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Lead Piece



The zero success of the *state* in River Basin Management in India

With the constitution of the Ganga River basin Authority by the government of India under the Environment Protection Act (1986), the issue of river basin management has again come into focus. However, governments' in India have unblemished record of failures in this regard. Let us take a quick look at these attempts before we comment on the notification for and circumstances around the Ganga River Basin Authority.

Over the last sixty years since the country's independence, river basin management has been tried in about ten different ways.

Acts of Parliament The first attempt at river basin management was through an act of parliament when the Damodar Valley Corporation Act was passed in 1948 and had the most comprehensive mandate among all such organisations listed here. It is acknowledged by everyone including the first Chief Executive officer of the DVC that that attempt has been a complete failure. In 1956, the Parliament passed the River Boards Act, but no River Boards have been formed till date. In 1976 Betwa River Board was set up through an act of Parliament. In 1980, Brahmaputra Board was set up under an act of the Parliament, under the Ministry of Water Resources, covering the Brahmaputra and the Barak Valleys for planning, investigation and implementation of water resources projects in these valleys. It has largely been seen as a failed organisation, a Union Minister once wrote that the reports from this organisation are not worth the paper they are printed on.

The Water Pollution Act (1974) led to the constitution of the Central Pollution Control Board and the State Pollution Control Boards, along with all the paraphernalia. This pollution control mechanisms also have the unblemished record of failures as far as pollution control is concerned. In fact, these boards are largely seen as dens of corruption. These boards are not strictly river basin organisations, but they are similar in the sense that they have been formed for a water management function of a large area.

Over the last sixty years since the country's independence, river basin management has been tried in about ten different ways. However, governments' in India have unblemished record of failures in this regard.

Tribunal Orders An example in this regard is the Narmada Control Authority, which was formed following the order of Narmada Water Disputes Tribunal Award of 1979. The NCA did not have river basin wide mandate, but even within the limited mandate it has, it has been complete failure in ensuring that even the social and environment issues related to the Narmada Projects are treated as per legal and constitutional norms.

Statutory Orders Several basin management like entities have been created through statutory orders, as is also case of Ganga River Basin Authority. The Water Quality Assessment Authority of 2002 had mandate wider than a single basin. However, it is of comparable nature, its mandate included ensuring water quality and environment flows in rivers.

The tripartite (Centre, Andhra Pradesh and Karnataka) Tungabhadra Board was constituted by the President of India in exercise of the powers vested under sub section 4, section 66 of Andhra State Act 1953. The Bhakra Beas Management Board was constituted through an executive order as per the section 79 of the Punjab Reorganization Act 1966 to regulate supply of the Sutlej, Ravi and Beas rivers and to distribute power from the Bhakra Nangal and Beas projects. These organisations have not succeeded in achieving successful river basin management.

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Supreme Court Orders An important instance in this regard is the Central Ground Water Authority, constituted through an order of the Supreme Court in 1996, under the EPA (1986). This authority had mandate wider than a single river basin, but this is also an attempt at water management over large area. It is worth noting that this authority has been complete a failure in ensuring sustainable management of groundwater resources, which was its main mandate.

Inter State Agreements The Bansagar Control Board was set up in 1976 following agreement between Madhya Pradesh, Uttar Pradesh and Bihar in 1973 for sharing the waters of river Sone. The Upper Yamuna River Board was set up by the Union Ministry of Water Resources in 1995 as its subordinate office following an agreement between the basin states in May 1994. The Mahi Control Board and Chambal River Board were set up on similar lines.

Union Govt organisations The Union government has set up a number of organisations with basin level mandates. The Ganga Flood Control Commission was set up in 1972 through a Government of India resolution for planning, phasing, monitoring, performance evaluation etc of flood management in different sub basins. The starkest failure of this organisation got exposed in the Kosi floods of 2008, when it completely failed in its task of ensuring proper maintenance of the Kosi embankments in Nepal, which led to the Kosi disaster.

Similarly the Ganga Action Plan, the Yamuna Action Plan and pollution control action plans for a number of rivers have been taken up by the Union government under the National River Conservation Plan of Ministry of Environment and Forests. The failure of these organisations is too well known.

Basin Corporate entities by states Some states have created basin level or large area based entities for some specific water management functions. Some organisations on these lines are: the Krishna Bhagya Jal Nigam, Irrigation Corporations in Maharashtra, the Narmada Valley Development Authority in Madhya Pradesh. However, these organisations are also not known for any successful river basin management.

Basin authority under environment clearance condition As per the conditions of the Environmental Clearance to Tehri dam project given by Ministry of Environment and Forest on 19-7-1990, it was required of Ministry of power to ensure construction of the Authority on Statutory basis through legislative action before 31-3-1991. In compliance of the directive of the Ministry of Environment & Forests, GOI (though over eight years after the deadline set by the Ministry, 'Uttar Pradesh River Valley (Development & Management) Act, 1999 was passed River Valley (Development & Management) Act, 1999 was passed by the state Legislative of Uttar Pradesh. The authority that was set up under this authority was complete failure.

The then Uttaranchal Legislative Assembly passed an act, which was given assent by the Governor on 27-01-2005, called "The Uttaranchal River Valley (Development and Management) Act, 2005" (THE UTTARANCHAL ACT NO.

06 OF 2005), "For the sustainable development and proper management of River Valley with special reference to the Bhagirathi River Valley Up and Down Stream of Tehri Dam including its Catchment & Command Area in the State of Uttaranchal." The jurisdiction of the Bhagirathi River Valley Development Authority, formed under this act, was limited to "in the First Instance it shall apply to the Bhagirathi river Valley in Tehri and Uttarkashi Districts of Uttaranchal". However, it may be recalled that this is authority was set up after an earlier attempt in this regard had failed.

Even after the state act, this authority is so ineffective that most people concerned on this issue do not even know about its existence (For more information, see: <http://gov.ua.nic.in/brvda/index.html>).

Voluntary Corporate body In case of Sutlej basin, at one stage the various corporations (both public and private) having the hydropower projects in that basin in Himachal Pradesh realized that due to lack of basin level management, problems are faced and there is huge scope of optimization through cooperation. These organisations hence came together voluntarily and attempted to form a basin level organisation. However, that attempt did not go beyond one or two meetings.

Community efforts As against this series of failed attempts, there are some notable successes outside the state. The example of the formation of the Arwari River Parliament in Alwar district in Rajasthan to manage the almost perennial flow of the river (made possible due to the community efforts in creating and rejuvenating local water systems) is notable. In this case, the communities came together to take decisions about the management of the river and have been successful so far. Baba Balbir Singh Seechewal's success in transforming the 160 km long sacred river Kali Bein, in Hoshiarpur district in Punjab, from a filthy drain to a picnic spot has won him a place of honour among *Time* magazine's 30 environment heroes from around the world. This was entirely a community effort. There are some more such examples from tribal areas in Gujarat.

The Lessons In this brief note it is not possible to go into details of this complex issue. However, it is noteworthy that in all the successful cases cited above, the common theme was that they were all bottom up efforts, starting at the community level. They were all attempts in which the people staying on the banks of the river had the central role. As against this, all the attempts at the river basin management by the governments have been top down, unaccountable, non-transparent, non-participatory. The local people who have the greatest stake in ensuring proper management of the rivers had absolutely no role in these authorities, where as the lives or livelihoods of the people who were sitting on these authorities had no bearing on proper management of these rivers. This disconnect is at the centre of the failures at river basin management attempted by the government. The National Ganga River Basin Authority is no different in this regard. Its failure is writ large in the way it has been formed.

SANDRP

The Dam Industry's Brave New World

There was a time when we were all expected to follow the law. There was a time when we had to respect clear social and environmental standards if we wanted to build a dam with international funding. These days may soon be over if the hydropower industry has its way. A new initiative called the Hydropower Sustainability Assessment Forum puts social and environmental rights and standards at risk.

Over the last 20 years, the World Commission on Dams, the World Bank and various UN bodies issued standards and policies on the development of international infrastructure, mining and forestry projects. They covered topics such as how to compensate project-affected people, protect ecosystems, and prevent corruption.

The dam industry was never happy with this standards and rights-based approach. Together with a few governments, financial institutions and environmental organizations, the International Hydropower Association (IHA) created the Hydropower Sustainability Assessment Forum (HSAF) to come up with a new approach in 2007. The goal of this forum is to develop a "broadly endorsed" protocol to measure the sustainability of hydropower projects by the end of 2009.

My impression is that some industry representatives indeed try to avoid future development disasters, which they fear will hurt their whole industry. Others hope that establishing broadly accepted guidelines will help them access government subsidies and carbon credits. The EU requires hydropower projects that sell carbon credits to the European market to comply with the WCD framework. IHA and WWF have already written to the EU Commission suggesting that in the future, such compliance be measured by an HSAF protocol.

The new HSAF protocol will contain sustainability criteria on approximately 80 aspects. The Forum published an interim report on the protocol in January 2009. This report presents a fundamentally flawed approach. The interim document does not cover important aspects such as human rights impacts, a basin-wide approach to rivers, the cumulative impact of environmental impacts, the compensation of people who lose access to common resources (such as forests, fisheries etc.) or the risk of reservoir-induced earthquakes at all.

Maybe more importantly, the report almost completely ignores existing standards and policies in the aspects that it does cover. No word on indigenous peoples' right to free prior informed consent. No mention of land-for-land compensation for affected people, the right to access project information, labor rights in dam construction, and other hard-won achievements. No acknowledgment of the need to follow international competitive bidding procedures to discourage corruption,

and to respect ecological no-go zones such as national parks and Ramsar sites.

The interim report instead proposes to score vague aspects such as the "likelihood of compliance with regional and national plans", the "quality of the project communication strategy", the "quality of the labor management system", the "quality of plans to manage for biodiversity and conservation objectives", and the "level of compliance with resettlement legislation and standards requirement". In other words, HSAF proposes to replace clear minimum standards with consulting reports and management plans. It asks affected people to trade in hard-won rights for a lot of consultants speak.

The problem of lacking standards is compounded by HSAF's focus on scoring. I trust that a future HSAF protocol will not give projects high social and environmental marks if they impoverish thousands of people and destroy important ecosystems. But it is in the nature of scorecards that low scores in certain aspects can be offset with higher marks in other aspects. So projects that degrade valuable ecosystems could pass the HSAF bar if they have a good construction, safety and communication management. Projects that displace a hundred thousand people could pass the bar if they have high financial returns. Such an approach ignores that if a project is to be sustainable, social, environmental and economic principles all have to be respected and cannot be traded off against each other.

The process through which the new Sustainability Assessment Protocol is being prepared illustrates how affected people are being disenfranchised. While all interested groups were invited to participate in the WCD process from the beginning, the HSAF is a self-selected group. Dam-affected people and Southern NGOs are not represented at the negotiating table. HSAF spokespeople argue that they could not find a member who would represent all Southern civil society groups. They clearly set a higher bar for civil society than for the other participants in the Forum.

The Forum started a belated consultation process in January, half-way through the HSAF process, and will carry out a second consultation phase in September. By then, the new Sustainability Assessment Protocol will almost have been completed. This will not create the "broad endorsement" which HSAF is officially seeking.

International Rivers just prepared a detailed critique of HSAF's interim report, and shared it with the Forum members. We will continue to monitor the HSAF process, and will make sure a flawed approach will not replace the WCD framework as the leading international benchmark for hydropower projects.

(Peter Bosshard, the policy director of International Rivers. His blog, [Wet, Wild and Wonky](http://www.internationalrivers.org/en/blog/peter-bosshard), appears at www.internationalrivers.org/en/blog/peter-bosshard)

Sardar Sarovar Nigam **NOW** tries to cheat the investors

The Sardar Sarovar Project (SSP) is again in news. For the wrong reasons as usual. This time the Nigam is trying to cheat the very investors who put their money in the project, when the project was facing its strongest opposition from all quarters. Even as we disagree about the justification of the project, it is worth noting how the government is treating these investors.

The story started in 1993 when the World Bank had decided to withdraw itself from the project following loss of its credibility. Then, the Gujarat government's Sardar Sarovar Narmada Nigam Limited (SSNNL) floated the deep discount bonds (DDBs). It promised a return of Rs 1.11 lakh after 20 years on an investment of Rs 3600. The Nigam issued over 7.14 lakh bonds in January 1994, collecting about Rs 260 crores. Around 6.69 lakh bonds remained outstanding when the current process of redemption started in November 2008. As per the DDB prospectus, the Nigam had no option to call the bonds for payment before the maturity, though the bond holders had that option at various stages.

Gujarat Finance Minister Vajubhai Vala, while presenting the interim budget in the state assembly on February 18, 2009 admitted that the deficit in 2008-09 was much higher due to the prepayment of DDBs of the SSNNL, for which the government had earmarked Rs 2,720 crore. Out of this, Vala said, about Rs 1,800 crore had already been disbursed against premature redemption of the bonds. It is not clear why the govt earmarked Rs 2720 crores for the DDBs when the requirement was over Rs 3300 crores.

The SSP has been a huge drain on the resources of the Gujarat government. As CAG has noted, the project was cleared without any financial plan. The state government borrowed indiscriminately to push ahead with the project any cost, but most of the borrowings in the latter years went for serving the earlier debts. Even as the project got by far the largest funding for any project from the Accelerated Irrigation Benefits Programme in complete violation of the norms of the scheme, the project's

financial requirements has become an unbearable burden even for a so called prosperous state.

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of all bonds as of January 10, 2009, by paying Rs 50 000 per bond. Rs 50 000 was the amount payable for each bond at the end of 15 years in case an investor so wishes, as per the original promise. If SSNNL succeeds in this attempt it will have to pay about Rs 3345 crores at this stage.

The SSNNL (Conferment of Power to Redeem Bonds) Act, 2008 passed by the Gujarat assembly was clearly contrary to the terms and conditions of the bonds prospectus dated March 29, 1993. This act has now been challenged by the investors in the Gujarat and Maharashtra High Courts. The lawyers also argue that the bonds were issued under the securities laws and the Companies Act, 1956, passed by the Parliament and the

It is indeed ironic that the government was asked to take the prior informed consent of the bondholders who had voluntarily invested their surplus financial resources in the company. However, the government had to take no such prior informed consent of the land holders, whose only livelihood resource, the land was being taken away by the government forcibly! It is clear for whom our system works.

Now, considering that the SSNNL would have to pay over Rs 7400 crores to the DDB investors at maturity in January 2014, the Gujarat Government passed legislation in 2008. The Act was to help the state escape the guarantee earlier given to the bond holders and to allow mandatory redemption

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which the Nigam arrived at the redemption value. It seems SSNNL has not done this.

The Narmada Bachao Andolan (NBA) had warned in 1993 itself, at the time of issue of the Bonds, that the project is an unviable proposition and that the offer of such huge returns would put unjustifiable burden over the people of the state and would be an irresponsible way of allocating scarce public resources. That argument of NBA, unfortunately, fell on deaf years.

Even the Comptroller and Auditor General of India has repeatedly, including for the report for 2000-01 said that

the state government has been borrowing in an irresponsible manner. members, it affects the entire securities market in as

The Gujarat Government too realized this and in 2004 made an unsuccessful attempt at premature redemption of the bonds. Then SEBI had asked SSNNL to first get prior, informed consent of the bond holders for premature redemption, through a meeting with them. Realizing that the bond holders are not likely to give their consent, the state government withdrew the proposal.

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SEBI has argued in its petition before the Supreme Court that if this act of Gujarat government is allowed, it "may lead to complete collapse of the market for securities issued by the government companies". The SEBI petition says that if, "a public limited company is permitted to avoid discharging their obligations to public at large as also the institutional investors who are investing funds for the welfare of their

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achieve full command area development. The project is as yet able to use hardly 10% of the water available in a year at the dam site. It is clear that in stead of clamoring for further work on the dam as it is doing now, the state government needs to focus on achieving the utilisation of the water available NOW at the dam site. That may make the project slightly less distressing.

Clearly, the Deep Discount Bonds have turned out to be Distressingly Disastrous Bonds for the Gujarat Government. This is another incident that shows that the Sardar Sarovar Project is also a financially non viable project.

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High Court orders judicial enquiry into corruption in R&R for SSP Almost on the eve of the completion of the original six-month term of the Judicial Commission of Inquiry into corruption in the rehabilitation of the Sardar Sarovar Project affected families, which was appointed by the High Court of Jabalpur on 21-08-2008, the High Court took serious cognizance of the delaying tactics of the Government of Madhya Pradesh in operationalizing the Commission and directed that the Respondents shall, by the 4th of March provide all requisite facilities so that the Commission shall start functioning with immediate effect from Indore and begin receiving complaints and grievances from the PAFs as well as their representation organization – Narmada Bachao Andolan. The Order dated 20-02-2009 was subsequent to the progressive interventions and earlier orders of the High Court dated 21-08-2008, 25-11-2008 and 05-02-2009. The series of Orders are a consequence of the lackadaisical attitude of the GoMP / Respondents on the one hand and the persistent interventions of the petitioner to challenge the rampant ongoing corruption not just in fake registries and civic amenities at resettlement sites, but also in the allotment of house plots, livelihood grant disbursement, land acquisition and compensation of properties. With every passing order, the High Court directed the Respondents to actualize the Commission and provide it the necessary infrastructure, staff and resources. It must be noted that it was only after the Court's stringent directives that the GoMP provided office facilities and some staff, even if that was a half-hearted partial move. (NBA PR 230209)

Mountains of Concrete: Dam building in India, Pakistan, Nepal, Bhutan Himalaya itself is in danger?

Indeed, *Mountains of Concrete* (authored by Shripad Dharmadhikary, published by International Rivers in Dec '08, available at: <http://www.internationalrivers.org/node/3601>) would not seem a very apt title for a report, in many senses if you are referring to Himalayas. Himalaya mountain chain going from Pakistan in the west to Arunachal Pradesh in the east is more known for its fragile, erosion prone nature and young age. These are not the known characteristics of Concrete. So there seems to be contradiction.

In fact when a meeting to launch this report in Delhi was announced, some officials of the water resources establishment were angry that this report is an insult to the dam building plans of the government. But that is quite another matter.

However there is no contradiction here. The report in question is about dam building (more specifically building of big hydropower projects) in these Himalayan countries and the threat it poses to the Himalayas. The threat from the concrete works that would include huge walls damming the rivers, underground tunnels that could go scores of kilometer long, that could completely bypass and dry up the rivers for even longer lengths, the massive blasting that would be required for the same, the power houses, the roads, the townships, the mining that would be necessary to procure the materials for the projects, the hundreds of kilometer long transmission lines meant for the power promised to be generated, threats from all this is indeed of Himalayan proportions. And even if it cannot dwarf the mountain itself, certainly it has the potential to destroy large parts of it permanently.

Particularly when you consider the proportions: the total capacity that is proposed to be added just over the next ten years in this region (in fact in just the four counties listed above, excluding the massive plans of China, which are not included in this report) is equal to 80 000 MW. That is equal to about 80 projects like the Tehri Power Project. Think of it, a Tehri project coming up every 45 days. The estimated finances required is about USD 95.8 billion (excluding the cost escalations, excluding the real social and environment costs that remain non-monetised and excluding a number of related infrastructure like the transmission lines). So it means spending about USD 800 million every single month, for ten years, and possibly more.

And all this, to go back to where we began, in fragile, erosion prone, landslides prone, active seismic zone. Even more importantly, in areas like the Arunachal Pradesh, this is one of the handful of biodiversity rich hotspots on entire earth.

Excerpts from the report Unfortunately, the people who will be most severely affected have had little say in the planning, design and implementation of these projects, and even now have no place in the decision-making structures. Similarly, social, environmental and cultural issues are not even important considerations in the decision-making process, let alone being on the same footing as financial and economic ones.

Against this background, climate change looms as a huge threat that is set to overturn the fundamental assumptions, especially river flows, on which these projects are planned. The impacts of climate change are likely to lead initially to high flows and extreme events – raising concerns of dam safety – and are later likely to result in sharp drops in flows – raising questions about dam performance. The frequency of catastrophic events like GLOFs is also likely to increase, further increasing risks to dam safety. Sedimentation, already a bane for dams in the Himalayas, is also set to intensify. The big dam planners seem to have adopted an ostrich-like attitude to the impacts of climate change on the Himalayan region.

Pushing ahead such a massive dam-building program in the fragile Himalayan region without proper social and environmental assessments and safeguards, and ignoring the likely impacts of climate change, can have severe consequences. The recent devastation caused by the breach in the embankments of the Kosi River in Nepal and the subsequent change of course that wreaked havoc with the lives of millions of people is an indication of what lies in store if we undertake far-reaching interventions in sensitive regions of the Himalayas without fully evaluating the possible consequences.

All of these things point to the need for a comprehensive review of the dam building program in each of the river basins in the Himalayas. They call for evolving an alternative approach to meeting the pressing energy and water needs in a manner that is just and sustainable. The recommendations of the World Commission on Dams offer the best possible framework for this. The choices are not easy, and the process will be difficult. The decisions lie with the people in the respective countries. Yet, just as these countries claim the right to make their own decisions, they will have to grant the same right to local people, those who will be most affected, to have a meaningful say in these decision-making processes. And even as the interests of the local people need to be given a priority along with national interests, the people of this region should remember that they are the custodians of a treasure that is the common heritage of the entire world - the Himalayas.

It is the catchment of the rivers that are the economic, social, hydrologic, and cultural lifelines of hundreds of millions.

Now add the climate change threats to this picture. Climate change that is already leading to receding of glaciers (which provide 70% of the non monsoon flows in most of the Himalayan rivers), which is going to increase the rainfall and also the frequency of high intensity rainfall events, that would also add the threat of increased events of what is called Glacier Lake Outburst Floods (GLOFs in short, which happen when the stream flow blocked by natural causes like land slides burst and lead to flood disasters in the downstream area), and also increased sedimentation in the streams.

The proposed hydropower plans in the Himalayas will only accelerate the Climate Change threats. Firstly, because, as Senior Advisor Shri Surya P Sethi from the Planning Commission said at the meeting in Delhi on January 12, 2009, where this report was launched, "Large water reservoirs also significantly contribute to the emission of green house gases". Secondly, all the massive activities described above, for the colossal number of gigantic projects will make huge contributions for the climate change. Thirdly, these projects would also destroy vast stretches of natural forests, which are themselves huge carbon sinks and thus add to the climate change.

Thus, *Mountains of Concrete*, authored tries to give this BIG picture and the implications of these plans. As Mahesh Rangarajan, well known environmental historian from Delhi University said at the meeting, this report is a first step in a long journey at understanding this picture and also forging trans-national civil society alliances to fight the destructive projects.

A step in that journey was also taken when at least two persons to be affected by the proposed dams also spoke up at the meeting. Ratan Bhandari from Water & Energy Users' Federation Nepal, to be affected by the proposed 750 MW West Seti project in Nepal, said, "Unless, the people of Nepal, India and the region work together on these issues as common needs and threats, there will only be more conflicts in water and river sectors in the future".

Kebi Pulu from the Idu-Mishmi tribal community in Arunachal Pradesh, to be affected by the proposed 3000 MW Dibang Hydropower project (if it does come up, it will be the largest installed capacity hydropower project

of India) was clearly angry when he said, "the answers that the project developer National Hydroelectric Power Corporation of India gave at the so called public hearing are tantamount to killing us by torture. The environmental impact assessment of the project is totally fraudulent and in fact listed some marine animals as existing in the Dibang Valley. When we protest against such unacceptable projects, we are branded as anti national." In fact, a 33 minute documentary film "Rhymes and Reasons of Confrontation" on the people affected by the proposed project gave a stark picture of life of the Idu Mishmi tribal community, whose entire life supporting ecology will be destroyed by the proposed project.

Why is the dam building technology, essentially a 20th Century idea, has found a new force in the 21st Century? This question is also important, when in the west, where over 500 dams have been decommissioned over the last decade, and where this technology is already described as out dated by no less than the western media icon like *the New York Times*.

In the end, the searching question posed by Rangarajan remains unanswered: Why is the dam building technology, essentially a 20th Century idea, has found a new force in the 21st Century? This question is also important, when in the west, where over 500 dams have been decommissioned over the last decade, and where this technology is already described as out dated by no less than the western media icon like *the New York Times*.

The answer will take time to arrive.

But a glimpse is provided by the list of dam projects that the now infamous MAYTAS infrastructure company, belonging to Ramalingam Raju, the biggest corporate fraud ever of India, has been involved. The partial list includes the multi billion dollar and already proving to be faulty Narmada Canal, the canals of the Polavaram Dam in Andhra Pradesh, that will displace close to two lakh tribals, the Larji Hydropower projects (so expensive that even the state electricity regulatory company has refused to accept the stated cost), Upper Indrawati Hydropower project (so expensive and disastrous that even the dam friendly World Bank got out of the project), another hydropower project in Himachal Pradesh and two in Arunachal Pradesh. We will possibly get more such glimpses if we look at the right quarters. But I guess it will take some doing.

Till we do that, our challenge to the architecture that is pushing such unjustifiable and non development projects will remain significantly incomplete.

Mountains of Concrete, in spite of the seemingly inappropriate title, is a useful warning for those who are still open to such warnings.

Himanshu Thakkar (ht.sandrp@gmail.com, an edited version of this appeared in the February 2008 issue of CIVIL SOCIETY))

'Several rivers have vanished or exist only as nullahs'

Massive investments in the name of action plans to save rivers have not produced the desired results. Himanshu Thakkar, coordinator of South Asia Network on Dams, Rivers and People, speaks to Bharat Dogra about how official thinking needs to change to bring genuine results.

What is the missing link in our efforts to save rivers?

Unfortunately, although lip-sympathy is paid to protection of rivers, there is very little appreciation of the value of natural flow of fresh water rivers. Right from the place of its origin to its submergence in the sea (or a bigger river), a naturally flowing fresh water river provides the habitat for hundreds of diverse life forms. Such a river meets the needs of people on its banks and recharges the groundwater all along its flow. The livelihoods of many fisherfolk, boatmen and farmers are supported by the river. The silt deposited by the river improves the fertility of a lot of farmland. Hundreds of religious and cultural events are organised regularly on river banks.

All these benefits are provided by naturally flowing rivers without any costs being incurred, and these benefits are for all times. When the fresh water flow of natural rivers is impeded by obstructive constructions and by pollution, many of these benefits are sacrificed for short-term, narrow gains which benefit only a few, and for a few years.

To what extent is this natural flow of fresh water disrupted?

In the case of the overwhelming majority of dams in India, there is no provision, no legal stipulation that a certain share of the water must be reserved for

downstream rivers. So once the irrigation water has been diverted, then, for a long distance, effectively there is no river at all, except at the time of rains or some leaks from the reservoir. Then, much lower down, some tributaries may join or waste polluted water flows back into the river. For long stretches, several rivers have altogether vanished or exist only as dirty, polluted nullahs, acquiring a substantial flow only during a short span of rainy days.

What can be done to improve this fast deteriorating situation?

The concept of the many-sided, intrinsically invaluable role of natural flow of fresh water rivers should be emphasised. It should get due recognition in all official decisions concerning rivers. At present, this recognition simply doesn't exist at the official level. So there is a rush for projects which exploit, obstruct and pollute rivers without any understanding of the many-sided havoc this causes to countless people, other forms of life, and to the entire environment for all time to come.

Conducive conditions can then be created for saving our rivers with the close involvement and participation of people. Local people should get an effective say in monitoring water particularly in the downstream reach of dammed rivers.

(An edited version appeared on the Times of India on March 25, 2009)

ORISSA RIVER CONFERENCE: April 18 – 20 2009, Sambalpur The conference is organised by India River Network (IRN) and Water Initiatives Orissa (WIO).

The invitation letter says: "Rivers are in stress and dying. Odisha is no exception. All of its rivers including major rivers Mahanadi, Brahmani are dying of quantitative and qualitative degradation and decrease. Water salinity in the lower Brahmani has gone up as river flow has almost stopped in crucial summer months. Water flow in the Mahanadi River too is decreasing at a rapid rate. A comparison between second half of the post Hirakud dam period with the first half shows about 15 percent of decrease in average annual flow. Other rivers like Baitarani, Subarnarekha, Vanshadhara, Rushikulya and Nagabali etc. are also suffering the same fate. The problems are manifold. Unsustainable growth of population; industrialization led pollution; climate change and many other problems have virtually wrecked havoc on the fate of the rivers. The rivers are dying and are surely spelling doom for the civilizations around them. Time has come that rivers are recognized as life and not merely as a resource that's open for exploitation. This conference will debate and deliberate on the state of rivers in Odisha. It will also chalk out an action plan from both action and advocacy perspectives to work towards giving Odisha Rivers a life, yet again! The invitees include local activists, civil society, academia, researchers and media. We are aware of your active involvement in action against degradation of rivers/water conservation and management/issues related to water."

CIC directs IMD to make district wise rainfall data public**IMD Director General directed to review the information policy**

The Central Information Commission has directed the Director General of the India Meteorological Department (IMD) to review IMD policy and make a written submission within one month "about the arrangements that will be made for free access and dissemination of" district wise rainfall data for at least the last five years. The IMD was refusing to make this basic information public on the plea that they earn revenue by selling a lot of such information.

The CIC order dated January 16, 2009 (the order is available on SANDRP website at: www.sandrp.in/news), which became available to SANDRP on January 21, 2009, was following a hearing at the CIC on January 6, 2009. Shri A K Bhatnagar (ADGM & Appellate Authority) and Shri T A Khan (DDGM & CPIO) represented the case on behalf of IMD.

Facts of the case On March 27, 2008, Bipin Chandra from SANDRP had filed an application before the IMD for the monthly rainfall data for the last five years for some six districts of Madhya Pradesh and some other related information. Shri TA Khan, CPIO of IMD said in his reply that "supply of Meteorological Data does not fall in the ambit of RTI Act, 2005". We were shocked to get this reply, but an appeal to the Appellate Authority at IMD proved futile. So after due process an appeal was filed before the CIC against this decision of the IMD on July 9, 2008.

At the hearing on January 6, 2009, before the Information Commissioner Shri A N Tiwari, Himanshu Thakkar from SANDRP argued that the IMD must make the annual and monthly rainfall data for all the districts of India public on its own regularly and people should not be asked to file applications and pay charges for such primary data. This data is of crucial importance to a lot of different people. IMD has not been making this primary data public at any stage, whereas several state governments have been making even daily, taluka wise data public for several years on their website. The India Meteorological Department has been created such huge public expenses is refusing to make this primary data public and is asking people to file application and after IMD decides what charges to pay for each such applications individually, the applicants has to pay the charges. This is not an acceptable situation.

CIC agrees to the merit of the case In its directions dated January 16, 2009, the CIC said, "Commission noted that there was merit in the latter submission of the appellant... There is undoubtedly a public interest implication about dissemination of this data – brining it out into the public domain – as a routine process. One would have accepted the public authority to exhibit this data on its website and widely publicise its availability so

that those wishing to access it could reach out to it. Unfortunately, this has not been done and when this matter is raised, it is complicated by several complex technological/ tactical responses."

SANDRP is grateful that IMD agreed at the hearing to provide the information requested in the first place to be made available free of charge *within three weeks*, without prejudice to the respondent's rights. SANDRP is happy that CIC has made this direction and asked IMD's Director General to review its information policy and file a submission within a month in this regard. Let us hope that IMD will use this opportunity to make public *suo moto*, all minimally required information in public interest. (SANDRP PR on January 21, 2009)

Following this press release from SANDRP, India Water Portal had hosted a discussion on "Should IMD give away Meteorological Data for free", which invited many people from many well known organisations responding, an overwhelming number of respondents said that indeed IMD should make public basic information like monthly and annual district wise (and possibly for small areas like talukas) for at least ten years.

Farhad Contractor of Sambhaav (Rajasthan) said, "I feel it is absolutely essential for people working on the ground to have this kind of data. I would also say it should be for a minimum of 10 years if one really wants to plan and work on long term initiatives and revival and rejuvenation of various water systems." Manoj Mishra, convener of Yamuna Jiye Abhiyan said, "We not just suggest but demand that all data collected by IMD using public funds be forthwith made public on its website free for anyone's use." Sudhakar Penna, Scientist at CGWB, Hyderabad agreed, "Yes, since IMD is a government organization, the rainfall data should be made public and be given free of cost."

SANDRP has sent these responses to IMD and CIC. Further response from IMD is awaited.

In the meantime, as per the directions of the CIC, IMD has provided the data we had requested in our original RTI application. However, the applicant had to provide an undertaking for getting this data. The undertaking says that the data "will not be put on internet or nictet or will not be transmitted through any electronic media" and that the data "shall not be passed on to any other party or agency". We find this problematic as we wanted to use such data for public purpose and hence such undertaking is not helpful. In any case, there is no provision for such undertaking in the RTI act. . This is the reason it is important to direct the IMD to change its policies and to make all information under RTI act.

SANDRP

Report on India's National Action Plan on Climate Change THERE IS LITTLE HOPE HERE

**The plan will help neither the poor, nor the climate
NAPCC lacks urgency, democracy and perspective**

The South Asia Network on Dams, Rivers & People has just published a critique of the India's National Action Plan on Climate change (NAPCC), titled: "There is little Hope here". India is more vulnerable to the climate change impacts than the US, the Europe or even China. And the poor within India, whose contribution to the climate change is the least, are the most vulnerable, considering their dependence on natural resources. The report, which includes

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recommendations of several civil society consultations, concludes that the NAPCC has been formulated through a most non transparent process; it will help neither the poor, nor the climate. The climate change provides a unique opportunity to make India's development path people and environment friendly, but the NAPCC completely misses that opportunity.

There is little doubt that the responsibility of having created this specter that threatens our very survival, lies with the policies and practices of the counties of the Global North. It is also true that the western world, the UN and all the various multilateral agencies, including the UNFCCC have not managed to come up with anything more than feeble, cosmetic efforts towards addressing this challenge.

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It is the cruel irony that those who are the most immediately, most directly affected have been completely left out of the process, planning and indeed the vision of the NAPCC and the missions like the National Water Mission of NAPCC. Nor has the government consulted the people while formulating the plan or the mission documents. Rather than challenge the destructive model of development that has already jeopardized the livelihood of millions & continues to do so & which has also contributed to the climate change,

the NAPCC endorses it & says that sustaining the GDP growth on the same old path is top priority.

(CDM) projects have progressed so far here. The central and state governments see CDM benefits as free gifts and are not bothered to ascertain if these projects are indeed helping reduce greenhouse gas emissions, are sustainable, do not have significant social and environmental footprints or the local communities are benefiting from the credits or even participant in the

The Prime Minister of India released the NAPCC on June 30, 2008, see <http://pmindia.nic.in/Pg01-52.pdf>. The National Plan is likely to work only to the advantage of the already privileged elite, with all the adverse impacts going to the share of already disadvantaged. This is particularly evident from the way the so called Clean Development Mechanism project planning and decision making. The Executive Board of the United Nations Frame Convention on Climate Change has neither the mechanism nor the will to ensure that any of these are happening. The CDM and the failed carbon market, unfortunately, continue to remain the cornerstone of world efforts to tackle climate change.

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In Water Sector, the plan attempts to push for more big dams, irrigation projects, hydropower projects, interlinking of rivers and such other long distance water transfer projects. This is in spite of the increasing evidence of non performance of such projects. On the other hand, there are many examples where the community driven processes have shown that through local water systems, it is possible to achieve equitable, sustainable and pro poor development, but such systems have no worthwhile place in the plan. This is particularly true for Agriculture sector, where India's lifeline is groundwater, and which can only be sustained through local water systems. Here the emphasis on GM crops is completely misplaced and unjustified, in stead, what is required is sincere efforts to push organic

farming and promoting water and resource efficient and also high yielding methods like the System of Rice Intensification. In Energy sector, while the emphasis on energy efficiency is welcome, the continued and increased reliance on mega thermal power plants, big hydropower and nuclear projects cannot be termed environment friendly or climate friendly. Particularly when there is so little emphasis on reducing T&D losses, on optimizing peak hour generation, reducing unnecessary power consumption, peak-hour-power demand management, least cost options and on ensuring proper environment impact assessment.

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Water Sector in NAPCC The nodal ministry for the National Water Mission (NWM) under the NAPCC is the Union Ministry for Water Resources. The information about the NWM is very brief in the NAPCC document. It generally maps a business as usual approach. There are some welcome statements about increasing water use efficiency, recycling urban waste water, protecting wetlands, etc, but these have been declared intentions for about two decades without significant serious action. It talks about “regulatory mechanisms with differential entitlements and pricing”, which can possibly create more problems than solutions for the poor. Strangely, it mentions low temperature desalination as the only “new and appropriate technologies”. NWM section of the NAPCC mentions that National Water Policy will be revisited, but only “in consultation with states” and only to “ensure basin level management strategies”. It advocates “special effort to increase storage capacity”. This fortunately includes a mention of underground storages, but in absence of clear plans, programmes, resources and implementation mechanisms, it could end up paying lip service to underground storages and in stead continue the current overwhelmingly dominant strategy of storages through BIG DAMS.

The National Water Mission section in NAPCC document (and also NWM itself) has nothing about the best options available for different agro-geo climatic situations, about a credible participatory process to arrive at appropriate NWM, about learning from the rather abysmal and deteriorating performance of past big projects, about prioritising for best options for the water needs of already water scarce people and areas, & about right based approach for the basic needs of the people.

The NWM section in NAPCC document (and also NWM itself, see the NWM section below) has nothing about

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Looking at the broader NAPCC, we also see that the cross sectoral linkages are missing. Thus, in the section on “National Mission for Sustainable Agriculture”, there is nothing about water efficient methods like the system of rice intensification and how these can be

promoted with greater sincerity and could also be tried for other crops. Similarly, while the section on “National Mission for Sustaining the Himalayan Ecosystem” mentions increased vulnerability of 45 million residents of Himalayan ecosystem due to climate change, it does not go into the dos and don’ts for the kind of projects that should or should not be taken up in these areas and how the massive plans for the hundreds of big hydropower projects in these regions would actually increase this vulnerability, both for the hill people and the downstream plane people.

Among the desirable aspects of the NAPCC is the section 3.4.4 (page 31) on “Conservation of wetlands”. One hopes that this more urgently necessary aspects will indeed be taken to its logical conclusion. The trouble,

here is likely to be the turf war between the Ministry of Water Resources (MoWR) and the Ministry of Environment and Forests (MoEF). Indian water resources establishment, led by the MoWR, sees no role for itself in such conservation issues. On the other hand, the MoEF, which has a role and which has come out with a set of draft guidelines for regulation of wetlands in India, is not likely to be given in role in NWM by the

MoWR. This turf war is not likely to help the cause of wetlands, which is supposed to include the rivers, among other wetlands.

NATIONAL WATER MISSION NWM is one of the eight missions under the NAPCC, and the nodal ministry for the same is the Union Ministry of Water Resources (MoWR). The ministry put up the two volume DRAFT report of the NWM on its website some time during February 2009, before that the website of the ministry had no information about the NWM. Needless to add, there was no participatory process, not even in the namesake, in formulation of the NWM.

According to the DRAFT report, a High Level Steering Committee was set up in the MoWR. The High Level Committee, in its meeting on Aug 7, 2008, had in turn set up six sub committees to prepare the NWM, as under:

- a. Policy and institutional Framework;
- b. Surface Water Management;
- c. Ground Water Management;
- d. Domestic and Industrial Water Management;
- e. Efficient Use of Water for Various Purposes; and
- f. Basin Level Planning and Management.

There is no information in the report about who all were the members of many of these subcommittees, who were the members of the High Level Steering Committee, what was the criteria for selection of the members of these committees, and what was the process of formulation of the reports of the sub committees or that of the NWM. The entire process remain non transparent and non participatory for anyone outside the government. For some mysterious reasons, the ministry chose call this "a consultative process".

The NWM gives a long laundry list of strategies, which have been divided into four sections:

1. Assessment of Impact of Climate Change;
2. Changes in Policies and Practices;
3. Measures for Mitigation; and
4. Measures for Adaptation.

Some noteworthy points in regard to the suggested strategies include the following.

The central message of the analysis of the process and content of NAPCC is reflected in the title: *There is Little Hope here*. NAPCC lacks proper perspective, urgency and sincerity in taking note of contributions of various sectors and classes in India's current and future emissions. The plan is not based on any democratic process of assessing least cost options before the society.

"Water bureaucracy or water professionals in public service in India tend to put the procedures and regulations far above the professional knowledge and professional propriety. The universal principles of hydraulics could be over-ridden by an old circular of the concerned authority, and so on. Departments of the state may change from *Irrigation to Water Resources*, but the personnel of the line Department are unlikely to get unshackled from the history...A large programme for re-training, complete re-building of attitudes, etc. would become necessary."
Report of the NWM's sub committee on Policy and Institutional Framework

❖ "Water harvesting, provided this is socially desirable and provided that corresponding water saving is possible elsewhere in the region". This recommendation came from the sub committee on

policy and institutional framework, particularly for "closed basins". At the outset this seems like an unacceptable proposition, since it says that the existing water use (irrespective of its justifiability or lack of it) will get priority over rainwater harvesting for the deprived sections.

❖ Review of National Water Policy in consultation with all the stakeholders (however, the ministry does not seem to include the farmers, civil society organisations or other water using citizens of the country among the stakeholders), not just states, as recommended by NAPCC.

❖ An important recommendation of the sub committee on policy and institutional framework on the environmental flows is, "In view of the additional stress which climate change may cause to both hydrology and to the ecology of the affected area, maintaining aquatic ecology through environmental flow requirements as decided after considering the

needs of various uses and the trade-offs, will become even more important. Much work needs to be done for deciding an acceptable methodology." And "Improved management of wet lands has to be a part of the water policy."

❖ Most of the strategies are on the lines of business as usual approach. Thus it includes building more major and medium irrigation projects, additional and carry over storages, inter linking of rivers (inter-basin

transfer of water), among others. There are no credible suggestions for addressing the issues of (mis)governance.

The NWM has also proposed a monitoring and evaluation mechanism for "for identification of the most

appropriate measures from the national perspectives and for ensuring effective implementation of the identified activities". A Board under the chairmanship of Union Minister of Water Resources is proposed to be apex body for framing the policies and guidelines for implementation of the NWM. The proposed Board will have representative from States and Central Ministries / Organizations, experts, representatives from professional organizations etc. A High Level Steering Committee headed by the Secretary, Ministry of Water Resources and comprising of members representing concerned Ministries, Experts, Non-Governmental Organisations etc. has been constituted. MoWR has also constituted a Technical Committee on Climate Change & Water Resources under the Chairmanship of Chairman, Central Water Commission.

MoWR proposes to have a Mission Secretariat headed by a Mission Director, to be supported by two Advisors – one Advisor to be fully devoted to technical evaluations and the other for co-ordination and monitoring. The three cells created in NIH, CWC and Brahmaputra Board and the one proposed at Central Ground Water Board for research and studies on impact of climate change on water resources is to provide necessary input and assistance to the Mission Secretariat. State Governments would be requested to set up Monitoring Committee and Climate Change Cell at appropriate level. According to the NWM, The total estimated additional fund required during XI plan (April 1, 2007 to March 31, 2012) for addressing the specific issues related to impact of Climate Change on water resources works out to be Rs 286.56 billion.

Unjustified advocacy for Big Projects

The advocacy for Big Dams to combat climate change in the NWM is not entirely new, it is part of a series of such attempts going on for the last three years. The government's Water Resources establishment sees climate change as an opportunity to push its questionable agenda of Big Dams. Thus, a national workshop was organized by National Water Academy of Ministry of Water Resources on Dec 5-6 2007 at Pune. One of the main recommendations of the workshop was, "Existing storages require enhancement and provision of carry over", which essentially translates as more big dams.

Most of the strategies are on the lines of business as usual approach. Thus it includes building more major and medium irrigation projects, additional and carry over storages, inter linking of rivers (inter-basin transfer of water), among others. There are no credible suggestions for addressing the issues of (mis)governance.

While there are some positive suggestions in the plan, they are not sufficient in inspiring confidence since we have yet to see effective action or action plans to ensure their implementation. Unless a bottom up, participatory process for formulation of a fresh climate action plan is urgently taken up, it seems we are going to miss an opportunity to push for a people friendly and environment friendly development path.

The World Bank's role here is also insincere. The Bank's climate strategy document for South Asia makes tall claims. However, the Bank has recently renewed and accelerated funding for destructive large hydro projects in the Himalayan region, and International Finance Corporation, the Bank's private sector arm is funding the first of the series of India's largest 4000 MW thermal power project at Mundra, in Kutch in western India. It seems even this 4000 MW giant emitter also hopes to get CDM credits!

Why big dams should not

part of the solution There are many problems with this opportunistic advocacy for big dams to combat climate change. Firstly, we need to note that advocacy come from the usual suspects: the World Bank, the Union Ministry of Water Resources and so on. More importantly, this advocacy is not informed or backed by any performance appraisal of the currently existing big dams of India. Let us look at this aspect first. In the following paragraphs, we have tried to give a bird's eye view of the analysis on this aspect that has been done by a number of independent research groups in India, including SANDRP.

In conclusion The document (a low resolution soft copy is available at: [http://www.sandrp.in/CRTITUQE_ON_INDIA%27S_CLIMATE_PLAN-There is Little Hope Here Feb 2009.pdf](http://www.sandrp.in/CRTITUQE_ON_INDIA%27S_CLIMATE_PLAN-There%20is%20Little%20Hope%20Here%20Feb%202009.pdf), a 2.3 MB file, for a hard copy, write to ht.sandrp@gmail.com) provides detailed recommendations from Civil Society groups. The central message of the analysis of the process and content of NAPCC is reflected in the title: *There is Little Hope here.* NAPCC lacks proper

perspective, urgency and sincerity in taking note of contributions of various sectors and classes in India's current and future emissions. The plan is not based on any democratic process of assessing least cost options before the society. While there are some positive suggestions in the plan, they are not sufficient in inspiring confidence since we have yet to see effective action or

action plans to ensure their implementation. Unless a bottom up, participatory process for formulation of a fresh climate action plan is urgently taken up, it seems we are going to miss an opportunity to push for a people friendly and environment friendly development path.

SANDRP

SANDRP submission to Kosi Inquiry Commission**Issue of accountability for the man made Kosi disaster**

In response to the advertisement in the Hindustan Times dated February 26, 2009, where the Kosi Inquiry Commission had invited submissions from all concerned by March 13, 2009, SANDRP has sent a submission to the commission, the main text of which is given below.

The Annexures mentioned here are not given in this issue of *Dams, Rivers & People*, but the same is available at www.sandrp.in/news.

1. There is no doubt that the breach of Kosi embankment on August 18, 2008 was a man made tragedy. When the breach occurred, the flow of water in the river was less than 1.5 lakh cusecs (cubic feet per second), when the barrage and the embankment were designed for a flow of over 9 lakh cusecs. This is one of the many evidences that support this case that the embankment was not properly maintained. The breach occurred because the steps necessary to be taken to ensure adequate maintenance of the embanked river portion were not taken by the concerned persons in the short and the long term.

2. The Ganga Flood Control Commission (<http://gfcc.bih.nic.in/>) is a sub ordinate office of the Union Ministry of Water Resources. The GFCC's Chairman's introduction to the Annual report of the GFCC for the year 2006-07 (the latest year for which the website has the annual report) claims, "As Chairman of the Gandak High Level Committee and Kosi High Level Committee, GFCC has recommended every year, the flood protection works for implementation by the Govts of U.P and Bihar. The implementation of recommendations has successfully helped in maintaining the flood protection embankments satisfactorily thereby protecting large areas behind them." Since GFCC chairman takes the responsibility for the "successfully... maintaining the flood protection embankments satisfactorily" for Kosi river, the responsibility for its mal functioning must be with the same chairman of the GFCC.

3. The section 4.3.1 of the annual report of GFCC says, "The Kosi High Level Committee (KHLC) was constituted by the then Irrigation Dept. Govt of Bihar in the year 1978 under the Chairmanship of Chairman, GFCC to review/examine the protection works already taken on the river and recommend protection measures to be taken before the next flood season. Since then the committee is inspecting every year the protection works

All those who were members of the Kosi High Level Committee during the period October 1, 2007 (end of the 2007 monsoon season) and August 18, 2008 (the day the embankment breached) and prior periods where necessary, should be held responsible for the lack of required maintenance work done, which lead to the Kosi disaster.

taken up on the river and is making recommendations regarding protection work to be executed on the river before the next flood season. The State Govt executes the schemes on the basis of the recommendations of the committee." The list of members of the KHLC as given in the annual report of the GFCC is copied below.

Chairman, GFCC, Patna.	Chairman
Engineer-in-Chief (North), Water Resources Dept., Govt of Bihar.	Member
Director, CWPRS, Pune or his representative.	Member
Member (RM), Central Water Commission, New Delhi/ representative	Member
Chief Engineer, Water Resources Dept., Govt of Bihar, Darbhanga.	Member
Chief Engineer (Master Plan), Water Resources Dept., Govt of Bihar.	Member
Chief Engineer (Research), Water Resources Dept, Govt of W Bengal.	Member
Dy. Director General, Irrigation Dept. HMG, Nepal.	Member
Director, Eastern Region, Irrigation Dept., HMG Nepal, Biratnagar.	Member
Chief Engineer, Water Resources Dept., Government of Bihar, Birpur.	Member-Secretary

It is clear that all those who were members of the KHLC listed above during the period October 1, 2007 (end of the 2007 monsoon season) and August 18, 2008 (the day the embankment breached) and prior periods where necessary, should be held responsible for the lack of required maintenance work done, which lead to the Kosi disaster.

4. In para 5.1 of the GFCC annual report for 2006-07 it is stated, "Besides above, all schemes receiving Central Assistance under the following centrally sponsored /central sector schemes were closely monitored during the year.

- ❖ Maintenance of flood protection works of Kosi & Gandak Projects in Nepal portion."

The responsibility for close monitoring of the maintenance of the flood protection work of Kosi project in Nepal is, thus, clearly of GFCC and it is lack of maintenance in this area that lead to the Kosi flood disaster of 2008.

5. Attached at Annexure 1 are three letters, all from Director (Coordination) of GFCC to the Engineer-in-Chief

(North), Water Resources Dept, Govt of Bihar. The three letters are dated April 1, 2008, April 25, 2008 and June 12, 2008. Since the text in the letter dated April 1, 2008 is not fully legible, a file containing the retyped letter is attached as Annexure 1A. In these letters, the Director, GFCC is telling the Engineer-in-Chief (North), WRD, GoB, that:

- ❖ The estimates/schemes for the maintenance of the Nepal portion of the Kosi project, as recommended by the KHLC, to be completed in Nepal before the floods of 2008 “has not yet been received in this office”.
- ❖ The monthly physical and financial progress reports be sent to GFCC
- ❖ The may be treated as “urgent”.

The copies of these letters were also sent to the Chief Engineer, WRD, Govt of Bihar, Dist Supaul.

What these letters convey is that GFCC had no idea about the implementation of the repair of the Kosi embankment in Nepal portion on April 1, 2008, by which time, in normal course, the work should have been completed, since the snow melt in summer increases the flow in the river Kosi. What is strange from the subsequent letters of April 25, 2008 and June 12, 2008 is that they refer to the earlier letters, they say the same thing, they say that the matter may be treated as urgent, and yet they show no evidence of any action, besides writing of these letters. In matters where lives, livelihoods, safety of crores of people is at stake, where safety of crops and property over lakhs of hectare is at stake, the officials who are statutorily authorized (we can assume that since Director GFCC was writing these letters, he was writing on behalf of GFCC and it reflected the state of minds and actions of everyone at GFCC, including its chairman) and responsible, were indulging in writing these letters and nothing else. These officials should have been taking many other urgent steps rather than limiting to writing these letters to ensure that the duty given to them is indeed fulfilled. It seems that they taken no urgent steps to fulfill their statutory responsibilities.

In matters where lives, livelihoods, safety of crores of people is at stake, where safety of crops and property over lakhs of hectare is at stake, the officials who are statutorily authorized and responsible, were indulging in writing these letters and nothing else.

The daily *Tatbandh samachar* from the Executive Engineer of Bihar Water Resources Department at the Central Flood Control Room in Patna dated August 16 and 17 are one liner: “All the embankments under the Water Resources Department are safe.” Then suddenly, the report on August 18, 2008, the report says that the embankment of about 400 m length between 12.1 and 12.9 km has been damaged and water is entering Nepal and area around Birpur. These reports were untruthful or they were plainly ill informed about the condition of the Kosi embankment. In either case, they should be held responsible for the breach.

Hence everyone at GFCC, right from chairman down to all others who are responsible in this matter are held accountable for the lack of maintenance at the Kosi embankments that lead to the breach.

The fact that the Engineer-in-Chief, WRD, GoB in Patna and the Chief Engineer at Supaul did not respond to these letters (as seems to the case from the series of unanswered letters) mean that they both and also the lower officials should be held

accountable for this disaster.

This in turn also fixes the responsibility of all the members of KHLC since it was their duty to ensure that the required maintenance of the embankment is done properly and in time.

6. At Annexure 2, I have attached the daily *Tatbandh samachar* from the Executive Engineer of Bihar Water Resources Department at the Central Flood Control Room in Patna dated August 16, August 17 and August 18, 2008. The reports of the embankment news for August 16 and 17 are one liner: “All the embankments under the Water Resources Department are safe.” Then suddenly, the report on August 18, 2008, the report says that the embankment of about 400 m length between 12.1 and 12.9 km has been damaged and water is entering Nepal and area around Birpur.

These three reports firstly shows that the flood control room of the WRD of Bihar was contradicting itself when they certified till Aug 17, 2008 that all embankments are safe and than suddenly saying on Aug 18 that the embankment has breached. Their reports were untruthful or they were plainly ill informed about the condition

of the Kosi embankment. In either case, they should be held responsible for the breach.

Secondly, the report of August 18, 2008 also said that the spurs along stretch of the embankment between 12.1 and 12.9 km were facing erosion for “the past many days”. If that was the situation, why did they not mention it in their previous reports? It claims that the local engineers were constantly involved in efforts to protect

the embankment, that some anti social elements forced the labourers to flee from the site during the night of August 17 and hence there was excessive pressure on the embankment, that the materials sent for the flood protection on August 18 could not reach the site of work due to the Nepali people creating problems and the local administration not having been able to establish law and order. What this means is that the according to WRD, Govt of Bihar, the breach occurred only because of the events after the night of August 17, 2008 and that everything was fine before that. This is completely wrong, if we see what we know was happening before August 17, is also clear from the Annexure 4 mentioned below. Thus, all the officials of the Bihar WRD from Chief Engineers down, at the location and also those at the Flood control Room at Patna should also be held accountable for the breach.

7. At Annexure 3, I have attached an extract from one of the official documents (though we do not have the information as to which document this comes from, we know reliably that this is from official documents), that shows the comparison between what the field officers of Bihar WRD proposed for repair of the Eastern Kosi Afflux Bundh in Nepal, to be executed before the flood of 2008, and what the KHLC sub committee approved and what the KHLC itself approved, for the portion of embankment at 12.1, 12.8 and 12.9 kms, the very portion that ultimately breached and which lead to the Kosi flood disaster. It is clear from this comparison that the field officers had recommended much higher quantum of repair work and this was progressively diluted by the KHLC sub committee and than by KHLC. What this means is that the members of the KHLC sub committee and the KHLC should be held accountable as to the reasons for this dilution and if this dilution was one of the factors that lead to the Kosi disasters.

8. At Annexure 4, I have attached copies of the urgent communications from the Chief Engineer (Birpur), Water Resources Department of Bihar, to the Public Relations Officer of Bihar Govt in Katmandu (Nepal), dated August 9 and August 15 (this one also referred to the letter of August 14), 2008, requesting for cooperation in ensuring that in view of continued "massive" erosion of the Kosi

eastern afflux bund at 12.9 km in Nepal, the work is going on "day and night". This communication said that there is unnecessary delay from Nepal customs officials in Sunsari district and also the local organisations in Nepal are forcing the labourers to flee the place of work.

The copies of these letters were also sent to the Executive Engineer in Flood Control Room of WRD in Patna, who in spite of all this, kept sending reports of all safe till August 17, 2008.

These communications indicate that that indeed the massive erosion of the embankment at the breach location was known to the

engineers of the Bihar WRD at the location of the embankments at least since August 8, if not earlier. And yet they were not taking urgent steps to ensure that this work is completed soon, and in stead are sending such communications. Secondly, the officers who were recipient of these communications should also be held accountable to show what they did to amend the situation.

9. At Annexure 5 I have attached abstract of some papers presented t the 1st India Disaster Management Congress, organised by the National Institute of Disaster Management (Govt of India) on 29-30 Nov, 2006 at Vigyan Bhawan, New Delhi. In a paper titled "Kosi-A Review of Flood Genesis and Attempts to Solve this Problem" by officials of Central Water Commission (CWC) AK Jha and DP Mathania (then posted at the Joint Project Office for the Kosi Project in Biratnagar, Nepal), it is stated, "But, this engineering approach has proved to be far too insufficient in its objectives as at

present the pond of the barrage at Hanumannagar is almost full of sediments. Soon the embankments would be ineffective to control the Kosi floods. It would thus be naïve to embark upon finding of this menace through structural measures...". This and other documents indicate that the officials in the government

agencies at Patna and Delhi knew that the pond of the Kosi barrage was already full of sediments in 2006 and in fact much earlier. The question that needs to be posed to the officials at the CWC, Union Ministry of Water Resources, GFCC and Bihar WRD is, What had they done to address this problem and also what steps they had taken to ensure that this sedimentation does not lead to the disasters like the one Bihar witnessed in August 2008?

The field officers had recommended much higher quantum of repair work and this was progressively diluted by the KHLC sub committee and than by KHLC. What this means is that the members of the KHLC sub committee and the KHLC should be held accountable as to the reasons for this dilution and if this dilution was one of the factors that lead to the Kosi disasters.

Indeed the massive erosion of the embankment at the breach location was known to the engineers of the Bihar WRD at the location of the embankments at least since August 8, if not earlier. And yet they were not taking urgent steps to ensure that this work is completed soon, and in stead are sending polite letters.

10. In another paper shown at Annexure 5, by SK Sinha of WRD, Bihar, it is stated that construction of ponds and sinking of injection tubewells in the catchment area can help in flood management.

The question that also needs to be asked of the officials agencies listed above, is what they have done to take up these measures on wide spread level? Why did they not take these measures to wide spread level on urgent basis? Which officials were responsible for this? Such officials in turn must also be held accountable since their inaction also contributed to the Kosi disaster of 2008.

In fact as per another paper by SK Sinha and RR Prasad of WRD, Bihar, no less than the then President of India had, in a Chief Ministers' conclave in Delhi on August 4, 2004, had recommended construction of layered wells as a step toward flood management in Bihar. Why were such measures not taken up on war footing and who are responsible for this?

11. The officials of the government agencies listed above also needs to be asked as to what they have done with regard to the following issues which have significant bearing on the August 2008 Kosi disaster.

- ❖ The Indo Nepal Treaty of 1954, as amended subsequently had provision of soil conservation works. What has been done by the Govt of India to ensure that these have indeed been taken up at wide spread level all across the catchment areas in Kosi basin at regular intervals?
- ❖ The National Flood Commission (Rashtriya Barh Ayog) of GOI, also a number of other related committees and commissions had made a series of recommendations on the issue of flood management and embankment maintenance and their efficacy. What has been done by the Governments in India to ensure that these recommendations have been implemented?
- ❖ There had been breaches of embankments in the past in Bihar and elsewhere, including in Kosi basin. What has the Bihar and Govt of India done to ensure that accountability for such disasters in the past is fixed so that there is deterrence for future?
- ❖ Shri Dinesh Kumar Mishra, Barh Mukti Abhiyan and many others have been making detailed recommendations about ensuring that those affected due to the construction of embankments are justly

This and other documents indicate that the officials in the government agencies at Patna and Delhi knew that the pond of the Kosi barrage was already full of sediments in 2006 and in fact much earlier. The question that needs to be posed to the officials at the CWC, Union Ministry of Water Resources, GFCC and Bihar WRD is, What had they done to address this problem

In a paper by SK Sinha of WRD, Bihar, it is stated that construction of ponds and sinking of injection tubewells in the catchment area can help in flood management. The question that also needs to be asked of the officials agencies, is what they have done to take up these measures on wide spread level on urgent basis?

compensated and proper accountability norms are fixed, and to ensure and that where necessary, the embankments be decommissioned and that credible, independent post facto evaluation of the embankments should be done.

- ❖ A case in point is the book by Shri Mishra, titled: "Trapped! Between the Devil and Deep Waters: The story of Bihar's Kosi River", published by SANDRP and PSI in September 2008. [We are sure the commission would

have copies of this, if not, we can send if requested.] What has the governments done to ensure that such recommendations are implemented?

12. Thus, among the persons who are clearly responsible for this mishap and who should be held accountable include:

- A. The chairman & members of the KHLC and its sub committees from October 1, 2007 to August 18, 2008.
- B. The responsible officers of the Ganga Flood Control Commission, including its chairman and director (coordination) during the period mentioned in A above.
- C. The officers of Bihar WRD at the field level who were directly responsible for the maintenance of the embankment upto the level of Chief Engineer, Engineer-in-Chief (North), the PRO of the Bihar govt in Kathmandu, the executive engineer and others responsible at the Flood Control Room of Bihar WRD in Patna and also the officers and ministers to whom they were immediately answerable during the period mentioned above.
- D. The minister and the secretary, Union Ministry of Water Resources and Chairman of Central Water Commission, to whom the GFCC was answerable, for the period mentioned above.

The Kosi Inquiry Commission must recommend investigation against all the mentioned above and pending inquiry, these officers should stand suspended, unless there is sufficient ground to show that some of them could not perform their tasks in spite of their wishes and efforts (this will have to be credibly demonstrated).

**Based on SANDRP submission to
The Kosi Inquiry Commission on March 10, 2009**

Polavaram Dam**Andhra Pradesh and Central Water Commission attempt to mislead to get clearance**

The agenda notes of the 23rd meeting of the Ministry of Environment and Forest's (MEF) Expert Appraisal Committee for River Valley and Hydroelectric Projects to be held on Feb 16-17, 2009 stated that the committee will be considering Polavaram Multipurpose Project in Andhra Pradesh by Government of Andhra Pradesh for the proposal for the construction of the embankments to protect the lands in Orissa and Chhattisgarh from going under submergence due to the proposed Polavaram project.

The proposal The project authority has proposed embankments on Sabri River and Sileru River. Length of protective embankments is 30.20 km in Orissa and 29.12 km in Chhattisgarh. The embankments are broadly divided into three reaches depending upon the height of embankment. Under reach I (river Sileru), 0-10.472 km will be covered with varying height upto 10 m, reach II (River Sileru and Sabri) the length will be 10.472-16.43 km and the height of embankment will be between 10 m to 15 m, for reach III (river Sabri) the length will be from 16.43-30 km and the height of embankment will be up to 10 m. Total quantity of muck will be generated due to excavation of cut-off trenches is likely to be to the tune of 5.4 lakh cum. Out of which 2.623 lakh cum will be in Orissa side and 2.77 lakh cum in Chhattisgarh side. This muck will have useful soil for embankments to an extent of 3.48 lakh cum. The muck generation due to topsoil removal is estimated to be 4.64 lakh cum in Orissa and 5.36 lakh cum in Chhattisgarh. The construction of embankment would be costing the Government an estimated Rs 600 crores.

As construction of bund on the river was not considered by the then Expert Appraisal Committee, neither details were given in the EIA/ EMP report, the Ministry wanted to examine the impacts on surroundings for construction of the proposed bunds etc.

SANDRP wrote a letter to the committee members, showing why this Environment Clearance (EC) should not be granted. Following is the main substance of that letter.

1. Change in scope of the project The proposal to build this huge length of embankments was clearly not part of the original proposal for clearance for the project. The EIA-EMP (Environment Impact Assessment-Environment Management Plan) used for the public hearing and also the one submitted before the clearance given by MEF on 25.10.2005 and 25.4.2006 did not include the proposal to build the embankments now proposed to be built in Orissa and Chhattisgarh. The proposal to build the embankments changes the basic scope of the project. Hence the new project proposal must go through fresh EIA and EMP and also public

hearings in all affected districts including those in Orissa and Chhattisgarh as per the EIA notification of 2006, before the project can be reconsidered for EC. Hence the current application should be rejected.

2. Land required in Orissa and Chhattisgarh A very large area of land will be required for the embankments, which includes:

- ❖ **For Embankment** For the land on which the embankment is to be built, including freeboard, we estimate that at least 425 ha of land will be required in the two states of Orissa and Chhattisgarh
- ❖ **For mining of materials required for the embankments** over 10 million cubic meters of homogenous soil of suitable quality and at least 1.1 million cubic meters of metal (coarse and fine) is required. The mining sources for these materials are yet to be identified. However, it will require large quantity of land for mining of this material, which will be over 100 ha.
- ❖ **For muck disposal** The process of building the embankments will create huge quantity of muck, which will be in several lakh cubic meters. A very large area of land will be required for the disposal of this muck, which is yet to be identified.
- ❖ **For drainage channels** Drainage channels will have to be constructed on land side of the embankments to ensure that the seepage water and also the local rainwater is diverted to the next available stream/ rivers. Land will also be required for this.

However, there has been no process of survey, identification of the land required for all these purposes. The brief EIA note that has been submitted with the current proposal has been prepared without any ground survey. It is not known how much of this private land, how much is forest land, how much is gazing (and other common property) land and so on and what will be required and what all will be the impacts of acquisition of and use of this huge quantity of lands along the river banks. Hence the proposal needs to be rejected on these grounds also.

3. Maximum floods and disaster management The proposal includes having gates and pumping arrangements at some 36 places to ensure that the water from the tributaries, streams meeting the Sabari and Sileru rivers are drained into these rivers. However, this is not based on the 1-100 year High flood and probable maximum precipitation for these streams and their catchments. The assessment must include the simultaneous possibility of 1-100 year flood in the Sabari/ Sileru/ Godavari and also the tributaries meeting them. Without such assessments, the worst floods scenarios for these streams cannot be built, nor can the embankments and the drainage/ gate structures properly

designed. The proposal also does not include the disaster management plans in case of a breach of embankment or non-functioning of the gates/ pumps, which is very frequent, wherever embankments have been built. The proposal should also be rejected on these grounds.

4. Social impacts No assessment of the social impacts of building the embankment have been done. The building of embankments are bound to cause huge social impacts in terms of loss of hundreds of Ha of land (private, forest, common property lands) for the various purposes described above, in terms of flooding when the gates/ pumps do not function, in terms of lack of access to the river, in terms of additional siltation and stagnation of the river, in terms of loss of navigation to the other side and so on.

Any clearance without assessing all the social impacts would also be in violation of the clearance from the Ministry of Tribal Affairs (MOTA) dated 17.4.2007, which clearly states, "The Government of Andhra Pradesh, under the technical guidance of the Central Water Commission shall ensure that no submergence and displacement of people including Scheduled Tribes

(STs) takes place in the territories of States of Orissa and Chhattisgarh and the population of these two States including STs does not get adversely affected in any manner, either by changes in drainage regime or by any kind of primary/secondary displacement." Since the huge area of land required for the embankments and other aspects will have very substantial impacts on the tribal people staying in the area, any clearance without such assessment and consent of the affected people will be in violation of the MOTA condition and also in violation of the rights of the people, National R&R policy and also the EIA notification of 2006.

5. Public hearings in Orissa, Chhattisgarh This proposal will entail significant social and environmental impacts in the lands of Orissa and Chhattisgarh, and a public hearing for such impacts is mandatory under the EIA notification 2006 and such public hearing has never happened. Hence the proposal does not qualify for consideration.

6. Consent of the states of Orissa and Chhattisgarh The embankments are to be built on the soils of these states, but there is no consent from these states for this proposal. In fact the reports of the public hearing in the states are supposed to come to the MoEF from the respective state govts, which is not the case currently. Hence the proposal does not qualify to be considered.

There are serious questions if the proposed embankments are the best options for protecting the lands and people of Orissa and Chhattisgarh. There is no application of mind on this issue on the part of the project proponent (Andhra Pradesh) or others concerned at any stage. More importantly, the very people for whose protection this are supposed to be are not part of this process, or the state where these are to be created are part of this process.

7. Violation of High Court order The proposal would also be in violation of the Orissa High Court order in Writ Petition 3669 of 2006, where the High Court has said that the AP can take up the project without any impact on any land/ village/ area of Orissa. The proposed embankments are to be built on the lands of Orissa and will have huge impacts on the areas, people and lands of Orissa. Hence the embankments would also be in violation of the orders of High Court of Orissa and the proposal should be rejected on that count too.

8. Violation of the FCA Since the consent of the state govts of Orissa and Chhattisgarh is not available, it is not even clear if some of the hundreds of Ha of land required for the proposed embankments would be coming from forest land. The Forest clearance for the project has clearly stated that "In no case, there should

be any submergence of forest land in Orissa and Chhattisgarh". Use of forest land for building of embankment would also be violation of the forest clearance letter and FCA. The forest clearance may be separate from the environmental clearance, but the environmental impact assessment is at least supposed to make an unequivocal statement about how much forest land would

be required and impacts thereof, which is not the case in current situation. Hence the proposal does not qualify to be considered for EC as it would violate the EIA notification 2006.

9. Impacts in Andhra Pradesh The building of embankment will also have additional impacts within Andhra Pradesh, particularly on the area along the opposite bank of Sileru River from Orissa. The proposal is to build the embankment on Orissa side, but not on AP side. As the brief desk top EIA note (which cannot be considered an EIA by any stretch of imagination) attached with the proposal states, the embankments can have a number of impacts, including, change in flow velocity, changes in riverbed levels due to silt deposition and consequent flood levels and so on. These changes will be experienced by the AP portion along the Sileru River, on the opposite bank from Orissa right from the beginning of impoundment and these impacts also need to be assessed, which has not been done either by the earlier EIA or the brief note attached with the current application.

10. Efficacy of Embankments Experience from other places (including Bihar, UP, Assam, Orissa, among others) shows that embankments are at best temporary measure for protection of the area that they are supposed to protect and also they create more problems than solve. There are serious questions if the proposed

embankments are the best options for protecting the lands and people of Orissa and Chhattisgarh. There is no application of mind on this issue on the part of the project proponent (Andhra Pradesh) or others concerned at any stage. More importantly, the very people for whose protection this are supposed to be are not part of this process, or the state where these are to be created are part of this process. In this situation it would indeed be very shocking and in complete violation of the rights of the people and constitution of India if the EAC gives clearance to this proposal.

Under these circumstances, the current application should be rejected and the project authorities should be asked to redo the whole EIA for the Polavaram project, hold public hearings in ALL the affected districts in all affected states and then get back with an application for fresh clearance. In the meantime, the earlier clearance granted to the project should stand revoked in view of the change in scope of the project, among other reasons.

Subsequent to this letter, we have also known that the project does not have the forest clearance for the diversion of 3731.07 ha forest land required for the project. The MEF has given only *in principle* forest clearance on Dec 26, 2008, based on a purported recommendation of the Forest Advisory Committee sometime in 2007. The AP govt has used this to mislead everyone including the members of the Central Water Commission's Technical Appraisal Committee.

Decision of EAC As the minutes of the meeting of EAC on February 16-17, 2009, following decision was taken in this regard: "The Expert Appraisal Committee while agreeing to the proposal, however, finds the statutory requirement of public hearing as mentioned in the EIA Notification, 2006 was not conducted in Chhattisgarh & Orissa. The EAC therefore directed the project proponent to initiate suitable action requesting the appropriate authorities in Orissa & Chhattisgarh for conducting public hearings in the respective states of Chhattisgarh & Orissa in respect of embankment proposal and report back to the committee." This is a welcome decision of the EAC.

The EAC should not have stated "while agreeing to the proposal" in this regard. Without a full and proper EIA of the proposal, without knowing what land is required, what impacts it will have, what the views of the affected people and the affected states, how can EAC say that they agree to the proposal? This is particularly pertinent, when the minutes also noted, "It was also noted that the concerned authorities of Government of Chhattisgarh and Orissa have not been informed about construction of embankment on Sabri and Sileru River on the banks

located in these two States. It was not clear to the committee, how the construction of embankment is possible without co-operation from the concerned authorities of Governments of Chhattisgarh & Orissa."

In this regard the issues raised by Dr BP Das, a member of the EAC, are noteworthy, as stated in the minutes of EAC:

- (i) The reservoir to be created is likely to back up along the two major tributaries, Saberi and Sileru submerging the overbank low lands in the States of Chhattisgarh, Orissa and also in Andhra Pradesh.
- (ii) No reservoir in India has embankments in its periphery to restrict the spread, which in turn creates stagnation of water during monsoon and also deprives the reservoir of its natural yield.
- (iii) The area of submersion to be protected by embankments be indicated with their elevation from the deepest point to FRL of Polavaram (+150 Ft.)
- (iv) Although pumping is proposed, it can not be considered full proof because of the cyclonic storms. Chhattisgarh, Orissa and Andhra Pradesh experience (in May, 1990 A.P. got 1000 mm in Kakinada in 3 days, Orissa in September, 1980 got 500 mm in 2 days) cannot be pumped out in even 7-8 days.
- (v) The most important issue is large reservoirs with high spillway capacity have been constructed on Kolab (Saberi), Balimela and Lower Sileru on Sileru. These reservoirs will be required to spill design overflow in September-October during cyclones that will impinge on FRL of Polavaram. This will create much larger backwater rise, not anticipated now.
- (vi) Public hearing is mandatory in upper States for an inter-State project. No information is available in this regard.
- (vii) A lower FRL at Polavaram vis-à-vis the demerits of submersion in Chhattisgarh/ Orissa need examination.

The EAC should have asked the project authorities to formally respond to these issues raised by Dr B P Das, a member of the EAC. Unfortunately, the EAC did not do this.

However, it is a welcome step of the EAC that they have not accorded clearance to the proposal and asked AP to ensure that public hearings are conducted in the affected area before the proposal is considered for clearance.

SANDRP

RIVER LINK NEWS

Gujarat-Maharashtra agree on DPR for two links
 Maharashtra and Gujarat have given their concurrence on the MoU for taking up work of preparation of Detailed Project Reports of two more priority river links namely 'Par-Tapi-Narmada' and 'Damanganga-Pinjal'. SANDRP has sent objections to the clearance for scoping of these two links since the proposals do not have crucial details or are actually giving wrong details. In the meantime it is shocking to learn that the Expert Committee of the Ministry of Environment and Forests on the River Valley and Hydropower projects has said that the Damanganga Pinjal links do not need clearance as per the EIA notification of 2006 since NWDA wrongly claimed that the project is only a drinking water project. SANDRP has written to EAC, clarifying from some official documents that the Damanganga Pinjal link also involves hydropower and additional storage components, besides the drinking water (for Mumbai) component. Response from EAC and NWDA is awaited (PIB 231208, MEF, SANDRP)

Rs 222.8 crore Outlay for ILR The Government has approved an outlay of Rs 222.8 crore for the scheme 'Investigation of Water Resources Development' during the 11th Five Year Plan. This will include - Rs 182.8 crore to be spent by National Water Development Agency and Rs 40 crore by Central Water Commission. The funds will be used for the survey, investigation and establishing the techno-economic viability of Water Resources projects. Under this scheme, it is proposed to prepare Detailed Project Reports of three river links namely Ken-Betwa, Par-Tapi-Narmada and Damanganga-Pinjal; and Feasibility Reports of 18 Intra-State links, proposed by the States, and 2 Peninsular links during the XI Plan by NWDA. The DPR of Ken-Betwa link has been completed by 31st December 2008, however, when requested for a copy by the members of the expert committee on ILR constituted by the Union govt, the Union govt refused to share it with the members. The DPR has been sent to the states of Uttar Pradesh and Madhya Pradesh since three months, but there is no public response from them as yet. The DPR of Par-Tapi-Narmada and Damanganga-Pinjal links are planned to be completed by 31st Dec 2011. It is also proposed to complete Survey and Investigation and preparation of DPR of 10 hydro-electric projects in Arunachal Pradesh. 2 projects in Himachal Pradesh and 1 project (Kirthai State II) in Jammu & Kashmir and 5 new projects as may be proposed by States. (PIB 200109)

Study on economic impacts of ILR National Council of Applied Economic Research has conducted a study on the economic impact of inter-linking of rivers' programme and submitted its report in April, 2008, Minister of State for Water Resources said in response to a question in Rajya Sabha. The study is available on www.nwda.gov.in. (PIB 170209)

DAMS**Renuka Project: Environmental clearance on the way**

The Environment Appraisals Committee of the Ministry of Environment and Forests has agreed in principle to the construction of the Renuka Dam by

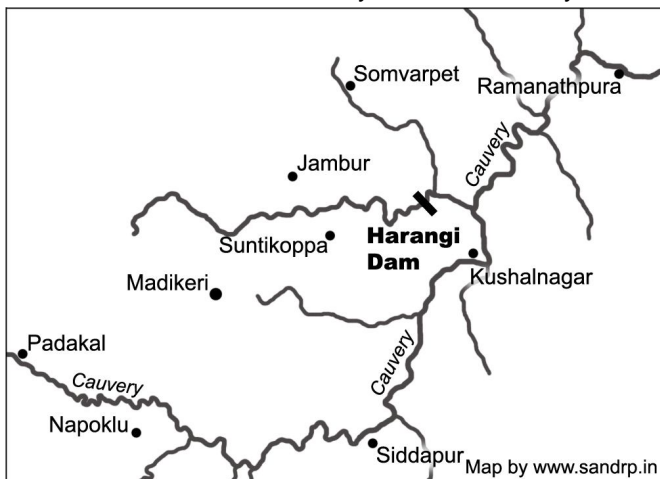


HPPCL. Renuka Dam Multipurpose project at Dadahu near Renuka on Giri River in Sirmour district of Himachal Pradesh will offer a storage capacity of 49.8 mcm from which daily 275 MG will be supply to Delhi to cater the needs of the city and it will also install 40 MW of hydropower generation. 148 m high rock fill dam was conceived at Rs 2175 crore at the December 2006 price level. The project has been planned keeping in mind the requirements of the Master Plan for Delhi-2021. The Delhi Jal Board has released Rs 300 crore to the Himachal Pradesh Govt for the time being to the project and will have to pay the entire project cost. Water from the dam will be brought into the Hathni Kund barrage through Yamuna and then will be channelised to Capital through the Munak Channel. The project was hanged for a long time due to disputes with the riparian states of Haryana and Rajasthan - those who share waters of Yamuna River. Clearance for about 700 ha of forest land has already been received in 2006-07 to be diverted for the project and 1051 ha of private land is in the process of acquiring. It has been reported that HPPCL has offered higher rates than average prevailing in the area to push the project urgently. Affected people of the project site have formed an organization named Renuka Bandh Sangarsh Samiti and are opposing the project.

In reply to an RTI by SANDRP, the Delhi Jal Board has replied that the Renuka Project is being taken up as per the agreement between the Yamuna basin states on May 12, 1994; that the Delhi govt will bear the project cost except the hydropower component, which will be the responsibility of the HP govt as all the hydropower benefit is supposed to go to that state. However, SANDRP has appealed to the appellate authority of DJB since DJB did not provide all the requested information. In the meantime, Haryana has said that the agreement is no longer valid since there is no signature from Rajasthan representative on the agreement. (THE HINDU 211208, <http://hppcl.gov.in/renuka1.pdf> 200109)

Agitation on Hirakud Diversion Farmers' leaders in Orissa warned the state government against allowing use of Hirakud dam water for industrial purposes. More than 10,000 farmers held two massive meetings in Sambalpur district near the Hirakud dam and said they are unhappy with the report of permissions to two big industries to build wells in the reservoir area to draw water from the dam. After the incidence of lathi-charge on agitating farmers on November 6, 2007 the CM while responding to queries at the State Secretariat in November 7, 2007 has said, "Not a single drop of water meant for irrigation will go to industries." The government two months ago has assured to the farmers that it will take care of farmers' interest and will not divert water from the dam for industrial purposes. More than 50,000 farmers will be deprived if the water is diverted to industries. Farmers under the banner of Paschim Orissa Krushak Sangathan Samanwaya Samiti have been protesting against the industrial use of Hirakud dam water since past several years. (<http://in.reuters.com> 130109, THE HINDU 081107)

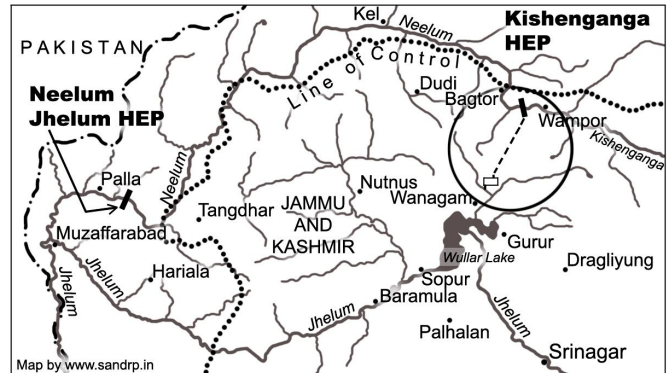
Why did the Harangi reservoir dry up? The Harangi reservoir on a tributary of Cauvery near



Kushalnagar in Somwarpet taluk of Kodagu district in Karnataka has become almost dry. The reservoir filled to the brim in 2008 monsoon. The filling of the reservoir is from June to November and depletion takes place from the month of December to May. But in middle of January 2009 the reservoir was found to be almost empty. This irrigation project was completed in 1982 with a live storage capacity of 228.6 mcm (million cubic meters) to irrigate 54,591 hectares in Somwarpet, K.R. Nagar, Arkalgud, Hunsur and Periyapatna taluks. 1908.16 ha of land have been submerged due to the project of which 114.53 ha was cultivable land and 1108.47 ha was under forest. 13 villages had lost their land. 53 m high (above deepest foundation level) masonry dam with FRL of RL 871.42 m was designed to yield 1112.86 mcm at 50% dependability. The latest situation (on 250309) is that the water level in the reservoir is at 852.35 m, the water storage amounting to just 4% of the live storage capacity. (THE HINDU 160109, <http://waterresources.kar.nic.in> 280109, National Register of Large Dams-2002)

HYDRO PROJECTS

Kishenganga HEP Kishenganga (called River Neelum in Pakistan), a tributary of Jhelum originates at Drass in



Kargil District in Jammu and Kashmir (India) passes through Tilail, Gurez, Karnah, Arnah and join with Jhelum River at Domel in Pakistan administered Kashmir. India and Pakistan have initiated to build Hydro projects on their respective territory on the same river.

Dam site of 330 MW Kishenganga HEP is located on Kishenganga River about 160 km upstream of Muzaffarabad (Pakistan) in Baramulla District of Jammu & Kashmir. The project involves diversion of Kishenganga water to a tributary of Jhelum called Bunar Madumati Nullah through a 24 km long Head Race Tunnel. Its power house would be constructed near Bunkot. The project involves construction of a 37 m high concrete faced rock-fill dam and an underground powerhouse. A maximum gross head of 697 m is to be utilised to generate 1350 Million Units electricity, in a 90% dependable year. It has been proposed that an additional energy generation of 312.62 Million Units at Uri-I and Uri-II HE Projects would be possible, as more water will be available at these projects. Cabinet Committee on economic Affairs has approved the revised cost of the project, up from Rs 2238.67 crores to Rs 3633.53 Crores (Sept 07 Price Level)-(Including Interest free debt of Rs 469 Crores).

The NHPC has hired the British company Halcrow to execute the planning, design and management services for the project. The Hindustan Construction Company was awarded contracts for engineering, procurement and construction of civil and associated infrastructure works; supply, installation, testing and commissioning of all electromechanical plants and machinery and hydro-mechanical components. However, now these firms will have to get security clearance from the Home ministry.

Pakistan claims that due to the diversion of Kishenganga water via Wuller Lake to Jhelum River would reduce water by 27% compared than the present flow. This less flow would mean reduction of power at the proposed 969 MW through the Neelum-Jhelum HEP. Pakistan has already signed up Chinese companies, namely the CGGC-CMEC Consortium China for the Neelum Jhelum HEP. (ASIA TIMES 130109, THE DAWN 051205, <http://www.nhpcindia.com/Projects> 150109)

NTPC in Mizoram for Kolodyne Stage II HEP NTPC has signed an agreement with the Mizoram govt for



execution of 460 MW Kolodyne Stage II HEP on the Kolodyne River in Sahia and Lawngtlai districts of Mizoram. Union Minister of State for Power Jairam Ramesh said Rs 3000 crore would be invested for this power project to be commissioned in 6-7 years. In accordance with the agreement, NTPC shall supply 13% free power from the project to Mizoram. The corporation has also agreed to supply 15% power at the tariff, to be determined by the Central Electricity Regulatory Commission, over and above the normal share of Mizoram as per the existing power-sharing formula, subject to the concurrence of the Power Ministry. Energy corresponding to 100 units of electricity is to be provided free of cost to the families affected by the project, notified by the Mizoram govt in the designated resettled areas and project area for ten years from the date of commissioning. (THE HINDU 120109)

Protests against Panan HEP The Sikkim Power Development Corporation had initiated the process of land acquisition in Dzongu on behalf of M/S Himagri Hydro Energy Pvt Ltd. for the Panan Hydro electric power Project on 1-6-2007. However, according to another Notification dated 24-6-2008 the above notification had lapsed on 1-6-2008. As such the proper process of land acquisition has not been completed by the District Collector and so the physical occupation of landed property in Dzongu by Himagri Hydro Energy Pvt Ltd is violating the law under section 447 of IPC and also violating the Provisions of the Notification No 3069 dated 24-3-1958 and 665/PS dated 27-9-1954. In this regard the ACT is to file an FIR against the General Manager of the Himagri Hydro energy ltd and other companies working in Dzongu for the violation of the above old laws. Meanwhile, 40 members of Affected Citizens of Teesta, concerned Lepchas of Sikkim and Sanga of Dzongu, arrested on 7th Feb 2009 were granted bail by the Hon'ble District. & Sessions Judge(E/N) on the 9th of March 2009. A rousing reception was held at the BL House to welcome all of them back. (ACT PR 120209, 100309)

Declare Dibang Valley as Ecologically Sensitive Zone: Ban Mega Dam Projects On March 14, which is observed all over the world as International Day of Action against Dams and for Rivers, water and life, the All Idu Mishmi Students Union and the Idu Mishmi Cultural and Literary Society demanded that the Dibang Valley in Arunachal Pradesh be declared as an Ecologically Sensitive Zone according to the provisions under Section 3 of the Environment Protection Act, 1986. Mega projects such as big dams should be banned in the Ecologically Sensitive Dibang Valley and the region declared as "No Dam Zone". A letter to this effect was sent to the Prime Minister with copies to the Ministry of Environment & Forests and the State Government of Arunachal Pradesh.

On March 20, 2009, the All Idu Mishmi students union declared economic blockade by the Sadiya organisations of Assam demanding scrapping of Dibang Project. The blockade is called for the period March 23 to 27, till the day of public hearing called for the Dibang project on March 27 in New Anaya. The blockade will stop all vehicular movements towards Lower Dibang Valley district of Arunachal Pradesh and demanded that the Govt of Arunachal Pradesh cancel the public hearing. (All Idu Mishmi Students Union PR, 140309, 200309)

BHUTAN Projects for 2020 plan finalised Bhutan and India have agreed to a final list of 10 hydropower projects with a total capacity of 11,576 MW to be constructed in Bhutan by 2020. This was decided during the visit of the economic affairs minister Lyonpo Khandu Wangchuk to India recently. Of the 10, six projects with a total power of 9,340 MW will be carried out on the 'inter governmental model' of 40 % grant and 60 % loan. The remaining four with 2,236 MW will be on the joint venture model, whereby public sector companies from both the countries will carry out the project. The selected projects are: Sunkosh reservoir - 4,000 mw (Inter-Govt), Kuri Gangri - 1,800 mw (Inter-Govt), Chamkarchu - 1,670 mw (Joint Venture), Punatsangchu 1 - 1,200 mw (Inter-Govt) Tendered out, Punatsangchu 2 - 1,000 mw (Inter-Govt), Wangchu reservoir - 900 mw (Joint Venture), Mangdechhu - 720 mw (Inter-Govt), Amochu reservoir - 620 mw (Inter-Govt), Kholong Chu - 486 MW (Joint Venture), Bunakha reservoir - 180 MW (Joint Venture). Sunkosh, Wangchu, Amo Chhu, and Bunakha of more than 5000 MW will be in the reservoir scheme, meaning that the river will be dammed to store water unlike the run of the river schemes. The Punatsangchu-1 project has been tendered and awarded to Larsen and Turbo for the construction of dam, worth Nu 12.4 billion, Hindustan Construction Company for power house, worth about Nu 7.0 billion, and Gamma India for the headrace tunnel, worth about Nu 4.0 billion. (Kuensel 260309)

NHPC ventures NHPC has finished DPR of 720 MW Mangdecchu HEP & is preparing the DPRs of Chamkarchhu-I and II & Kuri-Gongri HEP with a total capacity of 3040 MW. (THE ECONOMIC TIMES 190109)

ISSUES ABOUT RIVERS

Launch of Ganga River Basin Authority The union govt has announced the setting up the National Ganga River Basin Authority for “comprehensive management” of the Ganga basin. The Authority will be chaired by the Prime Minister and have as its members, the Chief Ministers of the Ganga basin states of Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and W Bengal. State Govts endorsed the need to plan in a comprehensive manner for the river instead of taking up projects in a fragmented manner. Its functions will include:

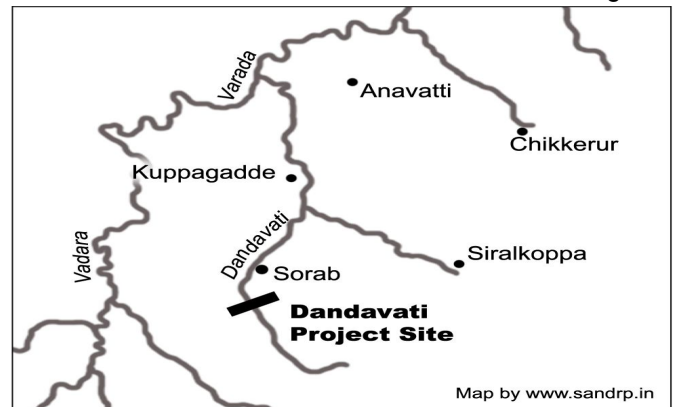
- Development of river basin management plan and regulation of activities aimed at the prevention, control and abatement of pollution in the river to maintain its water quality, and to take such other measures relevant to river ecology and management in the Basin States.
- Maintenance of minimum ecological flows in the river for ensuring water quality and environmentally sustainable development. (PIB 170209, 200209)

Alarming level of drugs in the streams Researchers have found alarming levels of drugs in waste water released from treatment plant at Patancheru, in Andhra Pradesh. Patancheru became a hub for chemical & drug factories in 1980s. At the Patancheru treatment plant, the process is outdated. Wastewater from the 90 bulk drug makers is trucked to the plant. Solids are filtered out, and then raw sewage is added to biologically break down the chemicals. The wastewater still remains contaminated, is dumped into the Isakavagu stream that runs into the Nakkavagu and Manjira, and eventually into the Godavari River. Some villagers fish in the stream's tributaries, while others drink from wells nearby. Livestock also depend on these watering holes. Study of Joakim Larsson, an environmental scientist at the University of Gothenburg in Sweden, has revealed that Ciprofloxacin, the antibiotic, and the popular antihistamine cetirizine had the highest levels in the wells of six villages tested down stream of the treatment plant. Some of India's poor are unwittingly consuming an array of chemicals that may be harmful, and could lead to the proliferation of drug-resistant bacteria. Scientist experimented that human cells fail to grow normally in the laboratory when exposed to trace concentrations of certain pharmaceuticals. Some waterborne drugs also promote antibiotic-resistant germs, especially when — as in India — they are mixed with bacteria in human sewage. Even extremely diluted concentrations of drug residues harm the reproductive systems of fish, frogs and other aquatic species. Larsson's team has also found high drug concentration levels in lakes upstream from the treatment plant, indicating potential illegal dumping. The APPCB has asked SMS Pharmaceuticals Ltd (a small company) to shut the plant at Patancheru. Kishan Rao, president of the Patancheru anti-pollution committee has said bigger pharma companies like Dr Reddy's Laboratories Ltd, Matrix Laboratories Ltd & Aurobindo Pharma Ltd are also equally contributing to the pollution. (TIMES OF INDIA 270109, MINT 040209)

IRRIGATION

Protests against Dandavati Irrigation project

The CM of Karnataka has forcefully laid the foundation stone of the 273 crore Dandavati Irrigation



Project on Dandavati River in Sorab taluk of Shimoga district in Karnataka. Capacity of the proposed dam would be 1.88 tmcft and it will provide irrigation to 31 villages in Sorab and neighbouring Shirakipura taluks. Dandavati is a tributary of River Varada, falling under Tungabhadra sub-basin. CM in the inaugural speech has stated that the project will not be dropped under any circumstance in appreciation of its significance for ensuring development of Sorab taluk. Chief Minister said that the project was being taken up in anticipation of clearance from the Centre. The project has not also got clearance from MoEF as 38 acres of forest land. CM said, “The project will not be stopped just because there is no clearance for it. There will be a BJP MP for Shimoga after the next election, and he will pursue the matter and get the clearance for the project from the Centre,” About 4000 farmers and their families pitched tents at the dam site. Feeling the heat the govt shifted the ceremony to Sorab town but even the helicopter of the CM could not land in the town but landed 20 km away at Shiralakoppa.

Affected person commits suicide A farmer at the agitating site had consumed poison in protest and died. Agitators held a procession with the dead body and buried the dead person at the dam site. The project will destroy nearly 2000 acres of fertile land that comprises areca nut plantations, paddy and maize fields.

Project shifted to save land of politician Earlier the proposal was to build a dam at Bathnal but was shifted to Dandavati. Land of a powerful politician would have been submerged at the earlier proposed site, which led to the shifting of its site. Dandavati project was rejected in 1989 by Irrigation department as it was not found to be feasible. (THE HINDU 140109, MAIL TODAY 150109, 090209)

Irrigation Infrastructure - A View from below This is a study by Chitra Krishnan, funded by the "Knowledge in Civil Society" initiative. It is a highly readable account of how irrigation infrastructure works, and the serious problems that beset it in our times. (India Water Portal)

People oppose Lower Penganga project

Lower Penganga Irrigation project on Penganga River, a tributary of Godavari, at Tadsawli in Ghatanji taluka, district Yeotmal of Maharashtra has faced disapproval from local people. Nimna Painganga Dharan Virodhi Sangharsh Samiti, Yavatmal Zilla Vikas Manch Yavatmal, and Lower Painganga Project Nirman Samasya Niwaran & Punarwasan Santha have criticized



the project. Farmers of the region have agitated as they would lose their cultivable land. Due to large submergence of the proposed dam the farmers has stated that barrage is more viable option because the barrage will cause no displacement.

Bhoi fishing community, who thrive by fishing in the river is also worried to loss of livelihood. In a Datodi village alone, there are 30 such families. In the whole area, there are an estimated 25,000 members of the community. They do not possess any land so they will not be compensated.

The Committee formed against the project had declared the project area as red zone, which means no government official can enter that zone. The project was cleared by the state govt in 1997 at an estimated cost of Rs 1402.83 crore. The project was accorded Environmental and in principle Forest Clearance in May, 2007 and February 2009 respectively. Officially no construction has started and till December 31, 2008, only 82.16 hectares was acquired. As per the project proposal total irrigation potential of the project is 227271 ha, in the command area two districts of Maharashtra namely Yeotmal (Talukas: Ghatanji, Kelapur, Aarni, Pusad, Pusad, Vani, Digras, Mahagaon, Zarijamni, Yeotmal) and Chandrapur (Talukas: Rajura, Korpana) and Adilabad district of Andhra Pradesh falls. Proposed 35.63 m high dam is to have water storage capacity of 1045.37 mcm. 17477 ha of land is required for the project of which 1089.06 ha is forest land. 23480 persons of 4952 families in 46 villages would be affected (out of which 32 villages are fully affected) due to the project. (THE HINDU 300109, 040209, PIB 200209, <http://www.vidc.gov.in/ceamt/pro/LowerPenganga/LA.htm> 310109)

POWER OPTIONS

Exchange scheme of pump Union Power Minister Sushilkumar Shinde has unveiled a pilot project in his home district Solapur in Maharashtra. The project is to exchange existing pumps with energy-efficient monoset pumps free of cost. About 2 crore farmers in the district will be benefited with those 4,475 pump sets over the next five years. New set, manufactured by Kirloskar Brothers Ltd, costs Rs 35000 where as the cost of the older one is Rs 14,000. For this pilot, the Power Finance Corporation is giving a loan of Rs 62 crore while Rs 6 crore will come from the escrow account of the Bureau of Energy Efficiency under the Ministry of Power. According to the minister this new pump sets are very much power efficient and the entire cost of the project will be covered by savings in the power consumption. Bureau of Energy Efficiency spearheading the 70,000 crore mission. At present 200 billion units of electricity is provided to farmers at highly subsidized rates. The proposed project can annually save Rs 18,000 crore if per unit of electricity charged at Rs 3. To implement the project the immediate plan is to conduct an energy audit over the next 12-15 weeks. One lakh pumps a year is to be needed and old pumps to be scrapped as per the scheme. (THE INDIAN EXPRESS 040209)

Carbon trade market slowdown Carbon offsets traded under the UNFCCC's Kyoto Protocol and used by European industry to meet carbon caps, representing a \$32 billion market last year, have faced global recession. UN-approved offsets called Certified Emissions Reductions for December delivery were trading at \$15.71 in the week ended on January 16, 2009. (THE FINANCIAL EXPRESS 190109)

Proposal on Solar Cities The ministry of New and Renewable Energy has proposed to develop 60 cities as solar cities during the 11th Plan Period. Nagpur will become model solar city by 2012 under the scheme. Up to 10% of energy consumption of this city has been targeted to be met through Renewable energy and energy efficiency measures. 50% of the cost will be shared by the Ministry where Rs 50 lakh will be provided for Master Plan, solar city cell and promotional activities. Major solar energy system will be installed including street lights, garden lights, traffic lights, hoardings, solar water heaters etc. Energy Efficient Green Buildings also will be promoted on large scale. Financial support up to a maximum Rs 9.50 crore will be available to each of these Model Solar Cities. (PIB 180209)

IEA is biased against renewables The International Energy Agency, the international body that advises most major governments across the world on energy policy is obstructing a global switch to renewable power because of its ties to the oil, gas and nuclear sectors, Energy Watch, a group of parliamentarians and scientists said in a report released on January 9, 2009. The experts, from the Energy Watch group, say the IEA publishes

misleading data on renewables, and that it has consistently underestimated the amount of electricity generated by wind power in its advice to governments. They say the IEA shows "ignorance and contempt" towards wind energy, while promoting oil, coal and nuclear as "irreplaceable" technologies. The report concludes: "The IEA outlook remains attached to oil, gas, coal and nuclear, and renewables seem to have no chance to reverse this trend. This organisation... has been deploying misleading data on renewables for many years [and is still doing so]... One has to ask if the ignorance and contempt of IEA toward wind power and renewables in general is done within a structure of intent." (The Guardian 090109)

CFLs and Mercury According to a European Commission technical briefing dated December 2008 on *Phasing out incandescent bulbs in the EU*, "Indeed the decrease of mercury emissions resulting from energy savings (electricity generation in power plants has its own mercury emissions) outweighs the need for mercury in the lamps. It remains that CFL lamps should be disposed properly." This clearly shows that on net balance, use of CFLs does not *increase* mercury emissions in atmosphere, but decreases. The need to ensure safe disposal of CFLs remain valid all the same. (<http://ec.europa.eu>)

LAKES, LOCAL WATER BODIES

Rs 4000 crore for restoration of water bodies Cabinet has approved the scheme of repair, renovation and restoration of one lakh water bodies having a catchment of 9 lakh ha at an approximate cost of Rs 4000 crore. After the completion of the scheme about 4 lakh ha of additional irrigation potential is to be created. (PIB 230209)

Bhopal Lake Desiltation campaign The Chief Minister of Madhya Pradesh has announced the inauguration of a six months campaign to restore Upper Lake of Bhopal. 31 sq km Upper Lake has reduced in area to less than 9 sq km. Storage capacity of the lake has also reduced significantly. CM has invited to the city dwellers to donate their labour for desiltation. The lake provides water to the half of the Bhopal city. (THE INDIAN EXPRESS 050109)

K G Vyas (Bhopal) writes about this: There has been much hype about the de-siltation programme of the government; where right from chief minister to all (interested in being in news) are sweating to remove tons of deposited silt from the upper lake (Bada talab) in the capital. Is all this fanfare and hard work going to serve the purpose it has been initiated for? Or is it just a gimmick meant to suffice the political interest with forthcoming elections in mind? It would be unfair to doubt the spirit of people who have been squeezing their valuable time to contribute, but the million dollar question is if the success of endeavor has ever been technically studied and understood.

As far as I conceive, the problem with the upper lake is

1. Reduced run-off contribution from the catchment. This is due to change in the land use. In the past, the catchments terrain was mostly forest and the same was contributing more run-off as it had higher run-off co-efficient. Now the maximum catchment is cultivated and has low run-off co-efficient so the contribution has drastically reduced.

2. If the rainfall intensity is low during monsoon, the run-off is low and if it is more the result is more run-offs. This is a natural phenomenon and we can not do any thing to alter it in our favor.

3. Due to increased use of groundwater in the catchment, the water table has dipped greatly. This situation has enabled more infiltration into the sub-surface. This factor has also negatively influenced the run-off or reduced contribution to the upper lake. The reduced contribution of run-off due to above reasons is the main cause of not filling the upper lake. In the recent years (forget about the year when Bhopal was deluged with unprecedented rains) the upper lake has stayed parched with little water accumulating. The main cause for this dearth is the blockade of runaway water seeping into the lake. There has been misconception that paved area (constructed areas) are most damaging but ironically as this area absorbs least hence contributes maximum to the lake.

The next problem is water quality being spoiled by agricultural pollution. Deposition of silt in the upper lake is a serious problem. This has increased due to change in the land use and is increasing. If the intensity of rain is more, more silt will be produced and will further reduce the storage capacity of the lake.

In the prevailing situation, with catchment area treatment pragmatically unfeasible, the only solution in view is heavy rainfall. So the question which crops in our mind is if digging the lake would ensure more rainfall? No, it will not, and hence the possible solutions for meeting the water needs are: Less dependence on the upper lake for water supply; Changing the usage of catchment area (like introducing social forestry in the uncultivated areas); Developing decentralized water harvesting systems in each colony; Increasing groundwater recharge.

AGRICULTURE

SRI promotion through NFSM Kanti Lal Bhuria, Minister of State for Agriculture in a reply to a question in the Rajya Sabha has stated that the popularization and promotion of System of Rice Intensification through demonstrations at farmers' field is one of the important interventions of National Food Security Mission-Rice which is in operation since October, 2007 in 136 districts of 14 States (Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Tamil Nadu, Uttar Pradesh and West Bengal) in the country. (PIB 200209)

SOUTH ASIA

SAWAS e-journal The first edition of SAWAS e-journal, a free, open accessed peer-reviewed South Asian online journal has been recently released. It will be published twice a year henceforth at www.sawasjournal.org. It aspires to broaden the South Asian water resources knowledge base by critically analyzing the water issues. SAWAS aims to share knowledge of successful resolutions of water related problems as well as constructive analyses of deadlocks and failures. The editorship is organized on a regional/ international basis with Chief Editor, Prof Vishwa Ballabh and Country Editors from Bangladesh, Bhutan, India, Pakistan, Nepal and Sri Lanka. SAWAS welcomes contributions that discuss any dimension of water resources development, technology, management and use, and their relation with society and the environment. Issue 1 brings forth interesting insights on water rights, water valuation, the effects of urbanization and peri-urbanisation, river sand mining in Sri Lanka, and hydropower development in Nepal. The issue also features an enlightening perspective, which addresses the framework of water policy through cultural politics. (Journal announcement)

WORLD DAMS

Ethiopian dam faces opposition Deep in the gorge country that falls off the Ethiopian plateau, workers are blasting their way into the mountainside for the foundations of the vast wall that will, create the second largest hydropower dam in sub-Saharan Africa. Workers are finishing the concrete lining to the last of three 1,000 m long tunnels that have already begun diverting the Omo River waters around the main construction site. The engineers are now about a third of the way through the Gilgel Gibe III 1800 MW hydroelectricity project, to be completed by 2012. The dam will soar 240 m high - the tallest of its type anywhere in the world; holding back a reservoir 150 km long. It will more than double the country's current generating capacity according to Prime Minister Meles Zenawi. "It also enables us to store water and regulate the flooding [downstream in the Omo River]." He rejects fears that some 500,000 people could see their livelihoods destroyed by the dam. The dam will produce far more electricity than the country is capable of consuming. The vast bulk of it has been earmarked for export to Sudan and Kenya.

Usually, a govt will first conduct a feasibility study followed by an environmental and social impact assessment to decide whether it really is wise to go

ahead with the plan. Then, it will raise the finance, call for competitive tenders and award the construction contract. Instead, the government first negotiated the contract directly with Italian civil engineering giant Salini Costruttori. It then went looking for the finance - a procedure that has left the govt with a massive hole in its budget. The two financial institutions that the govt had hoped would back the project - the World Bank & the European Investment Bank - have both refused to get involved because the govt broke international & domestic rules by dealing directly with Salini.

The corporation also short-circuited the environmental and social impact assessment process. Instead the study - which gave the project a clean bill - was published two years after construction began. One of the project's staunchest critics, Kenyan ecologist Richard Leakey, suspects the study was produced with one aim in mind: "The scientists that I've shown [the EIA] to suggest it is fatally flawed in terms of its logic, thoroughness & conclusions."

Mr Leakey's criticism echoes that of the "African Resources Working Group". The group asserts: "The document rests on a series of faulty premises and it is further compromised by pervasive omissions, distortions and obfuscation". Rather than being beneficial to the river valley as the govt insists, the dam will "produce a broad range of negative effects, some of which would be catastrophic" to both the environment and the indigenous communities living downstream. The science is still very much in dispute - a factor that Mr Leakey believes is reason enough to invoke the precautionary principle and stop the project before it is too late. For if the Ethiopian govt is wrong, those communities living along the lower Omo River Valley all the way down into neighbouring Kenya will pay a heavy price. (BBC 260309)

Indonesia dam burst kills over 50 A 32 feet high dam has burst south-west of the Jakarta, killing dozens of people. Witnesses said a "horrifying" flash flood engulfed hundreds of homes in Cirendeuh in the Tangerang district. Officials say about 50 bodies have been found but the death toll is expected to rise as many more are missing. An official said the Situ Gintung lake behind the dam became overloaded after heavy rains. The decades-old dam had been holding back a lake of about 2 million cubic meters of water. Local resident Seto Mulyadi said water crashed into his house, breaking through all the windows and doors. Another resident said it had been "like being in a tsunami". (BBC 270309)

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Himanshu Thakkar, Publisher

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1. *Trapped! Between the Devil and Deep Waters: The story of Bihar's Kosi River* by Dinesh Kumar Mishra, SANDRP & PSI, 2008 Rs 595/-
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5. *THE GREATER COMMON GOOD* by Arundhati Roy, Published by India Book Distributors, 1999, pp 76, Rs 80/-
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2. *Ken-Betwa Nadi Jod : Pyasi Ken Ka Paani Betwa Mein Kyon?*, SANDRP, 2004, pp 46, Rs 20/-.
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"The chapter on water sector and the care to be taken for the climate change being observed has been brought up very nicely in the report."

Resident Engineer, Karnataka Power Corporation, New Delhi

Adding that the (NAPCC) action plan was formulated in the most non-transparent process, the (SANDRP) critique says it will help neither the poor nor the climate. It lacked urgency, democracy and equity perspective.

The Hindu, March 2, 2009

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