SOUTH ASIA NETWORK ON DAMS, RIVERS AND PEOPLE
Let Rivers Flow
No Destructive Project
Harvest Rain
S A N D R P

Dams, Rivers & People

VOL 7 ISSUE 11-12 DEC 2009 - JAN 2010 Rs 15/-

Lead Piece

India's stand at Copenhagen

Pillars built on Sand?

India's Environment Minister Jairam Ramesh, the chief spokesman of the Government of India on climate change has been fond of saying that India's stand at the 15th Conference of Parties to the UNFCCC (United Nations Framework Convention on Climate Change) stands on four pillars: Mitigation, Adaptation, Technology and Finances.

When questioned that most CDM projects benefit neither the communities, nor the environment (local and global), Ramesh's answer gave himself out, "Before people, the country should benefit. I don't draw distinction between country and people". The spirit was dead there. People do not matter, country does.

Mitigation is to minimize the global emissions of green house gases to a level to ensure that the temperature does not rise above 1.5-2° C. However, even as we approach that level, there will be serious impacts on many sectors & societies and *Adaptation* is to help people cope with those changes. *Technology & Finances* are tools to achieve those objectives & are supposed to be provided or financed by the developed countries. It sounds good so far.

However, the pillars also need sound foundation. The foundation is provided by the values like equity, democracy and justice, among others. Equity at national level is enshrined in the Kyoto Protocol norm of Common but differentiated responsibility. The democracy is also supposed to be there since all countries have one vote in the convention and the protocol, unlike the case of the World Bank where rich countries like the United States have much greater vote than poorer countries.

Till the middle of 2009, internationally, India was consistent in adhering to the Kyoto Protocol principles, in letter, though somewhat lacking in spirit. It was also convenient, since Indian government saw the benefits accruing from the Clean Development Mechanism under the Kyoto Protocol as *free gifts*.

As Jairam Ramesh told *Rediff* in interview earlier in Dec 2009, before the Copenhagen summit, "We have approved 1,400 projects under CDM. If all of them are implemented then by 2012 we will get $6 billion worth of FDI (foreign direct investment)." He did not say how many CDM proposals his ministry has rejected, since they have rejected none. When questioned that most CDM projects benefit neither the communities, nor the environment (local and global), Ramesh's answer gave himself out, "Before people, the country should benefit. I don't draw distinction between country and people". The spirit was dead there. People do not matter, country does.

Continued on p 2

INDEX

Contact Himanshu Thakkar, Swarup Bhattacharyya, Ganesh Gaud, *Dams, Rivers and People*, C/o 86-D, AD Block, Shalimar Bagh, Delhi 110 088. India. Ph: 91-11-2748 4654/5 *cwaterp@vsnl.com* Web: www.sandrp.in

Continued from p 1

And remember, CDM is the corner stone of the Kyoto Protocol, seeking to enable the developed countries achieve their emission reduction targets cheaply through the market mechanism of CDM. Numerous analysis of the specific, sectoral, country level and global experience with CDM projects have shown that this faith in market mechanism to achieve emission reduction has completely failed. It may be recalled that Nicholas Stern, a former chief economist of the World Bank and author of the famous *Stern Review* admitted that climate change represents the biggest market failure in the world. How the architects of Kyoto Protocol sought to use market to address its own *biggest* failure is another story.

It may be recalled that Nicholas Stern, a former chief economist of the World Bank and author of the famous *Stern Review* admitted that climate change represents the biggest market failure in the world. How the architects of Kyoto Protocol sought to use market in CDM mechanism to address its own *biggest* failure is another story.

But in that failure, Jairam saw a Jewel. That showed the rot in India's climate stand. But the rot was clearly much deeper.

Incidentally, the Rediff Interview of Ramesh has other real jewels. When asked about India's stand that our per capita consumption is low is tantamount to hiding behind the poor and that India's rich consume at rates not too far from the average of some of the developed countries, he said: "Answer to domestic inequality is not to ask people to consume less". That showed that Ramesh has *not* understood the basic science of global warming. Excessive, iniquitous and non sustainable consumption is at the root of the climate crisis. How can indiscriminate increase in that consumption, help address the problem? That too when inequity is sought to be perpetuated.

How many of the about 80% of India's population that spends less than USD 2 per day, who have contributed least in climate change, who will suffer most due to impacts of climate change and who have no place in either decision making process or content of India's *National Action Plan on Climate Change*, and who will further suffer the impacts of that plan, is part of *this India* is not clear, but to use Ramesh's phrase, *Theek hai,* they had bigger issues to handle at Copenhagen.

So, as Jairam Ramesh declared in *The Times of India* (Dec 5, 2009) interview, equity is history, "But the fact of the matter is it is a historical accident that our per capita emissions are so low." When asked by Rediff why the developed countries not be asked to compensate for the climate change impacts in India (e.g. flood disaster and monsoon failure, a big impact on livelihoods of millions of rainfed farmers in India in 2009), India's environment minister was hopeless, "frankly we are not going to anywhere". The trouble is that conclusion is arrived at even without trying.

When asked why India is abandoning its long stand on equity, per capita emissions and historical responsibility of developed country, Ramesh was giving away too much to *Rediff*, "For us, India's interest is paramount. Nothing else matters." In the *TOI* interview he said, "There are too many other things to be gained at a larger scale", giving a clear hint at some *quid pro quo*.

Ramesh did not specify anywhere, what these *many other things at a larger scale* that India seeks to gain. I guess there are limits to transparency of even this advocate of transparent governance. But we are supposed to assume that whatever these *many other things at a larger scale* that *India* of Ramesh and his bosses aim to gain are in India's *paramount interest*.

So it was not particularly surprising that when Ramesh clarified India's stand in Parliament on December 4, 2009, he counted only two non-negotiables: No binding emission cuts and no peaking year for India. (In Parliament after the Copenhagen summit he accepted that India's stand diluted even these non-negotiables.) The earlier non-negotiables like the common but differentiated responsibility and the historical responsibility of the developed world were missing, even though these had figured earlier in statements of everyone, right upto the Prime Minister.

By the way, as Surya P Sethi, one of India's key climate negotiators till recently noted in his columns in *TOI*, India's changing stands is almost exactly in line with those desired by the Unites States. But that must be just a coincident, isn't it?

As government of India is now in the process of deciding whether to sign the Copenhagen Accord or not, it may help them to remember that their Pillars, however, strong, cannot stand without the firm foundation of values of equity, justice and democracy. It is still not too late for them to rediscover that truth. People of India may be better off not signing that flawed Accord and it may be better to insist on a strengthened and credible Kyoto protocol architecture. Let us see what decision the government takes and through what process.

Himanshu Thakkar

NHPC's questionable Awards

NHPC Ltd (formerly National Hydroelectric Power Ltd) has received various awards in recent years. Following our earlier investigation on TERI's dubious award to NHPC that also involved conflict of interest since NHPC had provided substantial funding to TERI (see details below), we decided to find out if such conflict of interest also affects other awards that NHPC has received in recent years. We were shocked to learn that for practically every award received by NHPC in recent years, NHPC had provided funds to the awarding organization. The funding was given under various heads like sponsoring programmes, advertisements, consultancies and others. Since 2005-06 TERI has received Rs 105,76,948 from NHPC under different heads. Similarly Amity International Business School, Mahavir International, Indian Institution of Industrial Engineering, Greentech Foundation, Construction Industry Development Council, Hero Group and World Environment Foundation have received substantial funds from NHPC. The information we thus collected under the Right to Information Act is tabulated below.

Name of the Award	Year	By whom	Reasons behind Award	Date of Funding	Amount	Purpose for providing Funds
TERI Corporate Environmental Award 2009	2009	The Energy and Resources Institute (TERI)	In-house case study titled "Post-Construction Environmental & Social Impact Assessment Study of Uri Power Station (480 MW) Jammu & Kashmir" which was evaluated by TERI research professionals for this award.	2005-06	23,08,723	Study "Valuation of the Socio-Economic & Environmental Costs-Benefits of Hydro Projects: Case Study of Two Selected Projects"
				2006-07	14,07,100	
				2007-08	9,38,925	
				2005-06	1,67,200	Training Programme
				2006-07	30,000	Sustainable Development Summit
				2006-07	56,75,000	Faculty chair at the TERI University
				2007-08	50,000	CEO forum 2008
Amity HR Excellence Award for Best Socio-Economic Responsive Organization	2009	Amity International Business School, Noida.	This award in due recognition of its Best HR practices which had been analyzed by AMITY through its annual comprehensive research on HR practices.	24.07.06	75,000	Advertisements
				21.08.07	75,000	
				27.08.09	75,000	
				24.05.06	7,500	Sponsored programmes
				31.01.07	4,000	
				28.08.08	1,00,000	
Mahavir International Award	2009	Mahavir International , New Delhi	Achievements in hydro power development and efforts in supporting various activities towards social service and human welfare.	04.02.07	50,000	Sponsorship
				02.05.07	20,000	Advertisements
				04.11.08	20,000	
				10.02.08	25,000	Sponsored Programmes
				17.01.09	1,00,000	
Performance Excellence Award	2009	Indian Institution of Industrial Engineering	Excellence in every sphere of Hydro Power Projects for the year 2007-08.	21.05.09	75,000	Advertisement
				16.05.08	70,000	Sponsored Programmes
				18.05.07	90,000	
				22.05.09	40,000	
				29.09.06	10,000	
8th Annual Greentech Safety Award	2009	Greentech Foundation New Delhi	Tanakpur Power Station: outstanding achievements in the field of safety	04.11.04	24,000	Sponsored Programmes
				21.06.04	1,00,000	
				29.08.07	63,000	
Vishwakarma Award	2009	Construction Industry Development Council	Best professionally managed company	26.02.04	11,000	Sponsored Programmes
				19.05.05	19,500	
				21.12.06	13,000	
				23.05.07	5,00,000	
				27.03.08	8,500	
				05.11.08	24,000	
BML Munjal Award	2007-08	Hero Group	Innovative Learning & Development Practices	06.01.06	38,000	Sponsored Programmes
				07.02.08	2,00,000	
Golden Peacock Award - 2007	2007-08	World Environment Foundation	To Region-II, Banikhet for Environment Management	09.04.07	20,000	Advertisement

(source: http://www.nhpcindia.com and information gathered through RTI)

It is not necessary that every one of these awards were given to NHPC *because* NHPC provided financial resources to the awarding organization. However, considering the pathetic performance of NHPC on social and environmental issues, as also project implementation, project operation, safety and technical appraisal point of view, a doubt arises how did so many organizations decided to give award to NHPC. When this underperformance is then linked with the funding provided by NHPC to the awarding organizations just around the time of the award, the issue of conflict of interest is inescapable. What should be code of ethics in this regard for the awarding and awardee organizations and individuals? There are no easy answers to such questions. However, under the current circumstances, there is little credibility of these awards that NHPC has received. Similarly, the awarding organizations and the awards mentioned above also lose their credibility. It would be better if these awards are withdrawn. Better still, NHPC should return such awards back to the awarding organization. That may help restore a bit of the discredit.

Swarup Bhattacharya and Himanshu Thakkar

One of the Architects of the Adivasis' Misery?

Gladson Dungdung

India's first Prime Minister, Jawaharlal Nehru, who is also known as the architect of modern India, once said, "Dams are the temples of modern India." According to him, the big dams would address the issues of hunger and poverty of India. Unfortunately, the big dams only created pains, sufferings and sorrows to the owners (mostly the Adivasis; the indigenous people of India) of the lands, which submerged into the temples of modern India. Similarly, the big industries like Heavy Engineering Corporation, Bokaro Steel Limited, steel companies, coal mining and other mining industries created only misery for the Adivasis. Consequently, the Adivasis became landless, daily wage labourers and servants of the bigwigs after losing their land, forest, water and other livelihood resources.

India's first Prime Minister, Jawaharlal Nehru, who is also known as the architect of modern India, once said, "Dams are the temples of modern India." According to him, the big dams would address the issues of hunger and poverty of India. Unfortunately, the big dams only created pains, sufferings and sorrows to the owners (mostly the Adivasis; the indigenous people of India) of the lands, which submerged into the temples of modern India.

Ironically, the architect of modern India did not create space for the Adivasis in the modern country. He only inspired them to add more sufferings in their lives for the sake of national interest, saying, "If you are to suffer, you must suffer in the interest of the country." Perhaps, the Adivasis never know what it means by the national interest because they are the people who have always suffered for the national interest but they never enjoyed the fruits of the national interest, they were also not given place in the Indian history and not even remembered in the holy land of martyrs in the national capital. Needless to say, the architect of modern India did not even bother to count the people who have suffered in the interest of the country, which counts nearly 50 million, who have sacrificed everything for the national interest. Among them 40 percent are Adivasis, 20 percent Dalits and rest 40 percent mostly the people of other backward classes. Indeed, the elites almost never suffer for the national interest as they are born only to enjoy their lives and of course the country protects them in every possible manner.

The most important question is, how can you ask to the Adivasis to go with their pace and understanding if you snatch their livelihood resources in the name of the national interest and also do not provide them any support? The fact is the Adivasis' indigenous method of development was never counted by people of the mainstream of the society and the corporate development model was imposed on them instead.

However, when the issues of the Adivasis are discussed, Nehru is always remembered for his 'Panchsheel for tribal development', which is also called the five pillars of the tribal development. But does his panchsheel work for the Adivasis? No, it doesn't. In fact, Nehru himself went against the principles of Panchsheel and so did the Congress party and other Indian rulers. The history suggests that some policies were made only to silence the Adivasis. According to Vincent Ekka of the Indian Social Institute, whenever the Adivasis protest against unjust policies of the state, they are given some rights on paper to keep them silent like the barking dogs are treated. Clearly, Nehru's Panchsheel may look good in principle but is the worst in practice as it seems to have been made for keeping the barking dogs silent.

1. Non-imposition: The first pillar of Panchsheel says that the Adivasis should be allowed to progress according to their own pace and understanding of the situation. In principle, it seems to be very good but practically, the Indian government went against of it. The most important question is, how can you ask to the Adivasis to go with their pace and understanding if you snatch their livelihood resources in the name of the national interest and also do not provide them any support? The fact is the Adivasis' indigenous method of development was never counted by people of the mainstream of the society and the corporate development model was imposed on them instead. In the last 6 decades, many policies were made, which displaced, dispossessed and deprived the Adivasis from their livelihood resources but rehabilitation was never a concern for the Indian government at all but of course, they were much concerned for the corporate houses.

2. Respect of tribal customs: The second pillar of Panchsheel also did not work because the Adivasi tradition, culture and customs were never accepted by

the mainstream society. Only the folk songs and dances of the Adivasis were romanticized to some extent but the tradition, culture and ethos, which are based on community living, equality for all and need based economy were always neglected, depicted as the worst and destroyed in many ways. Similarly, the religion of Adivasis was not recognized by the Indian constitution though many other religions that emerged much later in India got recognition in the constitution. As a result, thousands of the Adivasis accepted other religions, religious enmity was created among them and thousands of their sacred groves were destroyed in the name of 'development'.

3. Development of tribal youth: The third pillar speaks about the leadership of the Adivasis. But the fact of the matter is the Adivasi leadership is not acceptable to the so-called people of the mainstream of the Indian society. The history proves that the Adivasis legend Baba Tilka Manjhi was the first man to fight against the Britishers in 1780 and hanged subsequently but he was not recognized by historians of the mainstream. Similarly, the other Adivasis leaders - Sidho-Kanhu, Birsa Munda, Fulo-Jhano, Nilambar-Pitambar and many others fought against the British government but they were not given space in the Indian history that they deserved.

The tradition, culture and ethos, which are based on community living, equality for all and need based economy were always neglected, depicted as the worst and destroyed in many ways. Similarly, the religion of Adivasis was not recognized by the Indian constitution.

4. Simplicity of Administration: The fourth Pillar of Panchsheel seems to be a very good idea as the Adivasis' strong traditional self governance (TSG) system exists even today, which the Britishers were not able to destroy and finally they accepted it and made laws for its protection and promotion. Ironically, the rulers of modern India including Nehru did not accept the Adivasis' TSG. Instead, he preferred the voluntary agencies for carrying out the development works in the Adivasi regions. The Adivasis' traditional self governance was not accepted precisely because it was the biggest threat to the authorities of Indian rulers. Though the Indian constitution has some provisions for the Adivasi regions as in the 5th and 6th schedules but there was no attempt made for strengthening of the traditional self governance of the Adivasis. In fact, the Indian rulers wanted the Adivasi regions under their control therefore they imposed numbers of legislations – forest Acts, Laws in the name of the protection of wild life, Land related laws, mining Acts and civil as well as criminal laws. Finally, they captured the natural resources of these regions and exploited it as much as they could, as they continue to do even today.

5. Emphasis on human growth: The fifth pillar of Panchsheel emphasizes on human growth in term of the living standards, which is appreciable. But as far as the Adivasis are concerned, they are not accepted as human being in India even today. They are always portrayed as uncivilized, sub-human forest-dwellers and mindless people. The Adivasis are always racially discriminated, exploited and dispossessed. The question is if you take away the livelihood resources of Adivasis without providing them alternatives, discriminated them and treat like sub-human then how can you expect their human growth? The Adivasis regions lack education, health facilities, drinking water, sanitation and shelter even today due to the deliberate inhuman treatment of the Indian rulers for the Adivasis.

Undoubtedly, Nehru is the architect of modern India, but it is also the fact that his modern temples of India, industrialization process and corporate model of development are the main reasons of the Adivasis' pains, sufferings and sorrows. Indeed, if he is the architect of this modern India, by implication, he is also architect of the Adivasis' misery. Today, millions of the Adivasis are struggling for their survival. Later on, the right wing and the left wing also added salt on the wounds. Therefore, now we (the Adivasis) must realize that no one can fight for us but we have to fight for ourselves. If we protect our natural resources today, we would be ensuring a better future for our children tomorrow. Before we go for another movement against displacement, we must pray to our God for not to forgive Nehru because His temples of modern India dispossessed us, his temples of modern India exploited us and his temples of modern India created graves for us.

Undoubtedly, Nehru is the architect of modern India, but it is also the fact that his modern temples of India, industrialization process and corporate model of development are the main reasons of the Adivasis' pains, sufferings and sorrows. Indeed, if he is the architect of this modern India, by implication, he is also architect of the Adivasis' misery.

(Gladson Dungdung (gladsonhractivist@gmail.com) is a Human Rights Activist and Writer from Jharkhand, an edited version of this piece was published in Counter Currents on January 6, 2009)

CLIMATE CHANGE & WATER SECTOR

National Water Mission awaits clearance For the better part of 2009, the Ministry of Water Resources appeared to be drifting. In the light of the focus on climate change, it had to perforce change tack from its foremost agenda of constructing mega projects to evolving strategies for water conservation, rainwater harvesting and equitable distribution of water. However, no firmed-up policies were announced because the Ministry's Mission Document on Climate Change awaits clearance from the Prime Minister since July. The melting glaciers, perceived rise in sea levels and changing rainfall patterns will make it incumbent upon governments to evolve strategies for the water sector. Besides over-exploitation of groundwater, the seawater ingress, with rising sea levels, is projected to impact groundwater quality. These are issues that demand immediate attention. However, the ministry has prepared the National Water Mission document in most non transparent, non participatory way, without any attempt to learn lessons from past experiences in water resources development in India. Moreover, the Mission document is paying only lip service to some desirable aspects, while pushing more mega projects at the same time in the name of combating climate change.

The Ministry's Mission Document on Climate Change awaits clearance from the Prime Minister since July. The melting glaciers, perceived rise in sea levels and changing rainfall patterns will make it incumbent upon governments to evolve strategies for the water sector.

The Ministry proposes to create an irrigation potential of 10.5 lakh hectares in 2009-10 at a projected cost of Rs 12 285 crore under the Accelerated Irrigation Benefit Programme. A budgetary allocation of Rs 8000 crore, including Rs 1800 crore for the national projects, has been made. No figures, however, were available on how much potential was created in 2009. Only Rs 750 crore was released for completion of national projects with Central assistance of 90 per cent. The Ministry did not project in its official press release any major advancement during the year. During 2009, the Supreme Court held that right to water was part of the right to life guaranteed under Article 21.

In one of the worst climate related incidents of its kind, two villages (Lah and Ru Miyadola) with total of 43 people were buried alive in the night of August 7, 2009 due to landslide induced by cloudburst in Nachni area in Pithoragarh district in Uttarakhand. (The Hindu, *Jansatta* 010110, SANDRP critique)

Shrinking Himalayan Glaciers Michele Koppes, a glaciologist from the University of British Columbia in Vancouver, Canada has said in an article (Mint, 071209) "We know far less about the Himalayan ice masses than any other ice mass on earth, despite their influence on the three billion-plus people who live downstream from them. The true measure of glacier health is not the position of the snout but whether the glacier is losing mass through thinning—and it is its mass that determines what the storage capacity of fresh water may be and how it will contribute to downstream water supply. The variation in glacier size, shape and debris cover across the mountain range also dictates that no one glacier will truly be representative of what is happening across the whole region. Instead, what is desperately needed is a concerted effort to measure change at a number of glaciers around the region, across political boundaries, where the data collected can be standardized and shared so that a full picture of the fate of the Himalayan glaciers can be understood by all the countries affected." This is exactly, what we said in the article in *Dams, Rivers & People* (Oct-Nov '09 issue) in critique of MEF's report on Himalayan glaciers. The MEEF paper is silent on this most crucial issue of how the water content in the glaciers is changing.

Koppes goes on to say, "it is critical that the country builds its capacity to forecast what will happen to its water resources in the coming decades. To do this requires a robust focus on both long-term field and satellite monitoring of the Himalayan glaciers and mountain weather." We hope the Ministry is listening.

Kolahai glacier melting at 80 sq m per year According to Dr Shakeel Ramshoo, convener of the Climate Change Research working group of Kashmir University, the Kolahai glacier has been melting at the rate of about 80 sq m per year over the last three decades since 1976 and has shrunk from 13.87 sq km to 11.24 sq km. Situated at an altitude of 3600 m, the Kolahai is the source of water for Lidder and Sindh, two major fresh water streams in the Jhelum basin. Contradicting the stand of Union Environment Ministry (see *Dams, Rivers & People*, Oct-Nov 2009 issue), Dr Ramshoo says that the melting is due to the climate change, "The increase in the Kashmir temperature has been1 degree Centigrade, which is much more than the 0.72 degrees rise in global temperature over the past century. The result is less snowfall and less formation of glaciers." (Indian Express 141209)

Sikkim glaciers melting In the news item 'Before your very ice: glacial evidence of global warming', 'The National' based in UAE reported that the Rathong glacier in West Sikkim reveals further signs of deterioration. This is contrary to the claims of Sikkim Glacier Commission that there has been no significant decrease in glaciers in Sikkim due to global warming.

The Nation's foreign correspondent Hannah Gardner who visited the Rathong glacier recently along with the Energy and Resources Institute glaciologist Shresth

Tayal reported that evidence collected at Rathong glacier indicates that climate change is causing the Himalayan glaciers to shrink. Tayal's claims are backed up by a wealth of evidence, old maps and photographs, and occasional, but un-coordinated, scientific studies, *The National* reported.

Surprisingly, given their importance, there is still very little scientific proof about how climate change is affecting the 15,000-plus glaciers that dot the 2,414 km line of the Himalayas, the report states.

This has allowed some people – including, as of last month, India's Environment Ministry – to deny that the glaciers are receding abnormally fast, thus undermining calls for India and China to take stronger action on emissions. Supplementing the MoEF findings, the State Glacier Commission member Milap Chand Sharma had stated that there has been no significant decrease in glaciers in Sikkim due to global warming and climate change. There will be no decrease in the accumulation of snow/ice reserves in the glaciers of Sikkim in the near future due to precipitation in Sikkim throughout the year, he had said.

The MoEF and Sikkim Glacier Commission's claims and the TERI findings on the health of glaciers of Sikkim has now become a debatable matter and full picture will emerge only after the Commission tabled its full report to the State Government.

TERI has launched a project to gather the systematic data needed to prove that the glaciers are in danger. Under the plan, the Institute is installing hi-technology monitors, including a weather station, a black carbon meter and a state-of-the-art global positioning system, on three glaciers spaced out along the breadth of the Indian Himalayas. Their hope is that within two years, the sensors will have gathered enough information to establish a clear link between human activity and glacial retreat, it is reported.

Research by Dr Ramesh P Singh of Chapman University, California and others have shown that dust storms from the Gangetic plains, increased number of vehicles and emissions from the thermal power projects are all significantly contributing to glacier melt. (Indian Express 141209, Assam Tribune 211209, Mail Today 020110)

CC threatens apple production in HP: ICAR Factors such as decline in snowfall and fall in minimum temperature in the winter months over the last few years are posing serious threats to apple production in Himachal Pradesh. It, in turn, has started to threaten the Rs 1,500-crore industry in the state. A study conducted by agricultural scientists in the key apple growing regions of Himachal Pradesh says that there has been remarkable increase in the area under off-season vegetable cultivation in place of apple cultivation. "Decline in area under apple and other fruits were comparatively higher in marginal and small farms," a paper titled 'Weather Changes-related Shift of Apple Belt in Himachal Pradesh' prepared by researchers from Himachal Pradesh Agricultural University, Palampur, has noted. The study was carried out by the Indian Council of Agricultural Research's network project on 'impact, adaptation and vulnerability of Indian agriculture to climate change'.

The study said that productivity of apple has recorded a decrease of about 2-3% over the past years and the maximum decline of about 4% was witnessed in marginal farms. It covered key apple growing districts of Kullu, Shimla, Lahual and Spiti representing different elevations with large areas under apple cultivation.

"In the Lahaul valley, more than 80% of farmers surveyed were of the opinion that reducing snowfall in winter, delay in start of winter, threat of floods in the valley in the last 4-5 years are also the signs of changing climate in the valley," the paper said. An analysis of the last two decades database showed that minimum temperature is decreasing per year during November to April whereas maximum temperature has been showing an increasing trend from November to April. The analysis of rainfall for past 41 years recorded at Kullu district showed 77 mm increase during the period of November to May. Increase in precipitation and decreased snowfall during winter consequently reflected in the low chilling hours in the region. Trend analysis indicated that snowfall has decreased by 82.7 mm per annum in the entire region.

Apple is a cash crop in Himachal Pradesh and accounts for 46% of the total area under fruit crops and 76% of the total fruit production. The crop is grown in most of the districts of the state. (Financial Express 281209)

UNEP report for ecosystem based approach The UNEP has released a report *An Economics of Ecosystems & Biodiversity* which says, "Investing $ 45 billion in protected areas could secure vital nature based services worth some $ 5 trillion a year, including the sequestration of carbon, the protection and enhancement of water resources and protection against flooding." There are also employment incentives in this approach. Without reading it in support of the controversial REDD (Reduced Emissions from Deforestation and Degradation, the controversial UNFCCC proposal) under climate change, there is a lot of value in these words. (Financial Express 141109)

CO_2 emission rate tripled this decade According to a new study published in *Nature Geoscience*, the CO_2 emission during 2000 to 2008 increases at a rate of 3.4% per year compared to one per cent during the previous decade. 15% of the emission was from deforestation. Evidence suggests that the land and oceans may be becoming less effective at removing CO_2 from the atmosphere, which could accelerate future climate change. (Tribune 301109)

Copenhagen cop out

Praful Bidwai

The Copenhagen Accord is a travesty of what the world needs to avert climate change. Instead of an ambitious, effective, equitable and binding treaty with stringent emissions-cut targets for developed nations, we have a hollow Accord without legal status. The North has offered a 16 % emissions-cut when 40-45 % is needed. Years of talks have been set at nought by a dirty collusive deal between the United States and Basic (Brazil, South Africa, India and China), extended to cover only 26 of the 193 countries represented in Copenhagen.

The Copenhagen Accord is a travesty of what the world needs to avert climate change. Instead of an ambitious, effective, equitable and binding treaty with stringent emissions-cut targets for developed nations, we have a hollow Accord without legal status. The North has offered a 16 % emissions-cut when 40-45 % is needed. Years of talks have been set at nought by a dirty collusive deal between the United States and Basic (Brazil, South Africa, India and China).

The Accord mocks the efforts of a majority of nations to limit global warming to 1.5°C above pre-industrial levels. Many scientists now believe atmospheric greenhouse concentrations must be limited to 350 parts per million.

Under the Accord, concentrations will double to 600 ppm-plus, with warming rising to 4°C. This spells the near-extinction of 40-odd island states and consigns two billion people to growing hunger, dispossession and displacement through cyclones, floods and droughts, aggravated by glacier melting, deforestation and desertification. The worst victims will be vulnerable people, including half-a-billion-plus Indians.

The Accord couldn't have materialised without the collusion of BASIC, led by China, with the US-led North. China cynically refused quantitative targets even for the North. Disgracefully, India went along. China and India want to expand their carbon space to maintain rapid emissions-intensive GDP growth in the name of defending their poor. But India's poor will suffer grievously, next only to Africans, as the Accord accelerates climate change.

India's climate policy is made in isolation from the people by a bureaucratic cabal, excluding independent experts and representatives of civil society, leave alone those most affected by climate change. The 26-member PM's Council on Climate Change has only one civil society member.

This reveals a gaping divide between India's underprivileged and elite. The poor have a huge stake in an equitable, effective global climate regime. The elite wants a weak, ineffective, non-binding regime to feed its appetite for luxury goods, which is driving up India's emissions at twice the global rate. As I argue in my just-released book *An India That Can Say Yes: A Climate-Responsible Development Agenda for Copenhagen and Beyond*, a powerful strand among Indian policy-makers wants an ineffective deal which allows India's elite to raise its emissions. Its influence is reflected in India's climate policy, its denial of glacier-melting, and the National Climate Action Plan, which defines its priority not as combating climate change, but as maintaining high GDP growth. This follows the discredited trickle-down hypothesis. But a quarter-century of rapid growth hasn't reduced poverty or created food and water security. Forty years after the Rural Electrification Corp's existence, half our rural homes remain in darkness.

India's climate policy is made in isolation from the people by a bureaucratic cabal, excluding independent experts and representatives of civil society, leave alone those most affected by climate change. So unbalanced is the 26-member PM's Council on Climate Change that it has only one civil society member.

Yet, most opinion-shapers treat climate change not as a survival or development/equity issue, but as a diplomatic one, with sovereignty separated from the people. India's complicity in the Accord is a far greater global failure than the crossing of one avowed Red Line-not subjecting voluntary domestic actions to international verification/ review-via "consultation and analysis". Our people need a strong, equitable climate deal. Their government has failed them. It must be brought to heel and made to demand that the United Nations Framework Convention on Climate Change process be resumed with a clear rich-poor differentiation of responsibility. This won't happen unless people's movements seize the climate agenda. (Praful Bidwai in The Hindustan Times 311209)

The Copenhagen Accord or discord? Content wise there is on the same time a lot to be said and not much to say. SSNC call the COP 15 meeting in Copenhagen a collapse and a failure! The Copenhagen Accord is a not a deal, especially considering the needs: both scientifically and the need for climate justice in the world. Environmental and social movements all around the world demanded a "FAB deal", but none of the three key demands were met. The Copenhagen accord is not a Fair deal, it is not a legally Binding deal and it is not at all an Ambitious deal. (The Peregrine, Newsletter from the Swedish Society for Nature Conservation Dec '09)

GROUNDWATER

Chronic toxicity in Carbide soil, groundwater

The Centre for Science and Environment has released a new study on soil and water contamination in and around the Union Carbide factory premises in Bhopal. The focus of the CSE report differs from those conducted by govt agencies as it tries to prove "chronic toxicity as opposed to the acute toxicity". "Chronic toxicity implies that continuous exposure, even in small amounts, can lead to poisoning of our bodies," said CSE director Sunita Narain releasing the report. "So the claim that the factory is not dangerous because people can go inside, touch the waste and still be alive is misleading," she added.

While the Union Govt has not had any problems acknowledging the presence of hazardous waste inside the factory premises, it has consistently denied contamination of the groundwater. However, the CSE report confirms excessive groundwater contamination with all 11 groundwater samples collected from colonies around the UCIL factory found to be contaminated with chlorinated benzene compounds and organo-chlorine pesticides. The health impacts of the slow poisoning caused by these chemicals are devastating. Chlorinated benzene compounds can affect and damage liver and blood cells, while organo-chlorine pesticides can lead to cancers and bone defects.

"What is worrying is high-level contamination in groundwater collected from areas 3 km downhill from the factory," said CSE associate director Chandra Bhushan. "The Govt clearly knows this. The samples that we studied were collected along with a Central Pollution Control Board team and they have studied the same samples. But I don't know why they have not finished the testing yet," he said. (The Hindu 031209)

Report on Groundwater Assessment Methods A group was constituted by Ministry of Water Resources (Govt of India) to suggest new & alternate methods of ground water resource assessment for refinement in the existing policy. The group has released its report: http://cgwb.gov.in/GroundWater/Documents/Report_GW%20Assessment%20Methods.pdf. The report attempts to review the various methods for assessment of ground water recharge, present perspective of ground water assessment and to suggest the future strategies for refinements of the methodology for assessment of ground water resources. Comments/ responses on the report can be sent to res-cgwb@nic.in. (www.cgwb.gov.in)

Groundwater Challenge Groundwater accounts for 70 % of irrigation and 80 % of domestic use, a coping strategy against unreliable public water delivery. Indian Planning Commission observes that agriculture uses a third of the State Electricity Board sales but gives only 3% of total revenue. Secondly, excessive water-extraction means that about 1,600 blocks are now classified as critical or over-exploited, out of 5,723 blocks. Already 15 % of aquifers are in critical condition; in 50 years this is could be 60 %. Even in a state like Kerala, more known as a water surplus state, of the 151 blocks, only 101 have remained safe with 5 over exploited (Chittur Taluk, where the famous Plachimada struggle against the Coca Cola factory is located is one of them), 15 critical and 30 semi-critical. (The Hindu 201209, 221209, Plachimada Struggle Solidarity Committee, 031209)

LOCAL WATER BODIES

Water bodies more vital than housing: Madras HC Ordering the eviction of 500 poor families, who had encroached upon an irrigation tank at Dindigul district, the Madurai Bench of the Madras High Court has observed that the need to preserve water bodies would gain priority over the right of landless poor to housing, when there was a conflict between the two. Disposing a batch of petitions against the eviction of 500 families, who were living on Sirunaickankulam water tank in Palani, the Bench comprising Justice D Murugesan and S Nagamuthu said: "Landless poor have a fundamental right under Article 21 (Right to life) of the Constitution to demand residence. But such right cannot be extended to the level of encroaching water sources". The court criticised the Collector, Revenue Divisional Officer & Palani Municipality for recommending to the state govt to grant 'patta' to the encroachers. The recommendations were in violation of an assurance given by the district administration before the HC in 1998 to evict all encroachers from the water body, in a case filed by a farmers' association. (The Tribune 010110)

Model Ponds in Uttar Pradesh villages The *Adarsh Talab* has been created in Maseedha Ratan and some other surrounding villages in Mall block in Lucknow district under the National Rural Employment Guarantee Scheme. More are being planned. (Indian Express 271209)

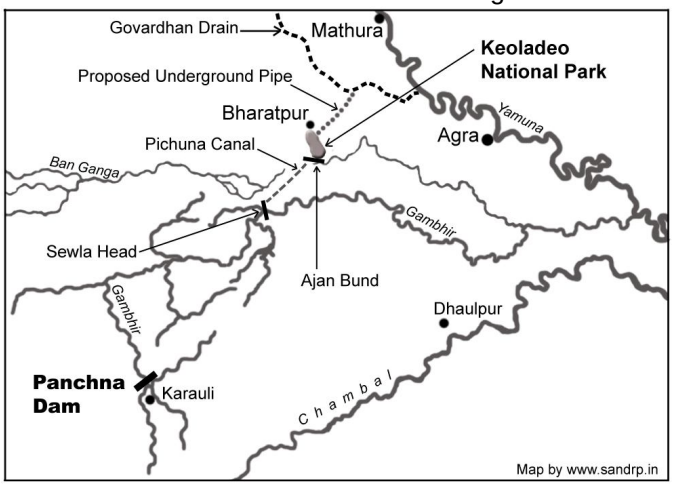
Delhi: sewage is destroying many of them According to Vinod Kumar Mishra, member of a Delhi govt committee formed for the water bodies being revived, the areas where water is scarcest are also the areas where the number of water bodies is the least. The committee also noticed that those areas where the local people are being involved in the maintenance and up keep of the water bodies, the revival has been commendable. Mishra said that the Red Fort Baoli and the Dhansa village baoli are good examples of revived bodies, both being maintained by the Archaeological Society of India.

- **Mayapuri lake revival promised** Following a contempt petition & 7 months after criticism by the Delhi High Court, the Delhi Govt has accepted the existing of the Mayapuri lake & promised to ensure its revival. Earlier, the PWD had refused to accept the existence of the lake. (The Hindu 151109, Indian Express 261109)

WETLANDS

Keoladeo National Park: Crucial water supply work yet to start

The work on the 16 km long Govardhan Drain is yet to even start, when it was expected to be completed by now. The Government of India has sanctioned Rs 56 crore for the drain and tenders were also floated, but cancelled, since the specifications mentioned in the document were not adequate. The problem for the World Famous bird sanctuary started in 1991 with the construction of the Panchna Dam on Gambhir River in Sawai Madhopur district. Before the building of the dam, water of the Gambhir River used to flow to the wetland via Sewla Head–Pichuna Canal – Ajan bund, the last structure is just about 700 meters upstream of the wetland. The Ajan Bund had been created for protecting the Bharatpur town from the floods brought by the Gambhir and the Ban Ganga Rivers. The Ban Ganga River flows via Jaipur to Ajan Bund. However, the Ban Ganga River no longer flows, as informed by Harsh Vardhan, General Secretary of Tourism & Wildlife Society of India.



"KNP, Bharatpur is one of the world's most renowned wetlands. This 28.72 sq. kms Park is located at the confluence of Rivers Gambhir & Banganga... It is one of the finest bird sanctuaries in the world and known as 'Mecca of Bird Watchers'... KNP has been selected as a Ramsar site because of its great ecological value, the huge congregation of birds and wide variety of species. As a signatory of Ramsar Convention, India has made a global commitment to protect the KNP... The KNP has been designated as world heritage site by the UNESCO in the year 1985 on account of its unique conservation value and rich biodiversity."

Panchana Dam	
River	Gambhir
District	Karauli
Dam Height (above Lowest Foundation Level)	33.19 m
Gross Storage Capacity	59.45 mcm
Live Storage Capacity	52.65 mcm
Purpose of the Project	Irrigation

As per the 2005 report of the Central Empowered Committee of the Supreme Court, following an application filed by Harsh Vardhan in 2005, "Keoladeo National Park, Bharatpur is one of the world's most renowned wetlands. This 28.72 sq. kms. Park is located at the confluence of River Gambhir and the River Banganga... It is one of the finest bird sanctuaries in the world and known as 'Mecca of Bird Watchers'... KNP has been selected as a Ramsar site because of its great ecological value, the huge congregation of birds and wide variety of species. As a signatory of Ramsar Convention, India has made a global commitment to protect the KNP... The KNP has been designated as world heritage site by the UNESCO in the year 1985 on account of its unique conservation value and rich biodiversity."

The CEC report noted that the KNP comprises of three eco-systems namely wetland, grassland and woodland. Of these three ecosystems, grassland and wetland are the most sensitive ones and need to be managed properly. Both the grassland and wetland through the process of succession will emerge as woodland. To prevent this succession process, it is important that these two ecosystems are manipulated and maintained. This is always what has happened here. Regular flooding and flushing the wetlands is the only way to manage the wetlands. Any shortage in availability of water will lead to severe damage of the wetland. This is exactly what is now happening in KNP. KNP today is facing huge shortage of water.

Panchana Dam has been constructed near Karauli town which is about 90 kms upstream from KNP on river Gambhir. The construction of this Dam commenced in January, 1979. The sluice gates of the Dam were reportedly installed during July, 2003. It may be seen that the release of water to the KNP had progressively decreased as the construction was nearing completion and has now practically become nil.

The water brought into Ajan Bund is retained there for a few days for the silt to settle down and then released into the KNP during the month of July-August through Ghana canal and it is then let into various compartments by means of series of gates. Following building of the Panchna dam, the water availability for the Park has

become almost nil, notes the CEC report. It adds, "In the command area of the Panchana Dam 9985 ha. area has been developed for irrigation which requires almost the entire water available from the dam leaving no water for the KNP... the KNP has been given the highest degree of protection as it has been declared as a National Park under Section 35 of the Wild Life (Protection) Act, 1972."

"Article 253 of the Constitution of India provides that the State Governments are bound to implement the provisions of International Treaties and Conventions to which India is a Party. Accordingly, the States have a constitutional responsibility thrust upon them to protect the sites identified and listed under the Ramsar Convention such as the Keoladeo National Park."

On the legal side, the CEC report noted, "Article 253 of the Constitution of India provides that the State Governments are bound to implement the provisions of International Treaties and Conventions to which India is a Party. Accordingly, the States have a constitutional responsibility thrust upon them to protect the sites identified and listed under the Ramsar Convention such as the Keoladeo National Park... The provisions of Section 35(6) of the Wild Life (Protection) Act, 1972 prohibit any person from stopping or enhancing the flow of water into or outside the National Park except by a permission from the Chief Wild Life Warden. It further states that no such permit shall be granted unless the State Government is satisfied in consultation with the National Board that the change in the flow of water into or outside the National Park is necessary for the improvement and better management of wildlife therein."

"The provisions of Section 35(6) of the Wild Life (Protection) Act, 1972 prohibit any person from stopping or enhancing the flow of water into or outside the National Park except by a permission from the Chief Wild Life Warden. It further states that no such permit shall be granted unless the State Government is satisfied in consultation with the National Board that the change in the flow of water into or outside the National Park is necessary for the improvement and better management of wildlife therein."

The Rajasthan government, in a submission to the CEC contended, "the catchment area of Panchana Dam is 622 sq. km as against 1926 sq. km of Sewla Head (downstream of Panchana Dam). The Ajan Bund also has an independent catchment area of 206 sq. km.", implying thereby that the water needs of the KNP can be satisfied independent of the Panchna dam. Rejecting this argument of the Rajasthan government, CEC report noted, "Due to the soil/rock strata of the said area, these catchment areas are not efficient catchment areas as compared with that of Panchana Dam which comprises of rocky strata which efficiently drains most of the water into the Dam without seepage losses attributed to sandy soil. Downstream of Panchana the soil being sandy, it is prone to seepage losses and absorption hence can be classified as an inefficient catchment."

Further responding to the state government submission, the CEC report noted, "(vi) the State Government's view that the water if released from Panchana Dam would be 'lost' as it would be absorbed in the dry sandy soil of Gambhir river and would not reach the KNP, does not appear to be correct as the so called 'loss' helps in recharging the ground water on either side of the river and contributes in the agricultural productivity and fulfils the essential water requirements of the people of this area. Total stoppage of flow of the water of Gambhir is likely to cause incomprehensible negative impact upon the life supporting river system. It is for this very reason the concept of maintaining minimum flow in the rivers has been treated as sacrosanct. Besides, the loss is partly due to poor maintenance of water delivery system such as Pichuna canal etc."

This is indeed a very remarkable CEC report. Unfortunately, the CEC recommendation in that report to immediately start release of water from the Panchna dam for the KNP, which would have also helped the downstream river and groundwater recharge, was not implemented. CEC report had rejected all the alternatives suggested by the Rajasthan government. One lacunae of the CEC report is that it does not fix responsibility as to who all are responsible for the violations of the legal stipulations noted by the report and what steps are necessary in view of such violations. It is clear that while state government is one of the responsible parties, the Central Water Commission, the Planning Commission, the Union Ministry of Environment and Forests and the National Board of Wildlife are also responsible for the violations of the legal norms.

Subsequently, the new alternative of diverting the water from Goverdhan drain to the KNP was supposed to be taken up, but that also awaits implementation. It is not clear, though, how useful this alternative will be since the CEC report had also rejected the alternative of laying a 100 km long pipeline from Chambal River to the KNP. (CEC report of March 2005, Mail Today 271209, SANDRP)

DAMS

SSP takes another U-turn: land for field channels to be acquired Reversing yet another "Unique" feature of the project, the Gujarat Govt, bowing to the wishes of the farmers, have had to agree that the land required for the sub minor canals and field channels for the Sardar Sarovar Irrigation plan will be acquired and farmers will be compensated for the same. Earlier, spreading the propaganda about the project, the proponents, including the government had claimed that the project is so good and farmers are so happy that they will donate the land for the field channels and that no land will acquired for the sub minor canals and field channels. Having seen over the years that this propaganda has proved hollow, the govt has now decided to take a U-turn on this policy too, as it has done on many others (e.g. computerised volumetric control of water, cement lining of all canals, among others). At the recent meeting, district officials reported that even rich farmers were not ready to provide any land for free for the project. In many cases, the farmers near the canals prefer to monopolise water and not give land for field channels. So far, out of the command area of 18.25 lakh ha, around 3 lakh ha has been covered with field channels. Around 15000 ha would need to be acquired for 65000 km length of field channels. (The Times of India 141209)

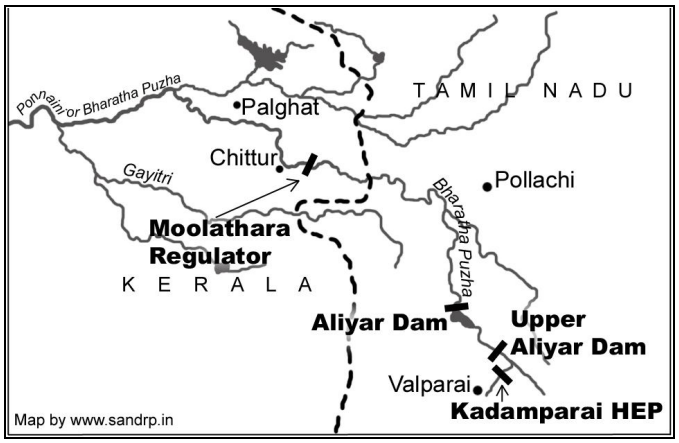
SSP affected Tribal's application: State Commission Slaps Rs 10000 Fine on Errant PIOs In a significant order, the Maharashtra State Information Commission has slapped a fine of Rs 9,750 on two errant public information officers of the Nandurbar district administration for having caused enormous delay in satisfactorily responding to an application for information filed by a Sardar Sarovar project affected adivasi Siyaram Singa Padvi. The original application for information related to details of the road being constructed from Kudavidungar hamlet to Hirapada hamlet in village Danel, Tahsil Akkalkuva, District Nandurbar under the NREGA. When appeal came up for hearing before the Commission on 08-12-09 the Commission recorded a delay of 39 days on behalf of the APIO and PIO in providing information and imposed a fine of Rs. 9,750 fine on them. (NBA PR 030110)

Another SSP U turn: farmers can lift water: GERC Till now farmers were pumping water from the Narmada canals with diesel pump sets, which has been termed illegal as it amounted to power theft. Now, the Gujarat Electricity Regulatory Commission has given the go-ahead to the state power companies for a new tariff structure to lift water from the canals, ponds and rivers. But the tariff structure is only for those who opt for drip-irrigation method. The lifting of water from canals was disallowed under SSP plan and policy, but the new GERC order will legalise it now. (Indian Express 181209)

Centre working on model dam safety law "Dams require constant management and monitoring. Legislation is required to establish an institutional system to maintain and regularly monitor the safety of dams. Both, the Centre and States will do it. We are currently in talks with State govts," Water Resources Secretary U.N. Panjiar said on Dec 8, 2009. Mr. Panjiar said that while some States, including Bihar, had their own dam safety laws, W Bengal and Andhra Pradesh had requested the Centre to make a model law. "As per constitutional provisions, if two or more States make a request, the Centre can pass a law," he said. "Other States can pass a resolution in their legislatures to adopt the Central law." (The Hindu 091209)

Moolathara Dam breach in Kerala Flood waters released from the Aliyar dam in Tamil Nadu (see the map attached) gushing out of the breached right bank protection works of the Moolathara Dam near Chittur in Kerala, flooding the Chitturpuzha and the Bharathapuzha on Nov 8, 2009.

One person was killed and some houses near the dam, a few bridges and crops were submerged. The police and the Fire and Rescue Services evacuated 32 marooned people from near the dam. Several low-level areas of Chittur taluk were under water. This is the third time that the right bank protection structures of the dam, part of the inter-State Parambikulam Aliyar Project, had breached, after giving way in 1960 and 1992.



The Tamil Nadu authorities had informed their Kerala counterparts that the sluices of the Aliyar dam would be opened following heavy rain. But the quantity of water released was more than what they were told to expect. The Kerala officials here said the Tamil Nadu officials put the figure at 14,000 cusecs (cubic feet per second), but 38,000 cusecs was released. Though the Kerala side opened the Moolathara dam shutters, the protection works could not withstand the heavy inflow, the officials said. They could not open the emergency shutters for technical reasons. Had that been done, the breach could have been avoided, an engineer with the Water Resources Department said. The Kerala govt has decided to set up an expert panel to ensure safety of the dam in future. (The Hindu 091109)

Dam is complete, the command area development plan yet to start

In a shocking case, the Omkareshwar Dam has been completed, the Narmada Valley Development Authority has now (The Hindu 130110) come out with a notice inviting offers of "consultancy for preparation of Command Area Development Plan, Environment Impact Assessment and Environment Management Plan of Command area (120246 ha) on right bank canal of the Omkareshwar Multi Purpose Project". This reflects poorly on our whole water resource establishment, how shoddily big dams and irrigation projects are implemented in India. The Union Ministry of Environment and Forests, the Union Water Resources Ministry, the Central Water Commission, the Planning Commission, the Madhya Pradesh Water Resources Department and the NVDA are all responsible for this state of affairs and responsible officers who allowed the dam to be completed without basic plans must be identified and punished. This has come to light, thanks to the petition by the Narmada Bachao Andolan in the MP High Court and the MP High Court order in this regard.

Earlier on Dec 18, 2009, the Supreme Court declined to grant a stay on the indefinite status quo order dated 11-11-09 of the Jabalpur High Court on land acquisition and canal excavation for the Indira Sagar and Omkareshwar canals. By that order, the High Court had put the canal work in abeyance until the environment and rehabilitation plans of the two projects are fully planned, approved by Central authorities and implemented by the State. The Special Leave Petition for appeal against the said judgment filed by the Government of Madhya Pradesh and Narmada Valley Development Authority came up for hearing before a Bench of Chief Justice Shri K.G. Balakrishnan, Justice Shri Sathasivam and Justice Shri Sudarshan Reddy. Terming the Judgment of the High Court as 'baseless and unlawful', the GoMP / NVDA asserted that the two projects being intra-state projects, there is no role for Central intervention or monitoring.

Noting with concern the fact that even after 15-20 years after the Projects were granted clearances, final environment and Resettlement & Rehabilitation plans for the canal-affected are not in place, High Court of Jabalpur granted an indefinite stay on the ISP and OSP canals until the MoEF Ministry of Experts and central authorities receive and approve the plans. This Order was made on a PIL filed by the canal-affected adivasis and farmers along with Narmada Bachao Andolan. The Sardar Sarovar is in the same similar situation.

INTERLINKING OF RIVERS

An official Update Ken Betwa is a project in which the Government of Madhya Pradesh very recently suggested an alternative proposal for a component of the project during August 2009. This link project would entail a cost of Rs.7,615 crore at the 2008 prices.

The Government of Andhra Pradesh on its own had taken up the Polavaram Project. They want to use 80 TMC only for transferring to the deficient Krishna basin, which would not in anyway affect the national perspective plan otherwise. There is a proposal by the Government of Andhra Pradesh with the Government of India for declaring that project as a national project. I would like to reiterate that the project stood cleared already, long back. After finding that the proposal is within the parameters of the guidelines for declaring a project to be a national project, a Cabinet note has been prepared and sent for Inter-Ministerial consultation. After that, whatever necessary step needs to be taken, will be taken. Our hon. Friends from Kerala in unison rose against one of the projects, namely, Pamba-Achankoil Vypar link. A Resolution was passed by the Kerala Assembly way back in August, 2003 against this link. Obviously, if one such State does not agree, and as the things stand today, we cannot force it on anyone. This is one of the 14 projects for which a lot of work was carried out. Because of the stand taken by the Kerala Assembly about this Pamba-Achankoil-Vyapar link, which would have created an additional 0.91 hectare of irrigation potential. Since there is an objection to that particular link, for the time being, this is not one of those five priority links.

These are five projects namely Kodavari (Polavaram)-Krishna (Vijayawada) Link, Parbati-Kalisindhi-Chambal Link. Damanganga-Pinjal and Par-Tapi are the other two ones where the States of Maharashtra and Gujarat have come together. They have agreed to the terms of the Memorandum of Understanding though that has to be formally signed between the two States but because of the immediacy, because of the urgency of the work, we have started the DPR for those two projects. (Union Water Resources Minister in Loksabha on 021209)

Jairam seeks review of Ken Betwa Link Minister of State for Environment and Forests Jairam Ramesh has asked the Centre to review the Ken-Betwa river-linking project in view of the ecological implications. In a letter to Union Water Resources Minister Pawan Kumar Bansal, Mr Ramesh suggested that it "may be revised" to exclude the tiger reserve area falling within its purview. The project encompasses a considerable forest area falling within the notified core/ critical tiger habitat of the Panna Tiger Reserve in Madhya Pradesh. "The proposal, if implemented, would involve construction of a large dam spread over 1.5 km besides the supporting infrastructure and powerhouses. This would cause considerable disturbance to the core/ critical habitat of the tiger reserve which is required to be kept "inviolate" for tiger and other wild animals as per the Wildlife (Protection) Act, 1972." Mr. Ramesh said. (The Hindu 141209)

IRRIGATION

Ukai Dam has water for sugarcane, none for Paddy! Gujarat's water resources minister informed the assembly on Dec 18, 2009 that no water could be made available for paddy from Ukai dam on Tapi River in South Gujarat as the dam had limited water stock. The minister said that the available water in the dam is to be used for drinking water for Surat city and for sugarcane crop. Earlier on Dec 17 farmers held a rally in Surat city against this decision of the irrigation department. The decision of the Gujarat government is pretty shocking that it does not water for food crop like paddy, but it has water for a non food commercial crop like sugarcane. The decision is also strange considering that the dam had 3.241 billion cubic meters, equal to 49% of its live storage capacity as on Dec 16, 2009, as per the latest bulletin from the Central Water Commission. (Indian Express 191209)

INTER STATE ISSUES

J&K to take water from Right Bank of Ravi River The Jammu and Kashmir government has decided to take its share of water from the Right Bank of the Ravi river since Punjab has failed to honor the 1979 agreement. Earlier J&K was considering filing a petition in the Supreme Court to recover its dues amounting to Rs 3640 crores (Rs 2180 crores on account of denial of power share of 20% for the last 10 years from Thein Dam and Rs 1500 crore for its failure to build Shahpur Kandi Barrage over the river in Kathua district). (Tribune 301109)

Haryana disputes Delhi claims on *saved water* The Haryana government has disputed Delhi's claim over the 160 cusecs water saved due to the construction of the Munak carrier canal. Delhi claims that since the canal has been constructed by Delhi at its own expenses, the water *saved* due to this as against the current open canal should be additional water that Delhi should get. Haryana has disputed this, saying that Delhi is already getting water beyond its rightful share. A meeting on Dec 30, 2009 called by the Cabinet Secretary to resolve the dispute could not succeed. (Bhaskar 311209)

Shahpur Kandi project suspended Following demand by Haryana that its share of water and electricity from the proposed Shahpur Kandi Project be decided before the project is taken up, centre has decided to withdraw the project from the Bhakra Beas Management Board. The project was declared as National Project and this only goes to show how poor was the assessment of the centre before declaring the National Project scheme. Haryana has filed a petition in the Supreme Court and the Union Power Minister had replied to Haryana CM that till the issue is resolved among the party states of Punjab, Haryana and Rajasthan, BBMB cannot take up the project. (Bhaskar 020110)

HYDRO PROJECTS

Athirapally: MEF notice to Kerala on Clearance The environment ministry has served a show cause notice asking the Kerala govt why the clearance given earlier to the proposed 163 MW Athirapally HEP should not be revoked. It was in 1998 that this project got the first clearance from the central govt, but the clearance was revoked following a High Court order. In 2005 following claims of a fresh environment impact study, it got the clearance again. But soon the Kerala High Court intervened and asked Kerala State Electricity Board to seek a fresh clearance. For the third time, the project got the clearance in 2007. The case against the 2007 clearance is pending before the High Court. (IANS 080110)

Priyadarshini Jurala HEP delayed for China supplier The 224 (39 MW X 6) MW Priyadarshini Jurala Hydro power project of Andhra Pradesh Generation Corporation Limited has been delayed as the Centre has put a restriction of one foreign professional for every 100 Indian laborers. The China National Machinery Import and Export Corporation wanted 23 of its professionals at the site, but regulations allow only 13. The project was awarded to CMEC in 2005 and three units have already been commissioned and fourth is expected to be ready shortly. (Indian Express 261109)

Singoli Bhatwari faces sustained agitation The proposed 99 MW on Mandakini River in Rudraprayag district in Uttarakhand is facing sustained agitation from large number of people. In May '09, the Uttarakhand govt had to stop work on this project allotted to Larsen & Toubro, following agitation. Now following further protests trying to stop work on the project, the police, lathi charged the affected people. Kedar Ghati Sangharsh Samiti is opposing the project with strong support of over a lakh people of 32 villages, whose houses and property are threatened by the project.

In May '09, additional Power Secretary Saurabh Jain said that the construction work of the project had come to a halt, following a letter by the state's Power Department. Company officials said that, since the implementation agreement with the state government was yet to be signed, work on the project would remain suspended. The work then had resumed after remaining suspended for several months due to a prolonged agitation by local people. Following an intervention by the Rudraprayag District Magistrate Dilip Jawalkar, the company officials signed an agreement with the locals, promising to give compensation in case of loss of life and property. The project involves construction of a 20-metre high and 80-metre long Dam, a 12-km long headrace tunnel and surface powerhouse. (Business Standard 260509, *Jansatta* 040110)

NTPC to provide insurance cover to just one village NTPC has provided insurance cover to 164 households including cattlesheds for 5 years at its upcoming project Tapovan Vishnugad. Total value of insurance for Shelong village comes to Rs 8.26 crore upto October 13,

2014. The insurance cover has been provided considering the probable cause of damages to houses and structures under the Standard Free & Special Perils Policy which includes landslide, cloud burst land subsidence and earthquake risk. An appreciation of cost will be at 5% per year on insured sum of structures. NTPC and United India Insurance jointly completed the measurement of houses and subsequently rate has been derived. For pukka house the rate is Rs 600 per sq ft, Rs 350 per sq ft for kucha and Rs 250 per sq ft for cowsheds. This looks like a highly inadequate step towards ensuring compensation for the damages to the people and their properties due to the construction of the Hydro projects. (Financial Express 301109)

NHPC pact for Myanmar HEPs The NHPC on Jan 8, '09 announced that it has signed agreements with the Ministry of External Affairs for the preparation of updated detailed project reports for the 1,200 MW Tamanthi and 642 MW Shwezaya HEPs in Myanmar. The cost of the DPRs has been estimated to be Rs 20 crore, each. In Sept 2008, NHPC signed an implementation agreement with the Department of Hydro Power Implementation, Govt of Myanmar, for the two HEPs. Under this agreement, a joint venture company was proposed to be floated by NHPC and DHPI. The Tamanthi and Shwezaya HEPs propose to harness the hydropower potential of the Chindwin river, the chief tributary of the Irrawaddy river, in the northern Myanmar. The 1,200 MW HEP involves construction of a 80 m high dam. Proposed to be constructed at an estimated cost of USD 3 billion the Tamanthi HEP is expected to annually generate of about 6,685 MU power. The present installed capacity in Myanmar stands at 1,667 MW, which includes merely 747 MW of hydropower capacity. (Energylineindia.com 100110)

ACT writes to MEF to uphold carrying capacity study
Following pressure from the Sikkim govt, Central Electricity Authority and Union Power Ministry, there is a move to revoke the earlier decision of the Union Ministry of Environment and Forests not to allow any hydro projects upstream of Chungthang in North Sikkim. This decision was taken following one of the recommendations of the carrying capacity study done for the Teesta River Basin. Now the affected citizens of Teesta (ACT), Sikkim have written an anguished letter to the Union Minister of Environment and Forests saying among other things, "Therefore, on behalf of all those poor primitives tribes who are already undergoing tremendous suffering inflicted by these mega destructive projects and those who are going to be affected I, would like to request your good self and all the Hon'ble members to rise to the occasion and restore the faith of the people in the law of the land by upholding the last opportunity to protect Our land and people by making the recommendation of the Carrying studies final and no scope of any change be permitted thereby stopping all Hydro electric power projects above Chungthang." (ACT letter to Union Environment Minister 110110)

HYDRO PROJECTS IN HIMACHAL PRADESH

Protests against Tidong HEP

With the inspection report of the district administration regarding violations in execution of the 100 MW Tidong-I hydro power project in Kinnaur indicting executors of causing damage to numerous trees and undertaking unscientific road construction, residents of the villagers are up in arms against the project. About 500 residents from the panchayats of Morang, Kunu Charang, Jangi, Rispa, Robab and Rarang held a demonstration at the project site on Dec 29, 2009 against the environmental damage being caused to the forests and the area in the vicinity of the site. The main grouse of the villagers is that 80 % of the endangered "chilgoza" trees in the Tinala forest where road construction work is being done would be completely damaged due to unscientific dumping of debris and blasting.

Interestingly, even though the joint inspection report of the ADM (Pooh) and the DFO of the construction site held on Dec 8, clearly indicts the Hyderabad-based NSL Limited of undertaking road construction work above the alignment resulting in damage to many more trees than the 1261 for which permission was granted, no final decision has been taken about the fate of the project. The inspection report was submitted to the Deputy Commissioner, Kinnaur, on Dec 10. "Even though the lease papers are still being processed but work has already been executed which is a clear-cut violation of Section 163 of the Land Reforms Act, 1954," says the report. The DC has directed ADM, Pooh, not to allow work till execution of the lease papers is completed.

"The damage caused due to unscientific method of construction of road to the forest in Raspa panchayat at the surcharge site and at the edit in the forest of Thangi and Lambar village is of such magnitude that it is difficult to count the number of trees that have been removed," says the report. The pradhan of Rispa panchayat, Narender Negi said 80 % of the trees damaged are Chilgoza which is an endangered tree. "The income from the sale of chilgoza supplements the income of the villagers and in case these are destroyed we will be very badly affected," he said. Despite the best efforts of the forest department to grow chilgoza trees, it has not succeeded as it regenerates only naturally. The report of the ADM mentions that cut and fill method is not being adopted and even the debris is being dumped unscientifically even though there is designated dumping site. The locals rue when the damage caused during road construction is so huge one can imagine the harm the project will cause in the area. They are demanding that the project should not be allowed to come up at all. (The Tribune 301209)

Doubts about Private Hydro Set up more than a year ago to put in place an effective mechanism to regulate and monitor the fast growing hydropower sector, the directorate of energy has virtually failed to take off due to indifferent attitude of the government. The government is in no position to enforce the hydropower policy, exercise quality control in private sector projects, address important issues pertaining to sale of power, evacuation of power, regulatory matters plan and grant of techno-economic clearance.

In absence of proper supervision and monitoring, the quality of projects being executed in the private sector has been under suspect. Allotted on BOT (build, operate and transfer) basis the projects are to be handed over to the government after 40 years in running condition. However, engineers fear that most of these may not even last for four decades.

A glaring example of the prevailing messy state of affairs pertains to the 1,000-MW Karcham Wangtu project coming up on the Sutlej in Kinnaur. While the state government is begging for additional power from the Centre to meet the winter shortfall, Jaypee Associates, the company executing the mega project, has signed an MoU with Punjab for supplying power at Rs 3 per unit. In absence of proper supervision and monitoring, the quality of projects being executed in the private sector has been under suspect. Allotted on BOT (build, operate and transfer) basis the projects are to be handed over to the government after 40 years in running condition. However, engineers fear that most of these may not even last for four decades. (The Tribune 040110)

***Hydro* state Himachal has high tariffs, import bill!** A steep hike in power tariff in the hill state is on cards with the state electricity board projecting a hefty hike in the aggregate revenue requirement for 2010-11 filed with the Electricity Regulatory Commission, mainly on account of increase in employee cost, power purchase and interest liability. The board has projected a revenue requirement of Rs 2,872 crore as against the expenditure of Rs 2,340 crore approved by the commission for the current financial year. The average tariff will shoot up from Rs 3.60 to Rs 4.49 per unit if the ARR is approved as it is. The domestic consumers will have to bear the brunt of the hike as power subsidy has been frozen at Rs 140 crore under the agreement signed by the govt with the World Bank for availing Rs 900-crore development policy loan.

Citizens of the *Hydro* state Himachal Pradesh will have to pay hefty power bills due to the wrong policies of the state government. A glaring example of the prevailing messy state of affairs pertains to the 1,000-MW Karcham Wangtu project coming up on the Sutlej in Kinnaur. While the state government is begging for additional power from the Centre to meet the winter shortfall the company executing the project, has signed an MoU with Punjab for supplying power at Rs 3 per unit.

The implementation of revised pay scale has sharply increased the employee cost, which is projected to go up from Rs 605 crore approved for the current year to Rs 860 crore. Consequently, the employee cost, which is already highest in the country at Rs 94 paise per unit, will jump further to Rs 1.35 paise per unit.

The other major factor contributing to the increase in expenditure is the high cost of power purchase due to declining surplus. The board will have to spend Rs 1,597 crore on purchase of power to meet the winter shortfall as against Rs 1,440 crore this year. The consumers will have to pay for the government's decision of allowing independent power producers to sell power outside the state without first meeting the state's own requirement. The total availability of power has been projected at 6,907 million units but the net surplus available for sale outside state will come down from 454 million units this year to 103 million units, after taking the energy involved banking and contra-banking with other states. (The Tribune 020110)

Himachal incentives for HEPs The Himachal Pradesh government has decided to give incentives to hydro electricity projects, which are completed ahead of the schedule period. The HP CM said under the incentive system, if the project is completed a year before stipulated five-year deadline, the power firms will have to provide only 11% free power to the state instead of the mandatory 12%. Similarly for every year delayed after the completion date the power plants will have to supply 1% additional free power above the mandatory 12%. [No such incentives or disincentives for ensuring timely and proper completion of the environment management measures of such projects, though.]

HP cancels allotment of 14 projects The Himachal Pradesh government has cancelled the allotment of nine hydropower companies, including those of Jindal Power, in the past one year, Chief Minister Prem Kumar Dhumal said. "Fourteen hydropower projects above 5 MW allotted to nine companies, including Jindal Power Ltd, DCM Shriram Hydro Energy Ltd, Patel Engineering Ltd, Moser Baer Projects Pvt Ltd and ABG Shipyard Ltd, have been cancelled in the last one year," Dhumal said in a written reply in the state assembly. "The projects were cancelled for the failure of the companies to deposit the upfront premium with the government on time," the chief minister said. Jindal Power Ltd was allotted three projects, DCM Shriram Hydro, Moser Baer and ABG Shipyard two

projects each, and Patel Engineering one project. The two Moser Baer projects, Reoli and Sach Khas, were the biggest — of 420 MW & 149 MW capacity, respectively.

18 HEPs of over 5 MW were allotted through global bidding to Indian companies in the past one year. Under the state's amended power policy, the bidder who offers more free power to the state in addition to the fixed quota is allotted projects. The fixed quota is 12 % free power for the first 12 years, 18 % for up to 30 years, and 30 % for up to 40 years. After 40 years, the project will be handed over to the govt. The free power bidding is in addition to the fixed upfront premium of Rs.20 lakh per MW. (Financial Express, IANS 181209)

Payment for eco-services to be part of CAT plan The concept of "payment for eco-services" (PES) will be soon put into practice with the government deciding to spend 10 per cent of the funds under the catchment area treatment plan for the purpose. The Forest Department has assigned the task of preparing a "scoping document" for PES for the Renuka Dam project to the Winrock International. The document is to provide blueprint for the conservation of ecosystem with the involvement of local community. The document is supposed to take care of all aspects right from land use to cropping pattern to suggest a model to help preserve and restore the forest ecosystem by improving biodiversity, water sources and other natural resources, besides enhancing livelihoods. The local community will be motivated to adopt the recommended model for which PES will be used as an incentive. For instance, a shift in cropping pattern or land use is conducive conservation of ecosystem and farmers can be paid for switchover, if required. The focus will be on meeting the needs of the forest-dependent communities through improved non-wood forest produce. So far the scope of CAT plans was limited to reduction of silt by way of engineering structures and afforestation. However, with introduction of PES the focus would be on enhancing the water quality, preserving biodiversity and promoting sustainable livelihoods and above all local people would be actively involved. (Tribune 130110)

SJVN disinvestment may hit Luhri accord Agreement between the Centre and the HP govt for the 775 MW Luhri project may have to be reviewed to pave way for the disinvestment of 10 % equity in the Sutlej Jal Vidyut Nigam. The state wants the Centre to settle all issues and ensure that its equity share and other interests were protected before coming out with an IPO. The Centre and the state hold 75 and 25 % equity. The total authorised capital is Rs 7,000 crore and paid up capital Rs 4108.81 crore. The Centre's share is Rs 3,081.61 crore and as such Rs 308.16 crore will be disinvested.

However, the equity share of the state has been raised to 49 % in the Luhri project and a special purpose vehicle, a joint venture company of the SJVN and the state, is to be set up to implement the project. Off-loading to 10 % equity by the Centre and the mandatory 50% independent directors to comply with the regulations of the Securities and Exchange Board of India will require a fresh look at the proposal to set up the SPV. At present, the SJVN has five full-time, six part-time and three independent directors. The Centre proposes to reduce the number of part-time directors from six to two so that the board has a maximum strength of 14. The number of part-time directors from the Centre is to be reduced from four to one and from the state, two to one. (The Tribune 071209)

Court stays revocation of Chenab HEP to L&T The HP High Court has restrained the state government from taking any further action on its move to revoke the award of the 420-MW Reoli Dugli Hydro Electric Project to Larsen and Toubro and call for fresh bids, based on the writ petition filed by L&T Power Development Ltd that was named winner of the project in October. The HEP has been proposed on a BOOT basis in the Chenab Valley, for which several firms had tendered the bids. These included Moser Baer, Jindal Steel, Tata Power, Essar Power and Piramal Healthcare. Moser Baer had emerged the original winner, based on its offer of 14.41 % additional free power to the state, over and above the royalty rates of 12, 18 & 30 % over three time bands.

The company, however, withdrew its bid, following which the others were given the choice to match the winning bid. In the event of more than one bid matching Moser Baer's offer, the winner was to be the one originally closest to the successful bid. Subsequently, the state government confirmed to Larsen and Toubro that it had been declared winner, based on its offer of 12.9 % additional power, and an upfront premium of Rs 84 crore was duly submitted. But a meeting of the state cabinet Nov 23 decided to call for fresh bids. Therefore, the allotment of Reoli Dugli 420-MW HEP made in favour of L&T Power Development Ltd, dated Oct 30, is hearby cancelled without any right and liability against the state government, said the cabinet note. L&T took exception to what it termed as a biased decision. Such unilateral cancellation of the allotment based on some media reports and likelihood of a better offer is not in accordance with the principals of natural justice, said its petition to the high court. (IANS 010110)

Dhaula Sidh project capacity increased Sutlej Jal Vidyut Nigam Ltd has decided to upgrade the power generation capacity of its Dhaula Sidh hydro project from 40MW to 66MW. During pre-construction studies company engineers found the project could generate an additional 26MW. Dhaula Sidh, which features a 51m high dam, is to be executed on the Beas River. The project is a joint venture of SJVNL (51%) and the state govt. (International Water Power and Dam construction 221209)

HP to re-advertise for 7 HEPs The state govt has decided to re-advertise these HEPs in accordance with the latest Power Policy Dugar (236 MW); Kilhi Bahl (7.5); Mane Nadang (70); Lara (60); Tingret (81); Kuling Lara (40) & Suil (13 MW). (The Tribune 101109)

HYDRO PROJECTS: NORTH EAST INDIA

The Subansiri gold rush

Subansiri, meaning the 'river of gold', is a major tributary of the mighty Brahmaputra, originating in Tibet and flowing through Arunachal Pradesh (AP) and Assam in India. It gets its name from the artisanal gold panning which took place traditionally in the waters of this river valley which is an ecological and cultural treasure trove too. But in recent times, it is the mining of 'liquid gold' through mega hydropower projects which has brought the river valley into focus and controversy.

There are plans to harness 12248 MW hydropower through 22 projects in the Subansiri river basin. Project developers and the AP state government hope to generate huge revenues through sale of power to other parts of the country. But the glitter of liquid gold has blinded decision-makers to basic issues of social and environmental justice in the first major project in this river basin: the 2000 MW Lower Subansiri hydroelectric project, currently under construction on the Assam – Arunachal Pradesh border. This has led to widespread conflicts and protests in the downstream areas in Assam in recent years.

On Nov 25–26 a 36-hour Lakhimpur and Dhemaji district bandh was organised by the 'Alliance against Lower Subansiri hydroelectric power project' (*Aikyamancha*) in Assam. This conglomeration of 36 organisations has asked for a scrapping of the project because of its major environmental and social impacts. From Dec 3 students activists organised a 100-hour 'material supply' blockade to the dam site in protest against ongoing construction at the dam site. Why this ire against this mega dam?

The Lower Subansiri project being developed by Central PSU NHPC was granted environmental clearance by the Ministry of Environment & Forests in July 2003 despite major concerns about poorly studied impacts of the project, including in the downstream areas. The Standing Committee of the Indian Board for Wildlife (now called the National Board for Wildlife) had earlier, in May 2003, given its green signal to the project coming up in a wildlife hotspot, but on the condition that no dams are built upstream of the project in the Subansiri river basin.

Local citizens and other civil society groups in Assam repeatedly raised concerns about the faulty clearances to the project without comprehensive downstream studies. Finally, on August 25th 2006, Sushil Kumar Shinde, Union Power Minister, informed the Lok Sabha in his reply to a Parliament Question: *".....To allay the apprehensions of the NGOs and to restore the confidence of the local people, on the suggestions of the Government, NHPC is in the process of awarding a study, by involving the local people, for a fresh and transparent scientific assessment of the downstream impact of the project...."* The first phase of the study was commissioned to IIT Guwahati. The second phase of the study was later commissioned to an interdisciplinary expert committee from Guwahati University, IIT Guwahati and Dibrugarh University.

In Dec 2008, the NBWL Standing Committee diluted some of the conditions imposed by it in May 2003 on the project, after construction was well underway! This was despite objections from many experts. In a May 2008 communication to the Chairman of the NBWL Standing Committee, member Dr. Bibhab Talukdar had observed: "If the Standing Committee agrees to waive the conditions, we would be setting a dangerous precedent and sending a wrong signal regarding the credibility of decision-making by us. This would mean that projects impacting rich wildlife habitats can receive clearances based on stringent conditions, only to be up for review later. Such an approach is undesirable both from a perspective of good governance as well the long-term interest of wildlife in the country." But this was ignored and the 'no dams upstream' restriction was one of the conditions lifted.

In Feb 2009, the committee of experts studying the downstream impacts of the project submitted their interim report. They expressed concerns about the very location and foundation of the Lower Subansiri dam on geological grounds and recommended that all construction work on the project be stopped till their study is completed. But the Central and State govts have failed to act on these recommendations and allowed work on the project to continue, leading to shock and frustration in the downstream areas in Assam. Contrary to the claim by Shinde in Parliament in Aug 2006, the attitude and actions of the Central Govt (& NHPC) have neither managed to 'allay the apprehensions' of groups nor 'restore the confidence of the local people.'

The Power Minister had also made claims of a 'transparent' assessment 'involving the local people' in Parliament. Not only did NHPC not make the interim report public for citizens' inputs, but it dismissed RTI applications saying this information was prohibited to be made public by law! Meanwhile, the AP govt has recently allotted the 1600 MW Middle Subansiri project to the Jindals, despite the project being all along discussed as a NHPC project. In fact NHPC's clout as a Central PSU appears to have been critical in getting the 'no dams upstream' condition lifted by the NBWL Standing Committee. This opened up the options for signing agreements for upstream projects. The AP govt has signed an agreement with Jindals as there is a greater flexibility to negotiate financially lucrative deals with the private sector. While environmental and social justice issues fade to the background, the Subansiri gold rush is well and truly on. (Neeraj Vagholikar, this is a modified/adapted version of an article which appeared in *The Statesman* 211209)

Agreement with Arunachal still pending NHPC has pleaded for an intervention from the Government of Arunachal Pradesh (GoAP) to ensure expeditious execution of the long-pending memorandum of agreement (MoA) that seeks to facilitate the development of the 2,000 MW Subansiri Lower hydroelectric project in the north-eastern state. The execution of this MoA has been hanging fire since 2000, given the GoAP's unrelenting attitude over the demand of entire free 12% share of power that is provided to home states as per current regulations. The home state share has become the bone of contention for this project since Assam claims that a part of the project also falls in its territory. With a view to reach a via-media solution, the two entities had, recently, agreed to make certain modifications to the MoA, by allowing the entire 12% share to the Arunachal govt. But it seems that the state government is still not happy, possibly, in anticipation of some more benefits. (energylineindia.com 211209) The latest news is that AP is to get 12% power from Lower Subansiri & Assam 1.25% MoA/MoU yet to be finalised.

Kynshi I and II to be revived? The Meghalaya state government has given the go-ahead for Athena Power and Jai Prakash Power Ventures to develop the 450MW Kynshi Stage I and the 450MW Kynshi Stage II project respectively. The two projects, located on the Kynshi River in the West Khasi Hills district, had been on hold for two years following protests. MoU's with the two companies are yet to be signed. (PTI 221209)

Middle Subansiri HEP goes to Jindal NHPC's plans have been dashed with the Arunachal state govt allotting the Subansiri Middle project to Jindal group. NHPC had been asked to prepare detailed project report for this 1,600 mw plant and was, therefore, expecting to get the project. NHPC has written to the power ministry asking for its intervention in the matter. The state govt has informed NHPC that Subansiri Middle project on Kamla river has been allotted to a joint venture of Hydro Development Corp of Arunachal Pradesh and Jindal Power and requested the company to hand over important data gathered by it (while preparing the DPR) to Jindal Power. (The Economics Times 211109)

Downstream impacts of Arunachal HEPs In answer to a question raised in Rajya Sabha, the Union Minister of state for Power Shri Bharat Sinh Solanki said, "The Ministry has received some representations from organizations and State Government of Assam protesting construction of big dam for power generation and relating to impact of hydel power development on downstream areas in Assam. To ally the apprehensions of the people with respect to downstream impacts in Assam of upstream Hydro Power Development in the region, NHPC Ltd. and North Eastern Electric Power Corporation have commissioned studies to assess the downstream impacts due to Subansiri Lower HE Project, Ranganadi Stage-I and Pare HE Projects. NHPC has awarded a comprehensive downstream impact study to University of Guwahati on 27.05.2008 which is being undertaken by University of Guwahati in association with University of Dibrugarh & Indian Institute of Technology, Guwahati. NEEPCO has also entrusted IIT, Guwahati for undertaking Detailed Hydrological Study of the Dikrong-Panyor river Basin and its impact in the downstream, which will cover Hydro-meteorological study of the Dikrong- Panyor Basin and its impact on flood scenario at the downstream of Ranganadi HE Project and on-going Pare HE Project with and without dam. Moreover, to forewarn the people in the downstream areas in case of approaching floods in the future, NEEPCO has entrusted the task of developing a model for flood forecasting in the downstream of its commissioned Ranganadi Hydro Electric Project (stage-I) and on-going Pare HEP, to North Eastern Space Applications Centre, Umiam, Meghalaya. Further, the Ministry of Environment & Forest while approving the Terms of Reference for the construction of big dams includes the assessment of downstream impacts in the TOR for preparation of Environmental Impact Assessment report." The last part of the answer does not seem entirely correct, as the MEF is not requiring full scale downstream impacts for any of the hydropower project that it clears. The downstream impacts are at best limited to a few aspects for a limited length of the river downstream of the proposed project and none of the projects have seen comprehensive downstream impact assessment. (PIB 231109)

ENERGY AND CLIMATE CHANGE

National Solar Mission Launched While launching India's Jawaharlal Nehru National Solar Mission under the National Action Plan on Climate Change, Prime Minister said, "Its success has the potential of transforming India's energy prospects, and contributing also to national as well as global efforts to combat climate change. This Mission is one of the major priorities of the second term of our government... The target of 20,000 MW of solar generating capacity by the end of the 13th Five Year Plan (2022) is no doubt an ambitious target." India aims to install 20 million solar lights and 20 million square metres of solar panel by 2022. In next three years, India aims to add 1300 MW of solar power capacity, 1100 MW of it is to be grid connected capacity. (PIB 110110)

Energy Efficiency Mission from April The Union Power Minister Sushilkumar Shinde has said that the National Energy Efficiency mission under the National Action Plan on Climate Change would start in April 2010 and seek to create an energy efficiency market worth an estimated Rs 74,000 crore. Its implementation over the next five years is estimated to result in an annual fuel saving of about 23 million tonne of oil and avoid capacity addition of over 19,000 mw, leading to carbon dioxide emission reduction of 98.55 mt annually. The perform achieve and trade initiative is the flagship of the mission,

which is a market-based mechanism to enhance cost effectiveness in energy efficiency in energy-intensive large industries and facilities through certification of energy savings that could be traded. Energy efficiency improvement targets will be set under Section 14 of the Energy Conservation Act, 2001. Industries that achieve savings in excess of their target will earn energy saving certificates, which they can sell to underperformers. (Financial Express 151209)

New Version of Smokeless Chulha programme The National Biomass Cookstove Initiative launched recently will try to put the user at the centre of the efforts to develop improved chulhas. The programme that was started in 1986, and discontinued in 2002, aimed at providing improved chulhas to reduce indoor pollution and fuel consumption. It is a classic example of how developing a product for the rural masses without the involvement of actual users is destined to fail. The abject failure to understand the cooking habits and the lack of facilities to maintain the chulhas were some of the reasons for the improved chulhas not evoking widespread interest. The latest initiative claims that the cookstoves will be "easy to use and maintain" and will "conform to local cooking habits." It does not see the cookstoves to be "free handouts" but as "economically sustainable business solutions."

The latest initiative seeks to achieve the twin objectives of reducing indoor pollution and cutting the amount of soot emitted. According to the World Health Organisation estimates for 2002, nearly 400,000 deaths were attributable to indoor pollution from chulhas. Soot arising from incomplete burning of fossil fuel and biomass used in chulhas is seen as a contributory factor to climate change, whose effects are manifesting themselves in the melting of the Himalayan glaciers and the erratic behaviour of the monsoons. The potential to slow down the pace of global warming by reducing the soot emitted from chulhas has caught the attention not only of India but of a few developed countries as well. However, unlike carbon dioxide, the life span of soot in the atmosphere is only a few days or weeks. Under the new programme, apart from testing the commercially available cookstoves and processed biomass fuels, work are to be taken up on developing the next-generation cookstoves and biomass-processing technologies. (The Hindu 311209)

Thermax focus on Energy, Water efficient use The Company estimates its saving from such activities as Rs 17 lakh in 2006-07, rising to Rs 56 lakh in 2007-08 and Rs 82 lakh in 2008-09. This is spearheaded by a Project Ever Lean, in which teams across divisions work on systems and processes to see how these can be made better. A project is underway for a biogas unit which will convert solid waste from the Chinchwad factory canteen. In addition, Thermax has installed a sewage treatment plant for treating and recycling water. The industrial wastewater at its chemical manufacturing plant in nearby Paudh has an effluent treatment and recycling system that uses various technologies, including reverse osmosis to clean and recover water, and boilers modified accordingly to reuse such water. The company says that clients in over 60 countries have found Thermax's green techniques useful in making their operations leaner. "We have already commissioned plants that generate green energy-equivalent of more than 4000 MW of power. Our vapour absorption chillers supplied to customers provide more than one million tonnes of environment-friendly chilling, with water as refrigerant. And, our treatment plants clean 1,000 million litres per day of wastewater," says M S Unnikrishnan, managing director. While revenue doubled between 2005-6 and 2007-08, from Rs 1,606 crore to Rs 3,433 crore, carbon dioxide emissions have fallen by four tonnes for each rise of Rs 1 crore, the company said. (Business Standard 101209)

National Biofuel Policy: A Wasted effort The national biofuel policy announced by the government is not really practical. It aims for achieving a 20 per cent blending of biofuels with petrol as well as diesel by 2017. Given that even the 5 per cent ethanol doping target — raised to 10 per cent last October — is yet to be achieved makes the target quite unachievable. A doping programme based on ethanol is not a stable once since it depends on the production of sugar which declines and rises in a cyclic pattern. In the case of biodiesel, it requires land which is not so easy to get. Most of the degraded lands are either forest lands, which are virtually out of bounds for others, or village common lands belonging to panchayats and communities and used by the landless and tribals for cattle grazing and other purposes. As for the non-edible oilseeds available from the wildly growing oilseed-bearing trees, such as Neem (Azadirachta indica), Karanj (Pongamia pinatta), Mahua (Madhuca indica), Sal (Shorea robusta) and the like, it will be a formidable challenge to collect these in large enough quantities to run commercial processing units. The real danger is that jatropha could encroach upon agricultural lands. The land-based route to biofuel production, which many land-surplus countries like Brazil follow, is unsuitable for land-starved India.

Moreover, the European Commission's Institute of Energy have pointed out that the problem of emission of nitrous oxide (270 times more potent green house gas than carbon dioxide) from large scale use of biofuels have been under estimated so far. This could also cloud the future of biofuels. (The Hindu 091209, The Business Standard 311209)

POWER OPTIONS

Electricity savings could wipe out deficit The potential electricity saving in the Indian economy is large enough to wipe out the energy deficit. This is shown by a recent study on electricity conservation potential in the country, commissioned by the Bureau of Energy

Efficiency and conducted by the National Productivity Council. The study shows that the total energy saving potential in the 35 states and Union territories of India is 75 360 million units, while the overall energy deficit is 73,090 MU. This is based on data for the financial year 2007-08. "Though the study is based on the 2007-08 data, the trends underlying the energy saving potential and the deficit remain the same even today" said the BEE Director General Ajay Mathur.

The biggest energy saving potential is in Andhra Pradesh (8,209 MU, over three times the energy deficit of 2,628 MU), followed by Gujarat (7928 MU), Tamil Nadu (7822 MU), Maharashtra (7757 MU) and Karnataka (6290 MU). Bulk of these energy savings could be achieved by simply moving to more energy efficient agricultural pumpsets. Overall energy saving possible by moving to more efficient pumpsets across the country is 27,790 MU, which is 37% of the total saving potential. Andhra Pradesh has the highest saving potential as far as pumpsets are concerned, followed by Gujarat, Karnataka and Tamil Nadu.

Energy saving potential is also significant in the domestic sector (32%), industries, including small scale units (25%), Municipalities (4%) and Commercial building (2%). On average, electricity saving potential in India is estimated at 15 per cent of consumption, on a conservative basis, the study says. The other states where savings potential is far in excess of the deficit include Karnataka, Kerala, Tamil Nadu, Chhattisgarh, Delhi, Jharkhand, Orissa, Punjab, Rajasthan and West Bengal. The power ministry is hopeful that this study will excite the states and get them to act on energy efficiency initiatives. Energy Efficiency is one of the eight missions under India's National Action Plan on Climate Change. The mission proposes to create a market for energy efficiency by introducing tradable energy efficiency certificates. (Business Standard 110110)

Centre to take over small hydro in J&K The Department of Science and Technology of the Central government, under the Integrated Rural Energy Planning Programme (IREP), has taken over the maintenance of nearly 1,000 micro hydel projects across the state. The projects have total installed capacity of nearly 5,000 MW and centre plans to hand over the plants to the youths after their renovation. "In a high-level meeting in New Delhi recently, the Union government has asked us to take charge of all projects and make them functional with the assistance of local administration," Director, IREP, Abdul Majid Wani said. "We have also been asked to verify the actual number of such projects that the Army claims to have built or upgraded the existing watermills," Wani added. "During verification it has come to light that 90 per cent of projects are in a shambles and need repair. We are preparing estimates of these projects," he said. The Army had set up some of these projects under the Operation Sadbhavana funded under the Prime Minister's Reconstruction Plan.

The department was also bracing up for upgrading all 10,000 traditionally run watermills locally called 'gharats' registered with the Revenue Department. These watermills could be turned into micro hydel projects with multi-functional capacities used for lighting up villages, grind corn and run lathes. "All paperwork will get completed in March and the work would start in April," he added. In the first phase, four districts have been selected; two each from Jammu and Kashmir regions. From the Kashmir region, Srinagar and Badgam have been chosen. Official figures say that Badgam has 217 watermills run by the local population, whereas, eight projects set up by the Army. In the Jammu region, Udhampur and Reasi have been selected where the Army has set up two and 43 mini-power projects, respectively, whereas the department is surveying the traditional watermills. (The Tribune 101209)

Power to Arunachal border villages through solar, small hydro The Prime Minister had announced a package of Rs. 550 crore for Electrification/ illumination of border villages of Arunachal Pradesh through solar and small hydro. This package has been divided into two parts. Part I includes completion of 46 ongoing small hydro and is being directly funded by the Planning Commission. Part II of the project which involves Electrification/ illumination of 1058 villages through solar and micro hydel projects is being funded by Ministry of New and Renewable sources of Energy involving a cost of Rs 275.53 crore. Out of 1058 villages to be benefited, 546 villages are envisaged to be illuminated through solar home lighting systems and balance 512 are proposed to be electrified through micro/ small hydro projects. The target is to achieve this by 31st Dec, 2009 (money spent so far: Rs 81 crores) for 580 villages, by 31st Dec, 2010 for 150 villages and by 31st Dec, 2011 for the remaining 328 villages (MNRE monthly report Dec 2009)

POWER SECTOR

Mah tells power cos to use recycled drain water The Maharashtra govt, in a bid to overcome water shortage, has decided to use treated drainage water in all power projects. Power developers have been asked to enter into an arrangement with civic bodies for treatment of drainage water, which can be used for cooling and ash disposal. "Water is required for boiler make-up, cooling and ash disposal. These operations require huge water and there is a scarcity, and thus the decision," said energy minister Ajit Pawar. A 400-MW plant generally requires 37 million litres per day of water. MahaGenco has already brought in the Nagpur Municipal Corp for use of recycled drainage water in the 1,980 Mw, coal-based project near Nagpur. (Business Standard 291209)

Rosa Power plant switched on The 300 MW first unit of the 1200 MW Rosa power plant of Reliance Power in Shahjahanpur district in Uttar Pradesh started generating 20 MW power on Dec 28, 2009. The plant draws water from Garrah river. (The Times of India 291209)

FLOODS

S&T Ministry's Operation flood Under Sanjeev Nair, a joint secretary in the department of science and technology, a disaster management cell, consisting of 14 scientists, has been working since late 2006 to use satellite imagery for flood relief and, perhaps this year, even to forecast where a river will do its most ruinous damage. In 2006, the notion of using satellite imaging for disaster analysis came under discussion. "It was just a concept at the time," he says. "How to really translate it into an application was the question."

Last year, Nair's team began to work with Mike 11, a commercial software package that simulates water flow and levels in rivers and reservoirs around the world. The government's earlier flood modelling system, says Pavan Kumar Singh, a senior research officer at the National Disaster Management Authority, had long been outdated. "A model has to take into account the new urbanization along the river, the desilting, the existing drainage systems," he says. Mike 11, by incorporating these factors, "can definitely be adapted to work in India, although I don't know how far it can help in predictions". In their pilot project, Nair's scientists worked on the Sabarmati and Tapti rivers in Gujarat. But it was the start of an effort.

Mike 11's inbuilt model is a generic one. "We have to calibrate new models based on each river, testing its sensitivity for many variables," Singh says. Knowing how the rivers flooded in the past, Singh and his colleagues patiently figured out how sedimentation, or topography, or releases of dammed water, or snowmelt, or soil quality affected flood water levels. The result was a model that had an error of 10-20%. But the team still hungers for better field data. "We've had cases where one automated weather station has reported 1mm rainfall, and another station in the same area has reported 3mm," he says wryly.

In 2010, the flood models will tackle more brawny rivers: the Kosi, Gandak and Baghmati in Bihar, and the Mahanadi, Brahmani and Baitarani in Orissa. Nair also hopes to push the project to the next level. Once the six specifically calibrated models for these rivers have been developed, his team will feed three-day rain forecasts, from Kolkata's Bose Institute and the Indian Institute of Technology, Kharagpur, and learn, hours in advance, which districts will get flooded. "We want to try this during the monsoon," Nair says. "That will, obviously, be the real acid test for us." (Mint 010110)

'Back to nature' cuts flood risks: US Study Reconnecting flood-plains to rivers will help reduce the risk of future flooding, suggest US scientists. A study by US researchers said allowing these areas to be submerged during storms would reduce the risk of flood damage in nearby urban areas. Writing in Science, they said the risks of flooding were likely to increase in the future as a result of climate change & shifts in land use.

"We are advocating very large-scale shifts in land use," said co-author Jeffrey Opperman, a member of The Nature Conservancy's Global Freshwater Team. "There is simply no way economically or politically that this could be accomplished by turning large areas of flood-plains into parks. What we are proposing in this paper is a way that this strategy can be compatible, and even supportive, with vibrant agricultural economies and private land ownership."

They said that man-made flood management systems, such as levees, also had an ecological impact. "Control infrastructure prevents high flows from entering flood-plains, thus diminishing both natural flood storage capacity and the processes that sustain healthy riverside forests and wetlands," they observed. "As a result, flood-plains are among the planet's most threatened ecosystems."

The reconnection programmes would deliver three benefits, they added: Reduce the risk of flooding, Increase in flood-plain goods and services and provide greater resilience to potential climate change impacts.

In other parts of the world, Dr Opperman said that there was a range of agricultural strategies for private landowners that would be compatible with allowing areas to be flooded. "There are emerging markets for ecosystem services, such as carbon sequestration and nutrient sequestration," he explained. "These are services that flood-plains do provide, so with various climate policies there will be a price for carbon."

The researchers cited the Yolo By-pass, in California, US, in their paper as a successful demonstration of the idea they were advocating. The scheme absorbed 80% of floodwater during heavy storms, they said, protecting the nearby city of Sacramento. "During a March 1986 flood, the by-pass conveyed [about] 12.5 bn cubic metres of water, more than three times the total flood-control storage volume in all Sacramento basin reservoirs."Without the by-pass flood-plain, California would need to build massive additional flood-control infrastructure," they observed.

The Yolo by-pass was created back in the 1930s, when a 24,000 hectare flood-plain was reconnected to the Sacramento River. The scheme was introduced when it became apparent that a "levees only" approach would not offer the required flood protection. "It's connected in an engineered way, which mean that when the river reaches a certain volume it flows over a weir and enters the flood-plain," Dr Opperman explained. He added that the scheme also had numerous additional ecological benefits: "In recent decades, people began to notice that this area was a phenomenal habitat for birds."In the past 10 years, people recognised that native fish were moving from the river on to the flood-plain, and deriving all of the benefits that fish get from natural flood-plains. "It was an excellent place for fish to spawn, and for juvenile fish to be reared." (BBC 291209)

WATER POLLUTION

Damanganga destroyed by Vapi Indusries, GPCB The polluted effluents from the Vapi Industrial area in South Gujarat have made Damanganga one of the most polluted rivers. The pollution is so severe that there are no fish even in the sea at least in 20 km stretch where the river meets the sea. Fisher-people families have lost their livelihoods. Now even the groundwater is getting polluted. The sand along the coast has turned black. The industries are releasing untreated poisonous effluents into the river, onto the land and even in groundwater. The problem becomes worse in monsoon when the industries also release additional pollutants collected across the year. The effluent treatment plants are not working. The Gujarat Pollution Control Board or the Gujarat government are not bothered. (Jansatta 281209)

Fish death in Sutlej in Punjab Thousands of fish have been found dead in the Sutlej River downstream of Nangal dam, 3 kms around the Beladhyani village. This is the 5th incident of its kind recently. (Bhaskar 201109)

HC orders shifting of Kanpur tanneries The Allahabad High Court has directed the Uttar Pradesh Govt to ensure that the tanneries in Kanpur are shifted to localities from where discharge of effluents into the Ganga can be effectively checked. A Division Bench directed the State Principal Secretary for Industrial Development to comply with the order. The Court also asked the Additional Advocate-General to file an affidavit describing the steps taken by the State Govt against the Municipal Commissioner of Kanpur against whom a complaint and recommendation for prosecution had been made by the UP Pollution Control Board. The Board had, by way of an affidavit, accused the official of failure to check discharge of effluents into the river despite repeated court orders. Meanwhile, a 3-member committee constituted by the Court to inspect the pollution level at the Sangam, where the annual religious congregation of Magh Mela is under way, has submitted that though the water is sufficient in quantity, it is not potable. The Court has asked the authorities to continue releasing 2500 cusecs of water. (The Hindu 130110)

Boras Dam water polluted; notices to 50 companies The Maharashtra govt has issued notices to 50 chemical companies in Ratnagiri district after a chemical was dumped on a national highway, polluting a dam supplying water to over 25,000 people in Khed sub-district. 'The reddish-brown chemical was dumped by a truck late night on the Mumbai-Goa highway, around three km from the Boras Dam,' said, revenue department official of Khed. The notices have been served on the companies to ascertain whether the rogue truck belonged to any of them and what kind of chemical was dumped there. The incident came to light when villagers from Khed, Boras, Shivkhud and Shivbudh found thousands of fish, crabs, snakes, lizards and other creatures dead in the vicinity of the dam. Some of the major companies which have been issued notice are Hindustan Unilever, Hardilia Chemicals, Gharda Chemicals, Punjab Chemicals, Ratnagiri Chemicals, Garuda Chemicals and MDH Chemicals. (Indo Asian News Service 291209)

Rihand dam water poisoned by effluents The release of untreated effluents from the Kanoria Chemicals factory into the Rihand Dam is making the water of the reservoirs poisonous. No fish survives in the reservoir and the people from the villages on the periphery of the reservoir are dying when they have to drink water from the dam in absence of any alternative arrangements. Earlier the ash from the NTPC, Hindalco and other power plants was being dumped into the reservoir. Local people have demanded action against the Kanoria Chemicals, compensation to the families of the dead and alternative water arrangements. (Jansatta 171109)

HC pulls up PCB, RSP Expressing concern that the Rourkela Steel Plant is polluting environment, the Orissa High Court has directed the Pollution Control Board to take steps against RSP officers for non-compliance of the environmental norms and mismanagement of the fly ash. Disposing a writ petition filed by Rourkela Shramik Sangha on the increasing pollution by the RSP, a division bench said the report submitted by the PCB was quite alarming. However, the bench wondered why the PCB had not taken any effective action against the RSP. "As a statutory body the PCB has totally failed in its duty to achieve the result desired by the general public, who are the worst sufferer of the evils of the polluted air and water," the bench said in the judgement. The court has also held the RSP authorities responsible. The fly ash has been found disposed off to Guradi Nullah which flows to Brahmani river causing water pollution, the bench said in the judgement delivered on Dec 17.

PCB has no culture of enforcement At a time when Orissa's Talcher represents one of 24 pollution hotspots of India and Sukinda has been awarded dubious distinction of being one of the most polluted areas of world, for State Pollution Control Board it seems there have been no environmental "wrongs". The SPCB has launched prosecution only on two occasions on account of water pollution, three cases relating to air pollution cases and eight cases for violation of Environment (Protection) Act during past five years.

The number of cases by SPCB seeking penalty against environmental culprits has gradually come down since 1986 under both Water (Prevention and Control of Pollution) Act and Air Act. In one out of two cases on violation of Water Act, the SPCB acted only after Supreme Court asked it to do so. As per information obtained under Right To Information Act, the board has issued 373 show-cause notices to polluting industrial units during past five years. However, these notices have mostly ended in further slapping of closure notices and then granting of permission to re-operate polluting

units on "rectification". Issuance of show-cause notices is many times intended at forcing operators of polluting industries to grease the palm of authority.

"Although SPCB has enforcement mechanism, it does not have enforcement culture" said senior High Court lawyer Bibhu Prasad Tripathy. Environmental activists also questioned SPCB's ability to curb pollution saying that no culprit of environment was sent to jail so far. One could well imagine how serious the board was in dealing with pollution. (The Economic Times 221209, The Hindu 020110)

Coal waste darkens the Kelo River in Chhattisgarh Untreated mining waste is being discharged into the river around Khamaria, but the govt is doing nothing about it. The Kelo river runs through Khamaria village's forests and irrigates the agricultural lands. The water that nourished this and neighbouring villages is turning black. Upstream of the Kelo's waters near Khamaria is a massive operation of an underground coal mine owned and controlled by Monnet Ispat and Energy Limited. As the crow flies the mine is about 3 km from Khamaria, and a winding road journey would take about 5 km. "That's the source of all the muck in the river", remarked one resident of Khamaria, looking at the coal deposits choking the river's flow. Kelo is very important drinking water source for all of Raigarh district, and also a critical tributary of the river Mahanadi. The river is already facing impacts of pollution at points closer to Raigarh city where a lot of the industrial effluent is visible.

Monnet Ispat's underground coal mining was granted environment clearance in the year 2000, for mining operations in Meelupara and Kondkel villages in Gharghoda taluk of Raigarh district in Chhattisgarh (at that time in undivided Madhya Pradesh). The clearance was granted under the Environment Impact Assessment Notification, 1994 for an area of 860 ha, with a targeted production capacity of 1.1 million tonnes/ annum. The clearance was granted with a set of 17 general conditions and ten specific conditions, clearly laid out in the letter issued by the MEF. These conditions are clear that waste water treatment should take place within the leased area for mining. But residents of Khamaria were certain that discharge from the mining area was discolouring their waters.

Thus, even though it is clear that the area needs scientific enquiry and executive action, such actions by the govt are not imminent. The residents' distress is visible. "We need to ascertain these facts scientifically and need help to do that honestly. This is not just for Khamaria but also for other villages like Lamdarha, Gare, Kosampali, Kondkel, Kunjemura and Tamnar", says Dr.Harihar Patel, a resident of nearby Gare village. Dr.Patel, a practising ayurvedic physician and acupuncture specialist, has noticed the failing health of the people of the area and heard repeated complaints of fellow villagers regarding the regular discharge from the Monnet underground mine. He is determined that things should not get worse, as they might if other mining companies also start their operations in the area. Desperate villagers find no help from the various institutions of govt that are supposedly established to safeguard the public interest - the environment, public health, pollution control, Union Environment Ministry and other wings. (Kanchi Kohli in Indiatogether.org, 311209)

Farmers to Govt: Don't subsidise polluting units Tamizhaga Vivasayeegal Sangam, a farmers' organisation, has urged the Tamil Nadu State Govt not to provide subsidy to dyeing, bleaching and other textile processing units and tanneries to set up effluent treatment plants. In a release the organisation says Chief Minister M. Karunanidhi's announcement on Jan 4 promising Union and State govts' subsidy to the units to set up treatment plants could be in violation of law if the Madras High Court were to favour the farmers in the case they filed to implement Govt Order 213/89 and 127/98. The aforementioned orders say that polluting industries should be at least 5 km away from water bodies and irrigation channels and citing the same the farmers have filed a case asking for industries within the 5 km radius to be removed. The release says the CM's promise would serve as an encouragement to the industries that pollute and would appear that the Govt supported pollution. (The Hindu 080110)

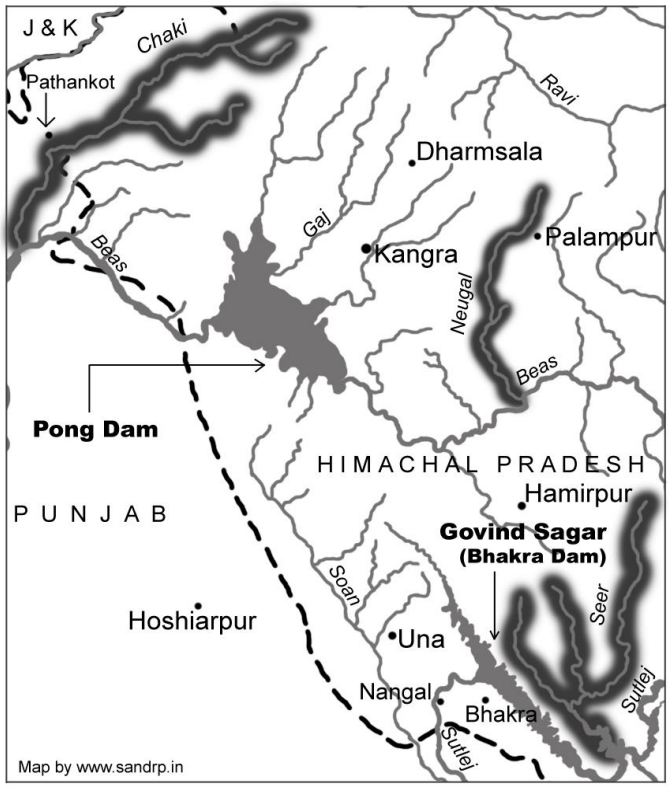
Cities destroying Rivers: CPCB Rivers, lakes and other water bodies in urban India are going to waste, with untreated water flowing into them like never before. Nearly 90 % of the liquid sewage — 38,254 million litres — generated daily by cities that flows into streams, rivers and sea doesn't meet environment norms. Water should be of bathing quality to meet the standard. Water waste generated by cities, where 36 %t of the country's people live, is polluting over 70 % of the water sources, says a report by the Central Pollution Control Board. India can treat 11,500 million litres of waste water every day — 31 % of what is generated. Poor maintenance, however, leaves only 39 % of it up to the environment norms, the report with data from 908 cities says. The problem is much bigger, as only 38 % of the population in these cities has access to sanitation and 78 % to clean drinking water. Urban sewage was extracting a huge ecological and public health cost because of increasing water pollution. "The cities are polluting their future drinking water sources," it warned.

Emerging cities such as Varanasi, Faridabad, Agra, Surat and Cochin have been identified as danger zones, generating 68 % of the total waste without any treating facility. However, the report claim that Hyderabad, Vadodara, Chennai, Ludhiana and Ahmadabad can treat all of their sewage is doubtful. In the remaining 900 cities, the capacity varies from 5-60 %.

The study says that the sewage water has nutrients like nitrogen and Phosphorus. If an economic value were to be assigned to the fertilising potential of this wastewater, Rs 1091 million is being lost annually. (Hindustan Times 070110, Indian Express 110110)

RIVERS

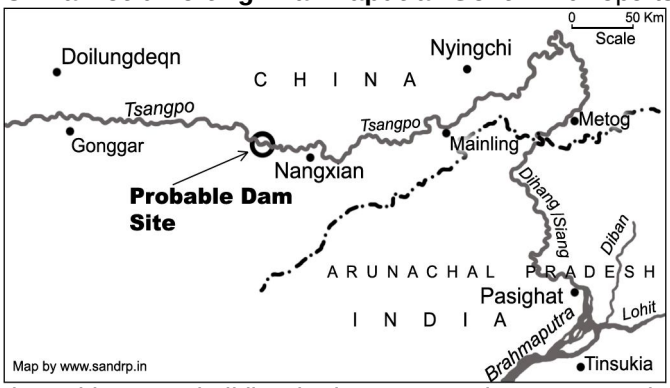
Himachal bans mining in three rivers The Himachal



Pradesh government has banned mining in three rivers. The rivers include Chaki and Neugal in Kangra district and Seer in Bilaspur district, the minister for IPH Ravinder Ravi said. The mining has been banned in the said rivers as many drinking water schemes in them were getting adversely affected due to uncontrolled mining. There are about 100 drinking water schemes in the Neugal river that feed Palampur and its surrounding areas. However, the illegal mining was affecting these water supply schemes. The Chaki River would supply water to the Phena Singh canal and Shah canal coming up in Kangra district. There are hundreds of legal and illegal crushers set up on the banks of Chaki river. The rampant illegal mining in rivers had eroded the bed level of river near Punjab-Himachal border by at least about 30 to 40 feet. This has affected discharge in many water supply schemes in the river bed. The government investment worth crores that has been made is likely to go waste due to illegal mining.

The minister also admitted that about 35 illegal crushers were operating in the Chaki river. Besides the crushers in Himachal, about 200 crushers in Punjab territory near the state border have also affected the ecology the river. The illegal mining in the Chaki was going on unchecked despite the fact that Indian Air Force and civil aviation departments had written letters to respective authorities against it. The illegal mining was affecting the establishments of said organisations in the Pathankot area. The minister said that once the illegal mining was banned in Himachal, the matter of illegal mining in Chaki river would also be taken up with the Punjab govt. He further said that to make the ban effective, the powers to challan the illegal mining were also being extended to officers of the electricity and IPH departments. The officers up to the level of junior engineers would be given the powers to challan anyone carrying out illegal mining. He also said that besides the said three rivers, the govt was also mulling banning mining in other rivulets where drinking water schemes have been implemented. (The Tribune 070110)

China not diverting Brahmaputra: Govt Amid reports



that China was building hydropower projects across the Brahmaputra, which in turn may affect the flow of the river in India, Union Water Resources Minister Pawan Kumar Bansal said no diversion of the river's waters had been observed on Chinese territory as of now. However, he underlined the need to remain "watchful" to prevent any such eventuality. His statement, by implication, did not deny that China could be building hydropower projects on Brahmaputra.

"There is no evidence (of diversion) whatsoever. No reduction has been noticed in the 79 BCM of water that flows into India from China" Bansal said on the sidelines of a media workshop in Parliament.

Strangely, India, in the meantime, is trying to pre-empt any move by China by establishing a right over the 79 BCM flowing into India from China. The government is planning to invest in new hydel projects in Arunachal Pradesh in a bid to ensure that if in future there is reduction in the quantity of Brahmaputra waters flowing in from China, India can stake claim, saying it needs 79 BCM for own use. Such attempts are likely to be futile, firstly because China has refused to recognise such rights in case of Mekong. Worse, these projects would be inflicting wounds on the land, environment and people of the North East India. The projects are in any case not required if we look at the electricity requirements of the North East India, nor are they economically or socially viable.

Meanwhile, Bansal said the spot where China was reported to be building a dam was 1,100 km from India's border. "It is a run of the river (project). There already are 15 small dams on their side of the river, which they are using for local use. Our concern should only be that

there is no diversion of water and that they (China) do not start increasing the height of dams or build up a reservoir. Through satellite photos we know there is some activity at the spot," Bansal said.

As per the Water Resources Minister, beyond some data sharing between the two countries there is no MoU or treaty on the usage of Brahmaputra waters. "It is their water in their state. As long as what they do is confined to their region and does not affect us, there should be no problem," he said. Here again India's water resources minister is wrong. He should also be concerned that even the run of the river hydro projects have significant damage potential for the downstream areas, in terms of sudden stoppage and releases of water. Such projects also increase the silt content in the river and sudden flow changes have enhanced capacity to erode the downstream area.

Reports in China's official media also suggest that middle reaches of the Brahmaputra (Yarlung-Tsangpo) river will have five dams for hydro-power projects, slated for completion by 2015. Other reports say more dam projects on the Brahmaputra are likely to be announced soon.

Foreign secretary Nirupama Rao on Nov 4, 2009 said China had denied any such activity. Recently, Foreign Minister SM Krishna also said experts engaged by the government did not come up with any evidence of a dam being built by China in the area. The issue was also raised at a meeting between Prime Minister Manmohan Singh and his Chinese counterpart Wen Jiabao on the sidelines of the East Asia Summit in Thailand in Oct 2009. (The Tribune 061109)

Now Ganga needs World Bank Support? The World Bank has promised with an initial assistance of $1 billion for the government of India's program to clean and conserve the Ganga River, to be provided over the next 4 to 5 years. In a Joint Statement, the Minister of State (Independent Charge) for Environment and Forests, Jairam Ramesh, and World Bank Group President Robert B. Zoellick made this announcement. Expectedly, the statement did not include large dams and large hydro among the threats to the Ganga, as the World Bank and the MEF is guilty of pushing many such projects.

The Bank President said that the Bank will begin its engagement by facilitating the exchange of relevant experience from elsewhere. Unfortunately, Bank is known more for destroying many of the rivers around the world rather than helping conserve, clean or rejuvenate rivers. According to the Joint Statement, the World Bank will seek to support the Government's program through financing over several phases, with the first of several loans/credits planned for presentation to the Bank's Board for approval between July 2010 and June 2011. The initial phase of any Bank assistance would focus on three key areas:

· Building the institutions and knowledge base for basin management: Bank support will seek to help develop the newly constituted National Ganga River Basin Authority (NGRBA) into an institution with Knowledge Center to manage the basin in a sustainable manner.

· Helping build a global consortium of financiers: The Government of India estimates that it will require an initial investment of $ 4 billion to achieve its immediate objective of stopping all discharge of untreated sewage and industrial effluent into the Ganga by 2020.

· Priority investments: The Bank will seek to finance select investments aimed at cleaning the Ganga, where pollution levels in certain stretches touches ten thousand times India's bathing standards. This initial portfolio of projects will be finalized by NGRBA by March 2010.

Zoellick said the Bank's experience in similar programs globally shows that river management and clean-up programs need to be a "compelling proposition for all stakeholders" in order to be sustainable. Unfortunately, the constitution or the process so far has had no role for the people living on the banks of the river or elsewhere in the basin.

Ganga to be Nirmal and Aviral by 2020! Meanwhile, on the eve of year 2010, the Centre has expressed confidence that by 2020 the polluted River Ganga would be cleaned. This confidence, as if money can clean the river shows how non serious the govt is about the task. "The Union government is confident of getting the holy Ganga River cleaned by 2020. Rs 15,000 crore will be spent for this purpose under the river development fund," environment minister Jairam Ramesh said. The Centre plans to save the river by making it nirmal (clean) and aviral (free flowing), he said. (The World Bank Press Release 021209, The Times of India 010110. PIB 311209)

What is the value of PM's promise on Yamuna? The Prime Minister had constituted on 24th August 2007 a high powered committee called the Yamuna River Development Authority (YRDA) under the Chairmanship of Hon'ble Lt Governor of Delhi with a well defined mandate and a 3 monthly reporting schedule.

Soon after taking up the charge of the Committee and holding of a number of its meetings, the Hon'ble Lt Governor found it appropriate to declare a moratorium (as an intent) on any new construction in the river bed / flood plain in Delhi (and has kept to it) but the fact remains that the said moratorium is no more than the honest word of a high level authority with little guarantee of it being kept, if for whatever reason and sooner or later, the present incumbent demits his office. There is no official communication or order, other than through word of mouth, as reported in the media that confirms the said moratorium.

In any case, the fact remains that PM had constituted the said high powered Committee as an interim measure

till the said Committee in accordance with point e) of its terms of reference came up with a suggested design for a statutory framework, which takes forward the policy framework and an integrated plan for the river which addresses issues of both quantity in terms of river flow and quality in the Yamuna river. The said policy framework as well as the integrated plan for the river was to be devised by the YRDA. The only thing that one has heard for the river for quite some time is the much advertised Sewage Interceptor Scheme of the Delhi Jal Board, which experts like the Centre for Science and Environment have adversely critiqued on several grounds. But even this scheme, if and when successful, would only be able to address the quality aspect of the river and the paramount issue of quantity in terms of river flow would remain unaddressed.

It is a measure of grave concern that even after almost two and a half years of the constitution of the said high powered Committee there is nothing in the nature of either any policy framework; an integrated plan for the river or the suggested design for a statutory framework, in the absence of which while the river's interest continues to suffer there are activities (impacting both the flow in the river and the river's flood plain) taking place or planned both upstream and downstream of Delhi in Himachal Pradesh, Uttarakhand, Haryana and in UP which would compromise the future of the river for all times to come.

The recent construction plans of Renuka dam in Himachal Pradesh, the plans in the river bed along the river between NOIDA and Agra as well as in Agra and in Vrindavan (being vehemently opposed by local groups) and water abstraction plans upstream in Haryana are but few examples of what is in store for the already beleaguered river. Thus it may later be too late for any remedial action/s for the river to be initiated or successfully implemented. (Yamuna Jiye Abhiyan letter to Prime Minister 060110)

Gomti Sewage Treatment Plant in Lucknow The Gomti river, which is a major source of drinking water for over 32 lakh people, is polluted the most in its 14-km stretch in the state capital, owing to millions of litres of untreated domestic waste that is released in it daily. A sewage treatment plant, which is Asia's largest, is nearing completion. It will have a capacity of treating 345 million litres daily, which is sufficient to take care of the effluents carried by 26 drains into the river. The STP was planned in 2003 under the Gomti Action Plan, but got delayed due to frequent changes in its location. Work on the Rs 169 crore project began in 2008 in Bharwara village in Gomti Nagar Extension, the plant is likely to be functional from March 2010. However, the impact on the pollution level in the river and the change in its surroundings will be visible only by July because the formation of a sludge blanket, where the filtered water is treated in anaerobic conditions, will take at least four months.

The Gomti, which is a tributary of the Ganga, originates from the Gomat Taal in Pilibhit and meets the Ganga in Ghazipur after traversing 900 km. Besides Lucknow, it supplies drinking water to 14 other towns located on its banks. These include Lakhimpur Kheri, Sultanpur and Jaunpur. The standard level of dissolved oxygen in Gomti should be above 4 mg per litre. The level is 7 mg per litre at Gaughat where the river enters the city, and is almost nil at the Gomti barrage. The situation becomes particularly bad in summer when the water level decreases, and also in the rainy season when large amount of sewage, accumulated in drains, reaches the river in bulk. The STP will produce 400 cubic metre methane per hour which will generate 1.2-1.5 MW power that will be used to run the plant. (Indian Express 040110)

Punjab plans to clean Sutlej, Beas The Punjab government has worked out a 2 year plan on pollution of the Sutlej and Beas. The state government would spend Rs 1,388 crore for the cleaning of the Sutlej (Rs 1076 crore), Beas (Rs 222 crore) and the Sirhind canal (Rs 90 crore. The government had received an assurance from the Bhakra Beas Management Board, National Fertiliser, Punjab Alkali and Ropar Thermal Plant that they would immediately stop the discharge of untreated water into the Sirhind Canal. The biggest cause for concern to the state government is the polluting industry of Ludhiana that was discharging wastes into the Sutlej.

The biggest culprits were electroplating and dying units spread over five clusters. Of Rs 1,388 crore to be spent in the state, a project worth Rs 676 crore had been approved and detailed project reports were under preparation. Three municipal towns along the canal, Nangal, Anandpur Sahib and Ropa have been allotted funds to the tune of Rs 21 crore, Rs 15 crore and Rs 54 crore, respectively, for laying down the sewerage and the installation of Sewerage Treatment Plants. 14 cities were polluting the Sutlej. Rs 416 crore had been sanctioned for Ludhiana alone and funds for other towns. An action was being initiated in 11 cities causing pollution in the Beas river. (The Tribune 171209)

MEF's Review of 2009 The issue of hydro electric projects In the upper reaches of Bhagirathi (Loharinag Pala , Pala Maneri and Bhairon Ghati) to be studied by Union Ministry of Environment and Forests and Power and report submitted to NGRBA in 60 days time. Rs 250 crore have been allocated in the Union Budget for 2009-10 for NGRBA. Rs 500 crore per year allocation in the remaining 2 years of 11th Plan has been agreed to by the Planning Commission. Empowered State River Conservation Authorities have been notified for West Bengal, Jharkhand and Uttar Pradesh. Pilot projects of Sankat Mochan Foundation at Varanasi (pond based treatment) and National Botanical Research Institute (plant based wastewater management) at Hardwar have been approved, in order to encourage innovative approaches to river cleaning. (PIB 311209)

AGRICULTURE

Success of farming without chemicals in Andhra Pradesh What started as an experiment in Pannukula village in Khammam village in Andhra Pradesh a few years ago has today become a movement that spread to 20 lakh acres in 18 districts in the state. This is the future of the climate friendly agriculture where the farmers are able to repay their outstanding debts rather than incur debts for farming. Centre for Sustainable Agriculture, among many others have made this possible. (Devinder Sharma in Bhaskar 080110)

Cyclone affected farmers turn organic The farmers in Sunderbans, after saline water flooded their farms due to cyclone Aila, thought they would have to give up farming. But guided by Coimbatore based Revathi Thiruvenkataswamy, director of the Tamil Nadu Organic Farmers' Movement, took to organic ways and not only their lands have started yielding higher returns, but their expenses have come down and the value of their crops is higher. The new method is also more climate friendly, a very important issue for the coastal farmers. (Indian Express 100110)

Zero tillage success in Punjab The specialised zero-tillage seed drill, which could sow seeds in fields without ploughing it, was introduced by the Mexico-based International Maize and Wheat Improvement Centre (CIMMYT), one of the key technologies under the environment-friendly conservation agriculture, has proved a bigger success in India.

The prototype of the zero-tillage seed drill given by the CIMMYT to India in 1989, needed to be worked upon to develop models suitable for local conditions. The effective public-private partnership in close association with farmers and local administrations helped India develop better and more cost-effective models of the drill. This triggered the take-off of this technology in the north-western Indo-Gangetic plains where rice-wheat cropping sequence is in vogue. India in particular was successful at developing local manufacturing capacity to adapt and produce zero-tillage drills at a competitive cost. In 2003, the price of zero-tillage drill was $325 in India. Thanks to the availability of affordable machines, the zero-tillage technology began spreading from the late 1990s and gathered notable momentum in the early 2000s. Between one-fifth and one-fourth of the wheat area is reckoned to have already come under this system of farming. Surveys of farm households in 2003 and 2004 found that 34.5 per cent of the sampled farmers in Haryana adopted zero tillage. The studies on the effectiveness of the zero-tillage system in India have shown that it could raise farmers' income by about $97 (roughly Rs 4,559, with the dollar at Rs 47) per hectare. This is because of both increase in yield (5-7 %) and reduction in cultivation cost (15-16 %).

The major benefits of the zero-tillage technology are in terms of saving on cost, water and time. Farmers practicing zero tillage spend much less time and energy on the crop sowing because land preparation and seeding operations are performed in a single run of the zero-tillage drills through the field. Normally, farmers make six to eight passes through the field for ploughing, leveling and seed sowing. This helps the farmer save on diesel and labour even while allowing him to finish off with planting operation quickly. The saving in diesel is estimated at around 36 litres per hectare for farms using tractors, lowering the overall sowing cost by up to 80 per cent. Besides, it takes care of the need for timely planting of the wheat as the crop otherwise is subjected to heat stress towards the end of wheat- growing season which can reduce yield by 1 to 1.5 % per day.

Though more research is needed to quantify the full range of environmental impact of zero tillage, some advantages are self- evident. Even more important, from the Indian standpoint, is the beneficial effect of zero tillage on the unhealthy and environmentally-detrimental practice of burning the leftover stubbles of paddy in a hurry to plant wheat. This generates tremendous amount of smoke, impairing the environment and causing health hazards like itching of eyes and aggravation of breathing illnesses. Under zero tillage, farmers can plant wheat, leaving the stubbles of the previous crop intact. (Business Standard 171109)

Climate friendly Agri miracle in Mirzapur Suryakant Jalan, a businessman bought 25 acres of stony, barren land in Dagmagpur village in Mirzapur district in 1998 at throw away prize and starting water harvesting through check dams and cattle rearing. Slowly he expanded the work to 500 acres and today it is lush green land through organic farming practices. He has inspired people in surrounding villages to follow his practice and aims to expand the work to 2000 acres by 2015. (Bhaskar 080110)

11th Five Year Plan: Agriculture sector a failure? "We are now writing prologues to the mid-term review of the 11th Plan… To begin with, the foodgrain sector has collapsed…" The implementation of the Rashtriya Krishi Vikas Yojana and its quarterly implementation review at state and district level "has not happened at all. The Central schemes are in a departmental mould. There is no understanding of the resource conserving strategies of the plan and their centrality in achieving growth targets. In fact the actual growth of agriculture is resource wasting. We looked for the largest increase in area in paddy. It was in Gujarat, which is very water scarce. Sugar area is going up in the driest areas in the Deccan and so is dairy farming, which is a very water-intensive activity. Neither the technology extension, nor the economic policies underlying the agricultural plan has made any progress. Dryland crops like oilseeds are crippled by cheap imports." (YK Alagh in Financial Express 110110)

Agri Ministry's New manual on drought The central government on Jan 4, '10 released a manual for management of drought mitigation and relief measures. "The manual is expected to prove an effective practical guideline for administrators, experts and civil society in implementing drought mitigation and relief measures and for alleviating distress of drought affected people," an official statement said. The manual suggests procedures and measures that need to be taken for alleviating drought. India has witnessed 7 major droughts during the last three decades, which not only impact farm output, but also leads to shortage of drinking water, fodder deficiency and low water in reservoirs. Of the 22 major droughts, last seven have occurred during 1982, 1986, 1987, 1988, 1999, 2000 and 2002. In 2009, 14 States faced drought in 334 districts. The department of agriculture and cooperation had requested the National Institute of Disaster Management to prepare a manual reflecting a comprehensive and coordinated approach to management of drought. (Financial Express 050110)

Indian Express twists facts again: Vidarbha suicide report The Indian Express newspaper published a front page news on January 10, 2010 titled, "First time in 4 years, annual suicide tally in Vidharbha is below 1,000". The blurb below spills out the business connection. It says - Key to the dip: Rs 1,300-crore loan waiver, Bt cotton crop, market prices. The whole of the report has nothing at all to substantiate this claim that Bt Cotton has anything to do with the decrease in suicide of farmers of Vidarbha in 2009. Indian Express has been doing such reports in the past, as SANDRP had earlier pointed out in the context of its reports on Big dams. It is shocking that Indian Express twists facts even in news reports to push its pro big dam, pro business bias. (Indian Express 100110, Devinder Sharma in countercurrents.com 110110)

Govt wants more of Contract farming Reflecting the government of India perspective, former member of Planning Commission has said that the questionable practice of contract farming needed to be further evolved and government needs to play guiding role in this. Planning Commission member Prof Abhijit Sen also spoke at the meeting. (Business Standard 131109)

URBAN WATER SUPPLY

Political Economy of Urban Water Supply The fact is that no municipality can do what economists preach — raise prices to capture the full costs. Instead, they spend money on supply and as costs go up, they have to increase the subsidy to the users or supply less to most. On an average, Indian cities charge Rs 2-3 per kilolitre (kl), when they should be charging Rs 8-10 per kl. And if their distribution losses are taken into account, charge Rs 10-14 per kl. If we add sewage costs, then the bill increases by roughly five times the cost of water supply. In this case, the family that pays Rs 2 -3 per kl will pay Rs 40-50 per kl. How feasible is this? (Sunita Narain in *Business Standard* 061109)

Delhi's water losses Delhi's inability to curb water leakage and theft is largely to be blamed for the absence of piped water supply to large parts of the Capital as the total distribution losses are to the order of 40 %. A study conducted by the Delhi Committee of the ASSOCHAM reveals that the distribution losses are primarily due to leakages in a network of nearly 9,000-km-long water supply lines and because of theft committed through unauthorised connections. Pointing out that this figure was quite high even in comparison to the 10 - 20 % losses seen in the developing countries, the study notes that the percentage of unaccounted-for water calculated from the difference between water produced and pumped was also very high at 35 - 40 %. At present Delhi supplies about 3,000 million litres of water, only about 1,700 million litres actually reaches the consumers. (The Hindu 070110)

Delhi Water rates up With effect from January 1, 2010, the water rates in Delhi has been raised, see details below.

Domestic Category

Monthly water use	Fixed charges per month	Per KL rate
0-10 KL	Rs 50	Rs 2
10-20 KL	Rs 100	Rs 3
20-30 KL	Rs 150	Rs 15
Over 30 KL	Rs 200	Rs 25

Commercial Category

Monthly water use	Fixed charges per month	Per KL rate
0-10 KL	Rs 400	Rs 10
10-25 KL	Rs 600	Rs 20
25-50 KL	Rs 700	Rs 50
50-100 KL	Rs 900	Rs 100

Sewer charges are 60% of the total water volumetric charge. The Jal board incurs a cost of Rs 24 per KL (Kilo Liters) in sourcing, treatment and distribution of water. There are about 18 lakh metered connections in Delhi. The Delhi Chief Minister said that while per capita consumption of water in Delhi remains highest in the country, water rates remain one of the lowest. (The Hindu 021209)

Chennai to set up largest desalination project A contract of the country's largest sea water desalination project by the Chennai Metropolitan Water Supply and Sewerage Board (Chennai Metro Water) has been awarded to VA Tech Wabag. The total cost of the project is Rs 1,033 crore, of which the construction cost of Rs 533 crore would come as a grant from the Centre. The remaining Rs 500 crore, the operational cost for seven years, would be shared by the state govt and Metro Water. VA Tech Wabag will build and operate a 100 million-litre daily plant at Nemmeli, just outside the Chennai city. The plant will be constructed in technical partnership with the Israel-based IDE Technologies. About 70% of the technology and equipment will be from VA Tech. This will be the second desalination plant being

set up in Chennai. The first one is near completion. The contract for the distribution system also has been awarded and the plant and supply network is to be in place by 2012. The water will be supplied to the southern suburbs of Chennai covering the entire stretch of the IT corridor, and adjacent areas. (Financial Express 060110)

Villages refuse water to Jhabua city When district administration released water from Dhamoi tank, 28 km from the Jhabua city for the city in view of drying up of its normal water source, the people of enroute villages put up gates on the stop dams and did used the water for irrigation. When the officers of public health department reached the villages to get the water released, people refused to allow the water for the city. (Bhaskar 161209)

WATER BUSINESS

Bisleri-Tata fight over water brand In a bid to take on Tata Tea's enhanced water brand, which is yet to be launched in the domestic market, Bisleri is gearing up to launch its enhanced water brand within two months. Parle Bisleri is test marketing its new brand with different flavours. "We are setting up a new manufacturing facility for our enhanced water brands in Delhi. We will be fortifying our new launch with vitamins and minerals," said Bisleri chairman Ramesh Chauhan. It is indeed strange that Delhi should be a manufacturing place for water intensive and non essential industry like Bisleri when Delhi is importing its water requirement from far off places. Bisleri will be the first company to enter the enhanced water segment in the Rs 2400 crore packaged water business in India. On the other hand, Tata Tea Ltd (makers of Himalayan Water) is stepping up its research and development projects in this segment. In a strategic move, Tata Tea is building its strategic capabilities to access a new distribution channel across the country for liquid products. Bisleri's premium brand will be priced at around Rs 20. With 60 % market share, Parle Bisleri currently leads in the packaged water business in India. PepsiCo India is also eying the enhanced water space (Financial Express 311209)

Is Water industry worth Rs 54k-cr in India? In India, water industry is estimated to be a Rs 54,000-crore multi-pronged sector. More than 60% of the Rs 1 lakh crore under JNNRUM is for water and waste water management in 63 major cities. While Rs 20,000 crore under UIDSSMT is for water in the small towns. All the 650 municipalities and municipal corporations have massive investment plans for improving their water supply and sewerage systems. The corporate sector has invested close to Rs 10,000 crore in the industry. Over Rs 5,000 crore are to be spent on Sea water desalination in the coming four to five years. India has the 10th largest packaged drinking water industry with a combined turnover of around Rs 3,000 crore. Indian corporate houses like Tata and Jindal are already into municipal water supply—Tata in Jamshedpur and Jindal in Raipur. Reliance is looking for major water supply projects besides undertaking projects for its special economic zones and for captive corporate use. (Financial Express 311209)

ENVIRONMENT

Six public hearing simultaneously: HC cancels clearances The Goa State Pollution Control Board's six simultaneous public hearings on five different mines at Sanguem in 2007, has led the Delhi high court to ask the Union ministry of environment and forests to take corrective steps and hold the hearings in seriousness. NGO Utkarsh Mandal had approached the court and sought the quashing of an order issued by the MoEF in 2007 granting environment clearance to Panduranga Timblo Industries for renewal of its mining lease. While setting aside the order passed by MoEF granting the environmental clearance to PTI, a division bench comprising chief justice Ajit Prakash Shah and justice S Murlidhar observed, "We find from the notice of the public hearing in the present case that as many as six public hearings were scheduled in regard to the projects (including PTI) by GPSCB on the same date and time and at the same venue." The court also noted that it is a matter of concern that the requirement of public hearing under the EIA notification has been taken so lightly by the MoEF. "We expect the MoEF to immediately issue necessary instructions in this regard so that public hearings in terms of the EIA (environment impact assessment) notification dated 14th September 2006 take place with the seriousness which they deserve." This order reflects poorly on environment governance, public hearings, environment clearances, the Ministry of Environment and Forests and the Pollution Control Boards. (The Times of India 030110)

Accreditation must of EIA consultants EIA Consultants will now need to be registered and accredited with the ministry of environment. The Quality Council of India and the National Accreditation Board of Education and Training will undertake the process of accreditation. The accreditation scheme isn't entirely new. It existed earlier although as a voluntary measure. The voluntary accreditation scheme saw around 10 companies getting themselves registered in the last two years. There are an estimated 400-450 consultants operating in this area. But the majority of projects (80% of reports) are done by the top-most organizations, which may number between 60 and 70. According to Nabet guidelines, a consultant seeking accreditation needs a minimum experience of seven years in the relevant sector and should have been involved in preparing at least three EIA reports in the sector. Nabet and QCI will also conduct an annual review of the consultants to verify compliance and reserve the right to suspend the accreditation. The trouble is that the people who are at the helm in this accreditation process so far do not have much credibility. Moreover, the ministry itself has never taken any action against the fraudulent EIAs or their consultants, when it had powers to take action. Now they can pass the buck to the registering organisation. There is also no provision of blacklisting the defaulting EIA consultants. (Mint 070110)

BANGLADESH

Bangladesh raises pitch on Teesta dispute Bangladesh has resolved to block all proposed projects till the Teesta river water dispute is settled. The Teesta dispute is likely to be on the agenda when Bangladesh Prime Minister Sheikh Hasina meets Indian PM in New Delhi on January 11. Ahead of Hasina's visit, an Indian team led by Water Resources secretary U.N. Panjiar left for Bangladesh on Jan 2, '09. India has been seeking Bangladesh approval for implementing three projects: dredging and desiltation of river Ichhamati, a project on River Feni to supply water to Sabroom in Tripura and construction of embankments on other rivers. In the December talks, Bangladesh was cold to India's proposal of carrying out "joint hydrological observations" downstream of the Bangladesh Barrage, especially at Kaunia and Teestamukh rivers. According to the 1983 agreement, India is allowed to use 39% of the water, Bangladesh 36% and the rest is supposed to be for river flow. Agreement on sharing of Teesta and Feni waters could not be reached after the secretary level meeting on January 4-5, 2010. However, it was agreed to start the dredging work on the Ichhamati river from Feb 1, 2010. (The Hindustan Times 030110, The Hindu, Bhaskar 050110)

BHUTAN

NHPC to prepare DPRs for two HEPs NHPC has been allocated the job of preparing detailed project reports for the 670- mw Chamkharchuu-I and 1,800 mw Kuri-Gongri hydroelectric projects. Agreements to this effect were signed by NHPC Chairman SK Garg and Bhutan's ambassador in New Delhi, major general Vestop Namgyel on Dec 29, '09 in the presence of PM Manmohan Singh.

- **NTPC agreement for Bhutan Hydro** NTPC has entered into a preliminary agreement with Bhutan government to prepare the Detailed Project Report for a 620 mw reservoir-based hydel project on the Amo Chhu river in Bhutan. The agreement was signed by NTPC chairman R S Sharma and Bhutan's ambassador Maj Gen Vetsop Namgyel in the presence of PM Manmohan Singh and Bhutan's King Jigme Khesar Namgyel Wangchuck. During King's visit to Delhi, MOU was also signed for preparing the DPR of the 486 MW Kholongchhu HEP. (Indian Express 231209, The Times of India 291209, Financial Express 301209)

THE WORLD HYDRO

Eyewitness Account:

China's Dam Builders Go Global

By building projects such as the Three Gorges, Ertan and Xiaolangdi dams, Western companies helped China to become the world's biggest hydropower producer. Now China has turned the table on the Western competitors and is beating them at their own game. Today Chinese dam builders are dominating the global market, and are building 19 of the world's 24 largest hydropower projects.

What has happened? How have Chinese dam builders managed to conquer the world market so quickly? And what are the consequences for the social and environmental standards applied in such projects? Peter Bosshard, the Policy Director of International Rivers, examines these questions in a long essay in the latest issue of World Policy Journal. Bosshard has monitored the global dam industry for almost 20 years. He has been intimately involved in the key policy processes and project campaigns which have shaped the sector. His essay combines eyewitness account, analysis and commentary on important milestones of the global environmental debate.

The author takes us to the resettlement sites of communities affected by dams in Sudan and Uganda, and to the top floors of the dam financiers in Beijing and Washington. He examines the strategies of Western dam builders and their Chinese competitors, and the evolving role of civil society networks. He finds that Chinese support has allowed projects to go forward which Western funders did not touch because of social and environmental concerns. The Chinese competition in turn made Western financiers backslide on their own commitments. "The new glut of hydropower funding allows many projects to go forward that don't meet international social and environmental standards," comments Bosshard.

Yet the conclusion of the new essay is optimistic. Destructive dams, mining and logging operations have already triggered a backlash against Chinese investors in many countries. China's government has realized that social and environmental sustainability is in its long-term self-interest, and is urging Chinese companies to follow stricter standards when they invest abroad. Civil-society organizations from China and the host countries of Chinese projects have begun to work together to monitor such commitments, and International Rivers supports them in this effort. "Working together with Beijing and host country governments to strengthen environmental standards in global projects looks like a more promising approach than engaging in an environmental race to the bottom," concludes Bosshard.

As the Chinese say, the mountains are high and the Emperor lives far away. Chinese companies are managed at arm's length and often resist instructions from their government even if they are owned by the state. Further conflicts over Chinese and Western dam projects will undoubtedly follow. Peter Bosshard's insightful and lively essay will help to put them into perspective.

World Policy Journal is published by the World Policy Institute. Alun Anderson (former chief editor of the New Scientist), Martin Chulov (a journalist in Iraq) and Peter Gleick (President of the Pacific Institute) also contributed stories to the journal's focus issue on water. The issue is available at www.mitpressjournals.org/toc/wopj/current.

Publications available with SANDRP

PUBLICATIONS IN ENGLISH:

1. *Trapped! Between the Devil and Deep Waters: The story of Bihar's Kosi River* DK Mishra, SANDRP-PSI 2008 Rs 595/-
2. *Large Dams for Hydropower in NorthEast India* SANDRP-Kalpavriksh, June '05, p 228, Rs 150 (indv), Rs 300 (inst)
3. Tragedy of Commons: The Kerala Experience in River Linking, River Research Centre-SANDRP, '04, p 146, Rs 120
4. THE GREATER COMMON GOOD by Arundhati Roy, Published by India Book Distributors, 1999, pp 76, Rs 80/-
5. *Water Private Limited* Manthan Adhyayan Kendra, 2006, pp 124, Rs 50/-
6. *Dams, Rivers & Rights: Action Guide*, IRN, 2006, pp 38, Rs 20/-
7. *Conserving Raindrops a Much Better Option than Linking Rivers* by Bharat Dogra, pp 8, Rs 4/-.
8. *The World Bank as a Knowledge Producer* Manthan, March 2008, pp 80, Rs 100/-
9. *Economics of Hydropower* by Bharat Jhunjhunwala Rs 750, Kalpaz Publications, 2009, pp 306
10. *There is little Hope here: Civil Society View: India's National Action Plan on Climate Change*, SANDRP, 2009 Rs 100

PUBLICATIONS IN HINDI:

1. *Bandh, Nadi evam Adhikar* Dam Action Guide for Communities, SANDRP, 2007, pp 44, Rs 30/-
2. *Ken-Betwa Nadi Jod: Pyasi Ken Ka Paani Betwa Mein Kyon*?, SANDRP, 2004, pp 46, Rs 20/-.
3. *Bade Bandh, Bharat ka Anubhav*, SANDRP, 2001, pp 268, Rs. 100/-.
4. *Bhakra: Parat-dar-parat ek padtal* Books for change, 2007, p 190, Rs 100/-
5. *Behtar Bijli sewa ke liye Jagrukata aur Karyakram: Samuday ke liye Agenda* Prayas, 2008, Rs 30/-
6. *Jal Vidhyut ka Sach* (Hindi) By B Jhunjhunwala, pp 61, Rs 10/-.
7. *Dhol main Pol: Srinagar HEP in Uttarakhand*, MATU (Delhi), 2009, Rs 10/-
8. *Ganga ki Bhrun Hatya*, MATU (Delhi), 2008, Rs 60/-
9. *Ganga ke maike main* Matu (Delhi) 2008, Rs 25/-

Please send your orders with DD in favour of *Dams, Rivers & People*, payable at Delhi and send them to DRP, c/o 86-D, AD Block, Shalimar Bagh, Delhi 110 088. Please add Rs. 25/- for postage and packing charges for all publications.

cgrj fctyh lok d fy, tkx:drk vkj dk;Øe % lenk; d fy, ,tMk ¼i;kl dk ,d egRoi.k idk'ku½

vkt fctyh d cxj vkt 0;kolkf;d] vk|kfxd vkj [krh dh xfrfof/k;k vlHko irhr gkrh gA ljdkjh vkdMk d vulkj lu 2007 rd 81 ifr'kr xkok dk fo|rhdj.k gk pdk Fkk] tcfd 56 ifr'kr ?kjk e fctyh d duD'ku gA yfdu vkdMk vkj okLrfodrk e dkQh Qd gA xjhck d fy, fctyh dh vkifr rc rd mif{kr jgxh tc rd fd lenk;k dh vkj l ble l/kkj d fy, ncko ugh cuk;k tk,xkA bu leLr ennk ij rF;ijd tkudkjh i;kl }kjk idkf'kr ifLrdk **^^cgrj fctyh lok d fy, tkx:drk vkj dk;Øe % lenk; d fy, ,tMk**** e miyC/k gA ;g ifLrdk xjhck dk cgrj fctyh lok lfuf'pr dju d fy, gLr{ki d fy, ,d <kpk iLrr djrh gA ;g mu ennk dh ,d :ij[kk inku djrh g ftudk xjhck dk lkeuk djuk iMrk gA ;g fctyh vf/kfu;e 2003] jk"Vh; uhfr;k vkj jkT; fu;ked i.kkfy;k d ie[k iko/kkuk dh 0;k[;k djrh g tk fd xjhck d ennk dk gy dju e bLreky fd, tk ldr gA ;g xjhck d lkFk dke dju oky tulxBuk d urkvk d i;kl dk leFku dju vkj fctyh {k= e mudh leL;kvk dk gy dju d fy, lgk;d gku dh mEehn djrh gA i;kl Åtk ny] i.k d lnL;k o vU; fo'k"kKk d l;Dr i;kl l r;kj bl ifLrdk dk fnYyh fLFkr l.Mi d lnL;k u Hkk"kkU rj e lg;kx fd;k gA

ifLrdk dh fuofnr lg;kx jkf'k 30 #i; g ,o bldh ifr d fy, di;k fuEu ir ij lEid djA

idk'kd % **i;kl**] vkBoy dkuj] do jkM] MDdu fte[kkuk] i.k & 411004
bey % prayasenergy@vsnl.net] oclkbV % www.prayaspune.org/peg

Dams, Rivers & People The annual subscription for the *DRP* is Rs 125/-. Please send a DD in favour of "Dams, Rivers & People", payable at Delhi, to our Delhi address (DRP, c/o 86-D, AD block, Shalimar Bagh, Delhi 110 088). Or, you can send money order to Delhi address. Subscriptions can be sent for multiple years at the same rate. The *DRP* is also available in electronic versions and can be accessed at www.sandrp.in/drpindex.

Edited, Published, Printed & Owned by Himanshu Thakkar at 86-D, AD Block, Shalimar Bagh, Delhi – 88
Printed at Sun Shine Process, B-103/5, Naraina Indl. Area Phase – I, New Delhi – 110 028