done to aquatic life. Out of total length of principal rivers and tributaries of 2686 km, about 725 km is considered suitable for fisheries. 31 natural lakes have an area of about 297 Ha and 1341 village ponds in the plain region have an area of 628 Ha. Udhamsingh Nagar has seven large sized reservoirs with 20 075 Ha area. By the end of 2001-2 the level of fish production from departmentally managed lakes was 5.5 T. In nine months of 2002-3 the level of fish seed production and fish seed supply was 1.65 M and 15.36 M respectively. A 100 % centrally aided project worth Rs 10 M started in 2001-2 for the development of cold water fisheries in which survey and data base, hatchery modernisation, fish seed mill, 25 units of trout race way and 90 units of running water fish culture are under progress. The govt recently announced a policy for developing fisheries and sport fishing. (THE ECONOMIC TIMES 220203)

## DROUGHT

**Rajasthan** Parts of Rajasthan has seen 39 droughts in the past 46 years. A part of the state is currently battling the fifth consecutive drought. The news is that we are getting incrementally less prepared to face droughts. The nation is committing less aid to victims this year and financial jugglery is replacing serious policy decisions. In the 32 districts of Rajasthan, a total of 41 000 villages are affected. The number of victims is an estimated 40 M people and over 50 M cattle. The standing *rabi* crop covers only 40% of the 7.5 M Ha area. This means a direct fall of over Rs 70 B in Rajasthan's rural income.

The Centre's Task Force on drought, in the 2nd week of Feb announced Rs 30 B relief package. Many saw this as the end of a long and bitter tug of war between a Congress ruled state and a BJP-led central govt. It turns out now that the announcement was based on clever juggling of numbers rather than new aid. The Task Force has merely put a price on the free foodgrains. In reality, Rajasthan is yet to get a penny from the National calamity Fund for drought relief.

The biggest policy blow this year is the calibration of Below Poverty Line folks. In the last BPL survey in 1997, the calculations were based on 1991 census and a state was allowed to notify up to 26% of its rural population. This year the instructions from the Planning Commission are to use the figures of the 1991 Census and it is astonishing that the states are being asked to restrict the number of BPL people to 13% of their population. This means that the number of poor is to be cut to half of their numbers 12 years back, even before starting the sample survey. Methodological miracle or call it a great Planning Commission magic trick.

Rajasthan govt's critics find CM's demand for over Rs 70 B a bit too high for Centre's comfort. However, the demand of 5.6 MT of foodgrains, free fodder and subsidised transportation are not misplaced. Until the 2nd week of Feb, the state received 0.81 MT of foodgrains out of around 2.91 MT allotted by the Task Force. In contrast, Andhra Pradesh, where the severity of drought is less, has been allotted 3.00 MT of grains and has already received 1.6 MT.

The FCI is finding it difficult to continue free foodgrain supplies for the mid-day meal scheme for primary schools. The mid-day meal scheme has made a huge difference in drought-affected areas. One hopes that the Supreme Court will not let the politicians and bureaucrats wriggle out of the commitment. The state needs immediate supplies of foodgrain to be able to run other drought relief schemes that could provide employment to 5 M people.

- **Seeking more relief** Govt has sought an additional amount of Rs 6.13 B from the Centre to assist the small and marginal farmers affected by drought. The state has also asked for doing away with 45 days deadline for lifting wheat sanctioned. The Centre has so far sanctioned Rs 1.56 B to pay the 2.68 M farmers who have to be given assistance for farm inputs up to 2 Ha. According to CM, the central assistance to Rajasthan in the form of wheat so far had been 0.81 MT while the amount sanctioned for cattle protection stood at Rs 116.6 M. (THE HINDU 040203, THE HINDUSTAN TIMES 220203)

**Gujarat** Govt has dashed off a memo to the Centre seeking maximum possible financial assistance of Rs 8.92 B. The memorandum says the calamities in the past five years have dented the state to the tune of over Rs 47.31 B. Apart from the 4529 villages declared as drought affected, 5589 more villages are likely to face drinking water problem. Describing drought as "rare severity" the state has requested the Centre to release Rs 1.34 B from the Calamity Relief Fund for 2002-3. Over and above, it has sought a ways and means advance of Rs 3 B from the National Calamity Contigency Fund, as well as Rs 170 M from the PM's Relief Fund to meet water scarcity in 55 towns. It had also asked the Centre to release *in advance* Rs 1.87 B from its share in Calamity relief Fund for 2003-4. (INDIAN EXPRESS 310103)

- **Drought cost Rs 10 B** The drought this year could cost the exchequer over Rs 10 B according to a study by the Ahmedabad based Disaster Mitigation Institute. (THE ECONOMIC TIMES 150103)

**Punjab** Govt is sitting over Rs 3.53 B, which is to be distributed as drought relief. The Centre had released its share of drought relief from natural calamity Fund

long back. The money is now in the state Treasury. The state govt had sought about Rs 36 B as drought relief from the national calamity Contingency Fund, but the centre turned down Punjab's request. (THE TRIBUNE 150103)

**Maharashtra** CM has written to PM that the Centre has approved only Rs 200 M assistance against the 12 B needed to tackle drought that has gripped one third of state villages. According to him, the state had asked for Rs 5.4 B central assistance last year, but the Centre had turned down the appeal. (*RASHTRIYA SAHARA* 220103)

**AP** Andhra Pradesh CM sought Central Assistance of Rs 23.73 B from the National Calamity Contingency Fund to overcome the drought situation. Giving details of state's requirements, he said that a sum of Rs 6.49 B was needed for AP Transco, Rs 5 B for wage employment, Rs 4.2 B for Agriculture, Rs 4 B for Rural Water Supply, Rs 1.1 B for Urban Water Supply, Rs 1.2 B for Hyderabad Metro Water Board, Rs 0.96 B for Animal Husbandry, Rs 0.52 B for Nutrition and Rs 0.17 B for Fisheries. He also sought release of 2 MT of rice. So far, the Centre has released 0.3 MT of rice and promised 0.2 MT more. Rainfall in the state was 574 mm, about 32% below normal. The state govt has declared 1036 mandals in 22 districts drought affected covering a population of 67.2 M. (THE HINDU 070203)

**Tamil Nadu** The TN governor declared in the assembly that the whole of TN, except Chennai will be declared drought hit. (THE HINDU 240103)

**Centre denies discrimination** Denying any discrimination in drought relief to States, Agricultural Minister said 17 drought-hit states demanded assistance of Rs 350 B and the Centre had so far released over Rs 20 B under the National Calamity Relief Fund. Expressing concern over the drought situation, he said it had affected production in foodgrains by 26 %, while in pulses by 13 % and edible oil by 25 %. National Calamity Fund was under utilised or even non-utilised in some states and there were states, which have diverted funds to other sectors, he alleged. He informed the Parliament that centre had provided assistance to Andhra Pradesh (Rs 140 M), Rajasthan (Rs 1670 M), Madhya Pradesh (Rs 1 320 M), Tamil Nadu (Rs 1 330 M), Karnataka (Rs 1900 M) and Chhatisgarh (Rs 810 M) to tackle drought. If we were to believe advance estimates of crop production for 2002-3, it predicts that the total production of foodgrains is expected to fall by 28 M tonnes while pulses by 7.5 M tonnes. "In spite of increase in productivity and sown area, it is shocking that all the production levels have fallen to this extent", said Agriculture Commissioner. (BUSINESS LINE, *RASHTRIYA SAHARA* 200203)

## AGRICULTURE

**Water-logging in IGNP** The Indira Gandhi canal is turning counter-productive with agricultural land becoming saline. Liberal use of water in the districts of Sriganganagar, Hanumangarh, Churu, Bikaner, Jodhpur, Jaisalmer and Barmer is creating new problems, which could turn the productive land barren, said a paper at 90th Indian Science Congress. The paper stated that nearly 3 000 waterlogged Ha of Sriganganagar and Hanumangarh districts have been rendered useless for agriculture, while emerging as a natural habitat for migratory birds. The paper said in Rawatsar, Piliganga and some other places, waterlogging problems cropped up after Indira Gandhi Canal commenced operations, low natural surface level, absence of major outfalls and natural drainage and Ghaggar depressions being additional reasons. The major problem is with the Suratgarh branch of the main canal. (BUSINESS LINE 060103)

**WB on Punjab Agriculture** The WB has prepared a concept paper on Punjab Agricultural Policy Review, which focuses on "sustainable" policies in the context of cascading impact of problems generated by rice-wheat crop rotation. Rice-wheat crop rotation, after having adversely affected the land and water resources, is now headed for a plateau. Pujab has 3 % of India's net sown area and produces 10% of rice and 20% of wheat. The two crops occupy about 75% of the total gross cropped area of 8.1 M ha. The Green Revolution technologies yielded good returns in '70s and '80s, but agricultural growth slowed down and became sluggish in '90s with the Agriculture SDP increasing by 2.5 % per annum compared to 4.9 % per annum in the '80s. It has identified the following objectives: 1) review recent agricultural performance, 2) review key sectoral policies and their impact on resource allocation, 3) identify main constrains to more rapid, diversified and sustainable agricultural growth, and 4) explore options for reform, drawing on relevant international experience and keeping in view political economy considerations. (THE TRIBUNE 030203)

**Environmental Pollution of Green Revolution** A study by Jivtesh Singh Maini, Punjab's Principal Resident Comissioner titled 'Economic Growth of Punjab in the Context of Environmental Sustainability' demonstrates how with the passage of time weakness of rice-wheat axis resulting into "mining" of soil and sub soil water resources and consequent eutrophication led to water-logging. The study observes that though the fond pampering that agriculture received led to Punjab's contribution to nation's macro-economy; a well maintained silence over pollution inflicted on the people, air and water by agriculture and industry makes it difficult to apply "polluter pays" principle to the economy. The study suggests a "sustainability budget" stressing that linkages between primary, a secondary and tertiary sector is as imperative as environment sector. (THE TRIBUNE 060203)

**Power subsidy for agricultural consumption** Eight states accounted for almost 90 % of the power subsidy of Rs 223 B granted by states to agricultural consumers during'1999-2000.

(Rs B)

| State | '99-00 | % of total subsidy |
|---|---|---|
| Maharashtra | 35.93 | 15.8 |
| Gujarat | 34.66 | 15.3 |
| Andhra P. | 27.96 | 12.3 |
| Madhya P. | 25.03 | 11.0 |
| Karnataka | 22.32 | 9.8 |
| Uttar P. | 22.04 | 9.7 |
| Tamil Nadu | 19.82 | 8.7 |
| Rajasthan | 14.53 | 6.4 |
| Haryana | 12.88 | 5.7 |
| Other States | 11.85 | 5.2 |
| **All India** | 227.03 | 100.0 |

(Rajya sabha Q 1957/ 090802, THE ECONOMIC TIMES 170203)

**National Livestock Policy on cards** Agriculture ministry and the states favour quick formulation of a national livestock policy. The proposed policy envisages stepping up investments, checking cheap imports and protecting farmers' interests under WTO regime. Union agriculture minister said, "budgetary allocation to the sector further declined to 0.6% of the total budgetary resources for the Tenth Plan from 1.4% during the Ninth Plan". He said that livestock and fisheries sectors employ over 18 M people and contribute 7.4 % to the GDP, but plan allocation has not been commensurate. (ECONOMIC TIMES 040203)

## CONTRACT FARMING

**Punjab** PAFC (Punjab Agro Foodgrains Corp) is organising contract farming in 6 000 Ha for Basmati cultivation in Kharif 2003 in Gurdaspur, Amritsar, Nawan Shaher, Jalandhar, Kapurthala and Hoshiarpur Districts. The area is expected to increase manifold subsequently. (THE ECONOMIC TIMES 310103)

## FOODGRAINS MANAGEMENT

| District | Beneficiary |
|---|---|
| Aurangabad | Nil |
| Jalna | 187 |
| Parbhani | 458 |
| Nanded | Nil |
| Hingoli | 438 |
| Beed | 13 |
| Latus | 1019 |
| Osmanabad | 227 |
| **Total** | **2322** |

**Poor starve amongst plenty in Maharashtra** For three years in a row, all eight districts of Marathwada region in Maharashtra have turned down huge

quantities of foodgrains, saying that they have not been able to find any suitable beneficiaries under the Annapurna scheme. Yet each of the eight districts figures in the list of the 100 poorest districts in the country. Figures show that while six districts have thrown up a dismal performance in implementing the scheme, ironically the two most populated districts – Aurangabad and Nanded have drawn a complete blank. (THE HINDUSTAN TIMES 060203)

## SUGAR

**Sugar Co-ops fleece Maharashtra Govt** The sugar barons of Marathwada have perpetuated a gigantic rip-off on the state exchequer. In fact, cooperative sugar factories of Maharashtra appear to have delivered profits to everyone except the poor farmers who are their members and the state, which has been funding them, according to a World Bank report. Sugar is grown on just 3 - 4% of the total cultivated area in Maharashtra, but it absorbs over 70 % of total irrigation water, and the highest agricultural subsidies on power (electricity and diesel) and fertilisers, as it uses these inputs more intensively than other crops. Even so, sugar has the lowest yield among the major crops grown in the state and it supports just 2% landowners. Over the last several years, 10-12 new sugar mills have been set up annually, with a typical capacity of 1250 TPD and cost of Rs 500 M. Most of the factories are owned by politicians. The party willing to invest 10% gets 90% from the govt in the form of share capital or loans and guarantees. Though limited information is available on the extent of govt support to sugar cooperatives, a rough estimate shows it has invested Rs 7.2 B as direct share capital in the last 10 years. The govt also guarantees loans, and had Rs 33 B in outstanding stock by March 2001. Guarantees of only Rs 2.12 B were invoked during 2000-1. Realising the need to 'reform' the sugar sector, the state govt announced in March 2002 that it would no longer give financial support to new co-op mills nor guarantee loans given to them. However, Nationalist Congress Party president has urged the govt to fully support sugar industry failing which 54 cooperative sugar factories will close down and 18 District Central Cooperative banks will face financial crisis.

- **Outgoing CM guarantees for co-ops** In a controversial decision, Maharashtra's outgoing CM cleared a proposal to bail out around 100 sugar co-operatives controlled by politicians from the ruling alliance by offering state guarantees worth Rs 15 B. In his last cabinet meeting, he okayed conversion of short-term loans sanctioned to sugar co-operatives into medium-term loans. The guarantees ignore attachment orders issued by the Mumbai debt recovery Tribunal and reservations of the bureaucracy. Why should the govt back these medium term loans passed on to sugar factories that are consistent defaulters? (THE ECONOMIC TIMES 170103, 150203, BUSINESS STANDARD 280103, THE TRIBUNE 190203)

**Allahabad HC on cane price** The UP High Court has modified its earlier order on sugar cane prices for the year 2002-3 and said the UP State Sugar Corp may enter in to an agreement with farmers on acceptable prices. Earlier on Nov 13 a division bench of Allahabad HC had restrained the State Govt from state advised cane price for fixing the statuary minimum cane price for the year 2002-3. The HC then said only the Central Govt had the right under the constitution, not the State Govt. (BUSINESS LINE 130203)

**Sugar decontrol unlikely for now** Decontrol of sugar may not take place in the current fiscal as tremendous pressure has been brought on the Govt to postpone decontrol to a future period when conditions in the industry are expected to improve. Despite a fall in sugarcane output to 275 M tonnes (295 MT last year) and anticipated lower sugar production at 17 MT for the current year (18.3 MT last year), the sugar industry opened the Oct 2002 with a stock in access of 11 MT with no prospects of a significant reduction either through higher domestic sales or export. (BUSINESS LINE 140203)

## FORESTS

**Japanese aid for Rajasthan Forestry** Rajasthan govt, the centre and the Japanese Bank for International Cooperation signed a MoU for the forestry and bio-diversity project in Rajasthan. The project, covering 18 districts (of 32 districts of the state) in the Aravalli hills and the irrigated command areas of the Indira Gandhi Canal system, is in continuation to three forestry projects the Japanese had supported in the state from 1991 to 2002. The 5-year project with an estimated outlay of Rs 4.42 B will focus on regeneration of the green cover of the Aravalli hill system and check desertification. The districts are Ajmer, Alwar, Banswara, Bhilwara, Bikaner, Bundi, Chittorgarh, Dausa, Dungarpur, Jaipur, Jaisalmer, Pali, Rajsamand, Sawai Madhopur, Sikar, Sirohi, Tonk and Udaipur. (THE HINDU 240103, BUSINESS LINE 250103)

**MoEF upset at fund allocation** The Ministry of Environment and Forests is unhappy that the budgetary allocation has not taken into account the 10$^{th}$ Plan proposal to increase forest cover. While MoEF had projected Rs 13 B estimate, it has been given only Rs 10.1 B. The 10$^{th}$ Plan specifies 11 monitorable targets, including increase in forest cover by 25 % by 2007 and 33 % by 2012 from the present 19.3 % of the geographical area. The 2002-3 allocation for National Forestry Action Programme of Rs 1.408 B has been fully utilised. (THE ECONOMIC TIMES 280203)

## POWER OPTIONS

**Power from Watermills** The villagers of Dokwala, a hamlet of 12 families now uses its traditional watermills – *gharats* –, now somewhat upgraded, to produce enough electricity for their basic needs. Gharats, which are supposed to have originated in the North – Eastern region in the seventh century, have been used in the Himalayan region for centuries. By some estimates, there are about 200 000 such mills in the Himalayan region, Uttaranchal has some 70 000 of which almost 50 % are still functional. "There are lakhs of *gharats* in the Himalayas, so you can imagine the potential for power generation. If each watermill generates 5 kW of power, the Himalayan villages alone can produce over 2500 MW", says Anil Joshi, director HESCO. HESCO has upgraded 200 gharats already. (INDIAN EXPRESS 020203)

**Bio-fuel** The inter ministerial committee – set up in April 2001 to recommend measures for accelerated utilisation of ethanol doped gasoline – made its presentation recommending the PM to frame the national policy on Bio Fuel. Submitting its report the committee said that it has identified Ethanol mixed Petrol and Diesel as an area for further research. The utilisation of bio fuels in petrol and diesel vehicles in the country could cost the exchequer as much as Rs 7.68 B per annum. NCAER DG pointed out that while the country had enough molasses to go in for a 5% blend, it would require cereals and straw to go in for 10% blend. According to NCAER, a 5% blend would involve a subsidy of $3.79 B - $4.09 B while a 10% blend would increase subsidy burden to $5.5 B – 7.68 B. (BUSINESS LINE, *RASHTRIYA SAHARA* 040203, INDIAN EXPRESS 050203)

## SMALL HYDRO

**Privatisation in Mizoram** The Mizoram cabinet has decided to privatise the 3 MW Teirei HEP in Mamit district. The power plant would be given to the Chandigarh based Punjab Power Generation and Machine Ltd which has constructed the project. (BUSINESS LINE 260203)

## *QUOTES*

"Narmada waters can be supplied in cities where a pipeline network exists. But rural areas are beyond its reach."

Gujarat Water Supply Minister
Narottam Patel (INDIAN EXPRESS 160403)

"Alas, hunger in the non-acute form of endemic under-nourishment often turns out to be not particularly politically explosive. Even democratic govts can survive with a good deal of regular under-nourishment. For example, while famines have been eliminated in democratic India, there is a remarkable continuation of endemic under-nourishment in a non-acute form. What holds up Indian food consumption today is not any operational ability to provide more food but failure to make the poor able to afford enough food. India has not done well in tackling persistent hunger."

Prof Amartya Sen (*GUARDIAN* 160602)

"In 1960 there were 262 lakes in Bangalore. Today, we have only 91 left, of which 61 are in the state of decay or dying. Again in 1960, there were 3 000 percolation tanks, all extinct now. We suffer from ecological illiteracy."

A N Yellappa Reddy (DOWN TO EARTH 150103)

"We can not allow the Renuka Sanctury in Himachal Pradesh to be drowned to bring water all the way to New Delhi. The capital should instead harvest rain on roof-tops and clean up the Yamuna to cater to its own expanding water needs. The project stands cancelled."

T. R. Baalu, Union Minister for Environment & Forests 260202 SOURCE???

Private enterprises are for rich people and state enterprises are basically private enterprises of a political party. We want an enterprise based on the four pillars of transparency of management, efficiency, Participation of people and social justice.

Oscar Olivera of Cochambamba (Bolivia) struggle (THE HINDU 090103)

I would argue that it is the rich and middle classes of developing countries that are actually responsible for the privatisation of water. I would, in fact, go so far as to argue that water scarcity and pollution are the outcome of the fact that water has for too long been considered a free good. A free good that benefits not the poor, but the relatively rich of the developing world.

Sunita Narain, *Down to Earth*, 150403

## POWER REFORMS

**PSEB privatisation opposed by workers** Punjab SEB employees struck work in protest against the proposed dismantling of the board and organised a rally. Speaking at the rally, the leaders said that Haldia Committee, which had been formed to suggest reforms in the power sector, was bent upon trifurcating the board to the detriment of employees as well as people. Speakers from PSEB Engineers Association, elaborating, about the failure of experiment of handling over power affairs to private companies in other states in last five years said, "power is being sold at Rs 7 per unit for commercial establishments and Rs 5 per unit for domestic customers in AP. Power tariff is almost one and a half times higher in Haryana as compared to Punjab". They stressed that huge loans from the WB and capital market in the name of power sector improvement would further deteriorate the financial health of power sector which was already facing accumulated losses of Rs 85 B for allowing free power to the farming sector and subsidised power to the domestic sector in the past five years. (THE TRIBUNE 010203, 030203, 050203)

**Losses go up during decade of reforms!** The average gap between cost of supplying power to consumer and the revenue realised has increased from Rs 0.23 in 1992-3 to Rs 1.1 per unit in 2001-2. Revenue from power sales have reduced from 82.2% of costs in 1992-3 to 68.6% of costs in 2001-2. (THE ECONOMIC TIMES 280203)

## POWER GENERATION

**Drinking water diverted for power generation?** Over 1 500 villages and towns in three districts in the command area of Kadra reservoir will face a severe water crisis with water meant for drinking being diverted for hydropower generation at Kadra HEP (3 X 50 MW). This is due to malfunctioning of the two units (235 MW each) of Kaiga Nuclear Power Centre. If the HEPs continue to generate power at the same capacity, the reservoir will empty very soon. Crops sown in nearly 0.18 M Ha of land will soon be dry and by peak of summer. However, this charge was denied in the Parliament following a question on the issue on March 10 2003. (DECCAN HERALD 190103)

**Unreliable HEPs** Hydel generation in 2002-3 is expected to clock negative growth rate of 9.6%. Hydel generation is just 14% of total generation. NHPC claimed, though that it has produced 10% over the commitments. Yet, govt has decided to invest 60% of tenth plan allocations in Hydel projects.

- **TN** When members of the Drought Assessment Team met CM, she said that the generation of hydel power had come down by more than half, resulting in a loss of Rs 6.9 B to the TNSEB.
- **Kerala** Following the fast depletion of water levels in reservoir of various HEPs, with the early onset of summer this time Kerala is headed to face major power crisis. Close on the heels of reports on the likelihood of NTPC plant at Kayamkulam being shut down due to saline water intrusion, Kerala State Electricity Board sources suggested that effective storages in the reservoirs as on Jan 30 will be sufficient to generate only 1148.29 MU, as compared to 2231.07 MU generated at the same period last year. As per the state's present power generation pattern of 10 MU per day, the effective storage of 1148 MU will be exhausted within the next 75 days, with water for generating 400 MU to be kept in reserve.
- **Uri, Salal** 480 MW Uri Power Project in J&K, commissioned in 1997, currently generates only about 70 MW only due to low water levels in the Jhelum River. The 690 MW Salal HEP on Chenab River in J&K produced just 89 MW in Jan '03. The Uri project generated lower than promised power in '99-00 & 2000-1 due to low water flow, according to Power Ministry Annual reports. (BUSINESS LINE 200103, THE HINDU 020203, THE ECONOMIC TIMES, FRONTLINE 280203)

**ENRON Govt holds talks with GE, Bechtel** GE and Bechtel, equity holders in the Dabhol power project agreed to extend unconditional support for restarting the project, which has been lying idle for the last 20 months. Responding upon the request of GE, a meeting between top executives of GE, Bechtel and officials of Union Power ministry took place. On it's part the govt has agreed to actively consider the partners' recent petitions to the Centre aimed at recovering their investments in the project - $ 100 M equity and $ 60 M unpaid construction expenses. Union powers minister claimed the meeting as successful saying that it has cleared roadblocks in restarting the project. The power secretary said that NTPC would hold discussions with the promoters to work out the modalities for restarting the project. An editorial in BUSINESS LINE opined, "The Power Ministry's approach seems flawed and without a clear-cut direction on what it proposes to do once the project begins feeding the grid again. For long Dabhol power project was touted as the harbinger of foreign direction investment in the power sector. Even now, the Power Ministry believes that once the Dabhol imbroglio is sorted out, foreign capital will start flowing into the sector again. Where from the power planners get this optimism is hard to fathom, as it is unlikely that even the domestic lenders will ever commit any funds to the power sector." GE and Bechtel are close to acquiring Enron's 65 % equity in Dabhol. GE and Bechtel have informed the govt that they have signed a Letter of Intent with Enron and Overseas Private Investment Corp to this effect. (BUSINESS LINE 010203, 070203, 110203, 190203,THE INDIAN EXPRESS 060203, THE ECONOMIC TIMES 070203, BUSINESS STANDARD 070203)

## POWER FINANCE NEWS

**PFC funds for NSP, APGenCo** PFC has sanctioned Rs 10.5 B to NHDC for its 1 000 MW India Sagar Project and Rs 4.38 B to Andhra Pradesh Power Generation Company for its 6x39 MW plants under Priyadarshini Jurala HEP. The Priyadarshini project was initially to be funded by a Japanese bank JBIC that however got stuck following delays. The project thereafter was handed over to PFC for funding and as per agreement with APGenCo, PFC will finance it partly through a term loan. (THE TIMES OF INDIA 230103)

**CMS, PSEG to exit India** The Bangalore based GMR group has bought out equity stakes of US power majors CMS Energy and PSEG in the 220 MW naphtha fired, barge based Tanir Bavi power plant in Mangalore and 200 MW, LSHS fuelled Basin Bridge power project in Chennai. GMR group has thus hiked its stake in Tanir Bavi power plant from 26% to 100%. Power from Tanir Bavi project goes to KPTC. The Basin Bridge project sells its power to the TNSEB. In a separate deal involving Basin Bridge project, the CMS group has sold its entire 48 % stake to the GMR group. While GMR refused to comment on the size of transaction, sources placed the deal in the range of 23 B. PSEG, which holds around 20 % stake in PPN Power Project in Tamil Nadu is reported to be scouting for buyers to offload its equity as part of strategy to exit the country. PSEG is understood to be unhappy over non-payment of dues by TNSEB. CMS, another multinational energy giant is also reported to have firmed up plans to exit the power business in India as part of a strategy to cut its losses and concentrate on its US business. CMS also owns 23 % stake in Andhra Pradesh based gas fired Jegrupadu Power Project where it has sounded out the promoters GVK group over it's plans to sell its equity. The move by the two MNCs to exit the country follows similar exercise by several power giants such as the Enron, Cogentrix and AES. (THE HINDU 060203)

**Budgetary support for reforms** The 2002-3 budget on the Accelerated Power Development and Reforms Programme is expected to be fully utilised and Union Power Ministry has accordingly sought budgetary support of Rs 50 B on this account from the Finance Ministry. Sources indicated that APDRP project worth Rs 145 B have been sanctioned by the Ministry and the projects are likely to be implemented by 2004-5, especially the ones on the 132 KV transmission lines. In this context, t was mentioned that the scheme, an important power reform tool, was studied by Deepak Parekh committee on power reforms, which suggested some charges to make it more effective. Altogether 63 circles were selected which were being developed as Centres of Excellence for distribution reforms. Since its introduction the scheme had not been very effective with disbursals remaining very poor. One of the major recommendations was to split the 'support' in two – one an investment component and another an incentive component. As such, out of this year's allocation, Rs 17.5 B was made available for investments towards projects and the balance amount was available under an incentive scheme for reducing the gap between unit cost of supply and revenue realisation of the SEBs. (BUSINESS LINE 040203)

**Funds for the hydel sector?** The Planning Commission has suggested that it would be difficult to meet the additional requirement of Rs 7 B sought by the Power Ministry for the hydel sector for 2003-4 and the village electrification programme of the Ministry of Non-Conventional Energy could also be affected. (THE HINDU 120203)

**Costs overrun of the Power Projects** The amount of cost overrun is the highest in the case of the Power projects where 42 projects have run into cost overruns of Rs 167.03 B. (BUSINESS STANDARD 050203)

**Disbursement for Tehri up** Disbursement for the Tehri HEP went up by about 65% from Rs 7.5 B in 2000-1 to Rs 11.4 B in 2002-3. (POWERLINE 0203)

**NHPC gets Rs 3 22 B in Tenth Plan** NHPC chairman Yogendra Prasad claimed that 11 projects totalling 4357 MW were likely to be completed during the 10$^{th}$ plan (2002-7). He claimed that the 10$^{th}$ Plan has allocated Rs 322 B for NHPC projects, which is the highest ever allocation. The NHPC also expects to add almost 14 000 MW in the 11$^{th}$ plan by taking up 14 new projects (2007-12). NHPC's budgetary outlay almost doubled from Rs 12.6 B in 2000-1 to Rs 24.7 B in 2002-3. An additional sum of Rs 13.4 B was provided in 2002-3 to fund 390 MW Dulhasti, 280 MW Dhauliganga, 800 MW Parbati-2 and 2000 MW L Subansiri HEPs. In addition to this, NHPC went for market borrowings and raised Rs 4.3 B by issuing bonds. During 2001-2, NHPC earned revenue of Rs 13.49 B. NHPC is arranging for a $150 M loan from Deutsche Bank for a period of 16 years. It has also arranged a credit line from LIC for Rs 25 B. (THE HINDUSTAN TIMES, *DAINIK HINDUSTAN* 280203, POWERLINE FEB 03)

**News about Films, Books, Documents**

# Words on Water

Documentary/ Video/ Colour/ 85 mins/ 2002/ English / Hindi (subtitled)
Written and directed by **Sanjay Kak**
Copies available in PAL/ VHS: Rs 500 for individuals and Rs 1500 for institutions.

**Director's note** *Shasan valo, sun lo aaj - Hamare gaon mein hamaara raaj* (Listen to us, you who rule - our villages, we control). A boat carrying that cargo of defiance begins an urgent journey through the Narmada valley. For more than 15 years people of the valley have resisted a series of massive dams on their river, and in their struggle have exposed the deceptive heart of India's development politics.

The struggle has forged unusual alliances. *Adivasis* in the hills, farmers from the Nimad plain, sand-quarriers and fishermen on the river, and middle-class activists. They are ranged against the powerful apparatus of this chosen model of development - Ministers, Magistrates, Police Commissioners, the World Bank, and in this era of privatization, multinational corporations.

This is a dialogue with authority that is usually conducted across barricades. But through the tumult and slogans, we make our way to the transactions between power and powerlessness, between truth and untruth.

The film was shot over a period of two years, after the Supreme Court lifted the stay on the construction of the Sardar Sarovar dam, and pushed the resistance into its most critical phase.

In a world where the use of violence has become the arbiter of all political debate, **Words on Water** is about a sustained non-violent resistance, that almost joyous defiance, which empowers the people as they struggle for their rights, yet saves them from the ultimate humiliation of violence.

"From being a fight over the fate of a river valley, the struggle against big dams in the Narmada valley has begun to raise doubts about an entire political system. What is at issue now is the very nature of Indias' democracy. Who owns this land? Who owns its rivers? Its forests? Its fish?"

From 'The Greater Common Good' / Arundhati Roy

For more information and copies: Octave Communications / email: **octave@vsnl.com,** tel: **91-11-26893893** / fax: **91-11-26123828**

## Water: Perspectives, Issues, Concerns:

By Shri Ramawsmay R Iyer Sage Publications, New Delhi, 2003, pp 368, Rs 550

**From the back cover**: With its lucid coverage of numerous topics of seminal and topical importance marked by original and unconventional thinking, this book will be of interest to the general reader as also to students and academics in the fields of water resources, hydrology, environmental studies, development studies and public administration. It will also attract attention of policy makers and the media.

## Living with the floods: The Mystery of Flood Control

By Shri Dinesh Kumar Mishra, People Science Institute, Dehradun, 2002 (English) and 2000 (Hindi), pp 124, Rs 360

**From the Back Cover**: During the rains, a supposedly spirited sermon is orchestrated by knowledgeable groups covering a range from criticism of flood-control measures thus far to new hope-kindling projects in this direction. The sermon concludes every year by October, only to be repeated from the following July. This exercise is repeated in the country year after year and nobody is curious to learn whether this will culminate at all. The book tries to document the identity and institutions involved in the orchestra and tunes they trumpet. An endeavour has also been made here tto explain why the country songs welcoming the rains are interpreted as notes of sorrow by this orchestra party.

**Food Insecurity Atlas of Urban India** (MS Swaminathan Research Foundation and the World Food Programme, 2002, pp 212) It says over 38% of urban children under the age of three in cities and towns are underweight and over 35% are stunted. MSSRF published the *Food Insecurity of Rural India* in 2001 and will be publishing *Sustainability of food security Atlas of India*.

RNI No DELENG/2003/9562

## WE AWAIT YOUR RESPONSES

The news on Vaitarna once again brings to the fore the unfortunate "clash" between "water development" and forest conservation. We all have to do something urgent to get the message across to urban citizens and decision-makers, that there is no water security without forests *(natural* forests). There are examples of cities that depend on water supplies coming straight from forests upstream (Mumbai, Shimla, etc)... can we get in a few more examples and then put these into a campaign of sorts?

Simultaneously we will have to counter a cynical reversal of the above logic. The other day in a speech on the River Interlinking proposal, Suresh Prabhu made the statement that the project will significantly add to the forest cover of the country, and thereby help wildlife like tigers. How? Because water will now be available in "water-scarce" regions. Breathtakingly simplistic visions like this need to be challenged. Forests and wildlife are adapted to the region they have evolved in over millenia, they don't need extra water provided by human hands, to survive! What they certainly need is protection from mega-projects that disrupt migration and gene routes, fragment forests and other ecosystems, turn finely tuned coastal environments into saline deserts by reducing the outflow of freshwater.

So we've got a double challenge, convincing people that maintaining natural forests are essential for water security, and that large-scale transfer of water is not necessarily good for forests!

Ashish Kothari, Coordinator, NBSAP Tech. and Policy Core Group, Kalpavriksh

The Gandak Project, a joint venture of Bihar and UP, was taken up in early 1960s. This scheme was propagated as the cheapest irrigation project of the country (@Rs. 125 per acre). An activist from Bihar, Nagendra Prasad Singh opposed the canals in his area in Vaishali district on the ground that the Gandak waters will never reach Vaishali because of the distances involved and if at all they do, they will be available only during the flood season when farmers do not need them. And when the farmers will actually need water, during the Rabi season, the same will never be available. The minister of irrigation of Bihar, who hailed from the same area, went on telling people that Nagendra has gone mad in opposing the project. As a last resort, the minister took the plea that even if water does not reach Vaishali, the project in itself will create so much of employment. If the water does not reach Vaishali, we will demolish the canal and that will lead to further creation of employment. The people agreed with the minister. Now the water reaches Vaishali but only in Monsoon season to aggravate the floods and there is no water for the Rabi crop. Nobody is held responsible for this debacle. Nagendra Prasad Singh (73), an ailing old man can be contacted at the following address: Nagendra Prasad Singh, Vill. & PO Vaishali, Dist Vaishali, Bihar.

Dinesh Kumar Mishra on River Link E Discussion Forum, May 2003

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