

Lead Piece



Large Hydro Power Projects in North East India

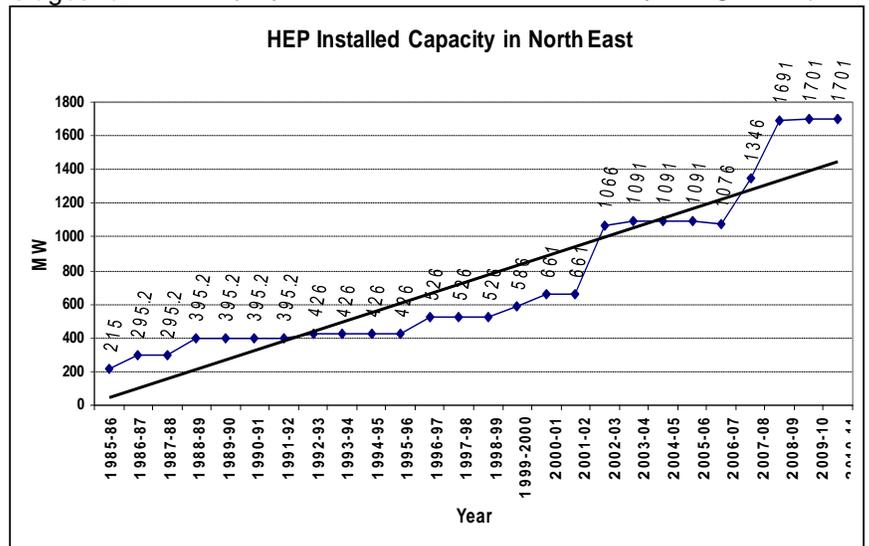
Dismal power generation performance

North East India is being seen to have huge hydropower potential, up to 60 000 MW or more. A huger number of large hydropower projects are under construction and various stages of active consideration. This has lead to a large number of questions on issues ranging from governance to environment, social and economic issues. The projects are also likely to worsen the coping capacity of the people of the region in the climate change perspective, considering the dependence on natural resources, including forests, rivers and biodiversity, all of which will be adversely affected by the proposed and under construction projects. Considering the geo-seismic situation and fragile, erosion prone mountains in the Eastern Himalayas, the high silt -laden rivers, the appropriateness of large hydro projects come under additional doubts. A huge movement is going on in Assam, Arunachal Pradesh, Manipur and other areas of the region in view of the very serious nature of downstream impacts, including the change in flood characteristics of the rivers due to these projects. Poor appraisal and poorer compliance are characteristics of such projects in India and the situation is worse in North East India.

In this context, it would be relevant to see what has been the hydropower generating performance of the existing hydropower projects. Here we have tried to do such an assessment. All figures used here are from the Central Electricity Authority, Government of India's premier technical monitoring body in power sector. Figures have been taken from either CEA website or from CEA publications or have been obtained under the Right to Information Act.

The total installed capacity of large hydropower projects in North-East is 1701 MW in the year 2010-11, while it was 215 MW in 1985-86. The following chart shows how the capacity is increasing in the region over the past 25 years. The graph is already steep compared to rest of India and is likely to get steeper considering the large number of projects under construction and in pipeline.

Arunachal Pradesh The installed capacity of Hydro Power Projects (HEPs) in the state is 423.5 MW, out of the projects in Arunachal Pradesh, only Ranganadi (405



MW) is large HEP, which is under Central Sector (NEEPCO) and rest are small HEPS.

Continued to p 2

INDEX

| | |
|---|----|
| Dismal power generation performance of large hydro in NE India | 1 |
| IE Journalist awards: There is conflict of Interest here, Sir | 5 |
| Draft National Policy 2012 largely seeks to help the vested interests | 6 |
| Clearance for L Demwe: MEF overrules all ind NBWL members | 9 |
| Diverse ecosystems can work as climate change buffer | 14 |
| Meghalaya eyes CDM credits to recover loss under Leshka HEP | 15 |
| Illegal dams for Mumbai: Kalu, Balganga, Susari | 16 |
| Purna dam: wrong assessment leads to loss of Rs 180 crores | 17 |
| NBA's Jamin Hakk Sangharsh | 18 |
| ALSTOM under scrutiny by Norway on corruption issues | 19 |
| Arunachal Pradesh: Anjaw district's micro hydro revolution | 20 |
| National Green Tribunal: All Citizens have right to contest projects | 21 |
| Alaknanda Hydro: Hagglng for environment flow in EAC meetings | 22 |
| Himachal govt way of Buying silence, manufacturing consent | 23 |
| NEW PUBLICATION: ADB hydro project report in HP in HINDI | 24 |

Continued from p 1

In State Sector, Arunachal Pradesh has no large HEPs (more than 25 MW installed capacity) while it has four small HEPs. These projects are Tago (4.5), Nuranang (6), Kambang (4) and Sippi (4).

In the table below we have provided an analysis of the large HEPs of the state in terms of best and worst performance in terms of Million Units (MU, one unit equals one kilowatt-hour, or power that 1 KW can generate if operated for an hour) per MW for the stated period for which the project has been operating in last 25 years since 1985-86. The projected 90% dependable figure is also given. The projects are given techno economic clearance based on this projected 90% dependability figure, with the promise that the project will generate that much power in 90% of years. We have assessed the actual 90% dependable generation based on actual generation figure and then compared that with the promised 90% generation and based on this, we have assessed the % under performance. The last column gives % years in the study period in which the actual generation is greater than the promised 90% dependable generation. This figure should be 90% or higher. This description of the table is valid for each of the states of North East region for which analysis is given below.

In the case of Ranganadi project, the second largest operating hydro project of the region, the % is ZERO, the project has NEVER achieved generation level which it should have achieved in 9 out of 10 operating years. This is indeed dismal performance.

| Project (Installed Capacity) | No of data years | Best - worst Performance (MU/MW) | Average Performance (MU/MW) | Design 90% dependable generation (MU)-A | Actual 90% dependable generation | % Under Performance | % years when actual generation more than |
|------------------------------|------------------|----------------------------------|-----------------------------|---|----------------------------------|---------------------|--|
| Ranganadi (405) | 10 | 4.05 - 0.47 | 2.94 | 1876 | 958 | 48.93 | 0 |

Meghalaya The installed capacity of four large HEPs, the largest number in the region in the state is 206 MW. In addition, Umiam ST- II (18) and Umtru (11.2) are in state Sector (MeSEB). Two of the four projects are heavily under performing and the rest are performing close to the promised generation. Overall performance of the state is pretty dismal with over 35% under performance.

| Project (Installed Capacity) | No of data years | Best - worst Performance | Average generation | Design 90% dependable generation (MU)-A | Actual 90% dependable generation | % Under Performance | % years when actual generation more than A |
|------------------------------|------------------|--------------------------|--------------------|---|----------------------------------|---------------------|--|
| Kyrdemkulai (60) | 26 | 3.42 - 1.95 | 2.65 | 118 | 134 | +13.56 | 92.3 |
| Umiam ST- I (36) | 25 | 8.92 - 1.31 | 3.63 | 128 | 129 | +0.78 | 88 |
| Umiam ST- IV (60) | 19 | 4.09 - 00 | 2.57 | 324 | 118 | 63.58 | 0 |
| Khandong (50) - CS | 26 | 5.84 - 0.34 | 4.02 | 242.63 | 146 | 39.83 | 19.23 |
| Grand Total (206) | 26 | 3.77 - 2.13 | 3.18 | 812.63 | 527 | 35.15 | -- |

ASSAM The installed capacity of Large HEPs in the state is 325 MW, among them, the Karbi Langpi (100 MW) is in state Sector (APGPCL) and Kopili (NEEPCO) is in Central Sector. The 90% dependable generation figure for Karbi Langpi looks low when compared with other such projects. This makes its performance look rather charitable. The project has been operating only for four full years so far. The longer operating Kopilli project is under performing by huge 44.5% compared to its promised generation figure.

| Project (Installed Capacity) | No of data years | Best - worst Performance (MU/MW) | Average Performance (MU/MW) | Design 90% dependable generation (MU)- | Actual 90% dependable generation | % Under Performance | % years when actual generation more than A |
|------------------------------|------------------|----------------------------------|-----------------------------|--|----------------------------------|---------------------|--|
| Karbi Langpi(100) | 4 | 4.95 - 4.00 | 4.29 | 390 | 407 | +4.36 | 100 |
| Kopili (225) | 23 | 6.53 - 2.61 | 4.16 | 1153 | 569 | 44.49 | 28.57 |
| Total(325) | 23 | 6.53 - 2.61 | 4.17 | 1543 | 976 | 36.75 | - |

Manipur There is one Large HEP in the state, which is NHPC's Loktak (105 MW). The project has performed below the promises by over 17%.

| Project (Installed Capacity) | No of data years | Best - worst Performance (MU/MW) | Average Performance (MU/MW) | Design 90% dependable generation (MU)- | Actual 90% dependable generation | % Under Performance | % years when actual generation more than A |
|------------------------------|------------------|----------------------------------|-----------------------------|--|----------------------------------|---------------------|--|
| Loktak (105) | 26 | 6.72 - 3.57 | 4.93 | 490.29 | 405 | 17.35 | 69.23 |

Nagaland The installed capacity of HEPs in the state is 99 MW, out of which Lokkim-RO is small HEP and comes under state sector. The only large HEP in the state is Doyang (75 MW), which is under Central Sector (NEEPCO). Even though the 90% dependability figure for the project is low, the project is heavily under performing compared to even this lower promised generation figure.

| Project (Installed Capacity) | No of data years | Best - worst Performance (MU/MW) | Average Performance (MU/MW) | Design 90% dependable generation (MU)- | Actual 90% dependable generation | % Under Performance | % years when actual generation |
|------------------------------|------------------|----------------------------------|-----------------------------|--|----------------------------------|---------------------|--------------------------------|
| Doyang (75) | 10 | 3.57 - 1.59 | 2.55 | 227 | 141 | 37.89 | 40 |

Tripura The installed capacity of huge Gumti HEP, which is a storage dam with live storage capacity over 250 Million Cubic meters, is 15 MW. This project comes under state sector. The project has very low 90% dependability generation figure and there is no wonder that the project is able to achieve generation close to that figure.

| Project (Installed Capacity) | No of data years | Best - worst Performance (MU/MW) | Average Performance (MU/MW) | Design 90% dependable generation (MU)-A | Actual 90% dependable generation (MU) | % Under Performance | % years when actual generation more than A |
|------------------------------|------------------|----------------------------------|-----------------------------|---|---------------------------------------|---------------------|--|
| Gumti (15) | 24 | 4.67 – 2.4 | 3.46 | 38 | 40 | +5.26 | 95.65 |

However, it should be added that Gumti dam is a fit case for decommissioning, considering the small installed capacity for a dam that has submerged 4634 ha of land in Raima Valley in South Tripura district bordering Bangladesh. As Subir Bhowmik says, “This was one of the most fertile valleys in otherwise hilly state, where arable flatland suitable for wet rice agriculture is so scarce.” He went on to narrate how the project was fiercely opposed and was also catchment for insurgency groups subsequently. If the dam is decommissioned, Tripura will not suffer power problems as Tripura already has operating gas based power capacity of 232.5 MW, which is far in excess of the requirements of the state. At least 25000 tribals can be resettled in the land that would be available if the dam is decommissioned. In fact in the last state elections, this was a major election issue which was endorsed by all except the ruling alliance. It is high time this dam is decommissioned.

Sikkim The installed capacity of HEPs in Sikkim is 602 MW. Rangit (60) and Teesta (510) are large HEPs, which are under Central Sector (NHPC) and rest are small HEPs. Sikkim has the highest hydropower installed capacity among all the NE states and also has the largest number of under construction hydro projects among all the North East states. Sikkim State Sector has are L Lagyap (12 MW), U Rognichu (8 MW), Moyangchu (4 MW) and others (8 MW).

| Project (Installed Capacity) | No of data years | Best - worst Performance (MU/MW) | Average Performance (MU/MW) | Design 90% dependable generation (MU)-A | Actual 90% dependable generation | % Under Performance | % years when actual generation |
|------------------------------|------------------|----------------------------------|-----------------------------|---|----------------------------------|---------------------|--------------------------------|
| Rangit (60) | 11 | 6.18 – 3.35 | 5.50 | 349 | 304 | 12.89 | 33.33 |
| Teesta (510) | 4 | 5.15 – 3.70 | 3.62 | 2573 | 2598 | +0.97 | 66.66 |
| Total (570) | 11 | 6.18 – 3.35 | 5.26 | 2922 | 2902 | 0.68 | - |

Mizoram has no Large HEPs.

Regional Analysis

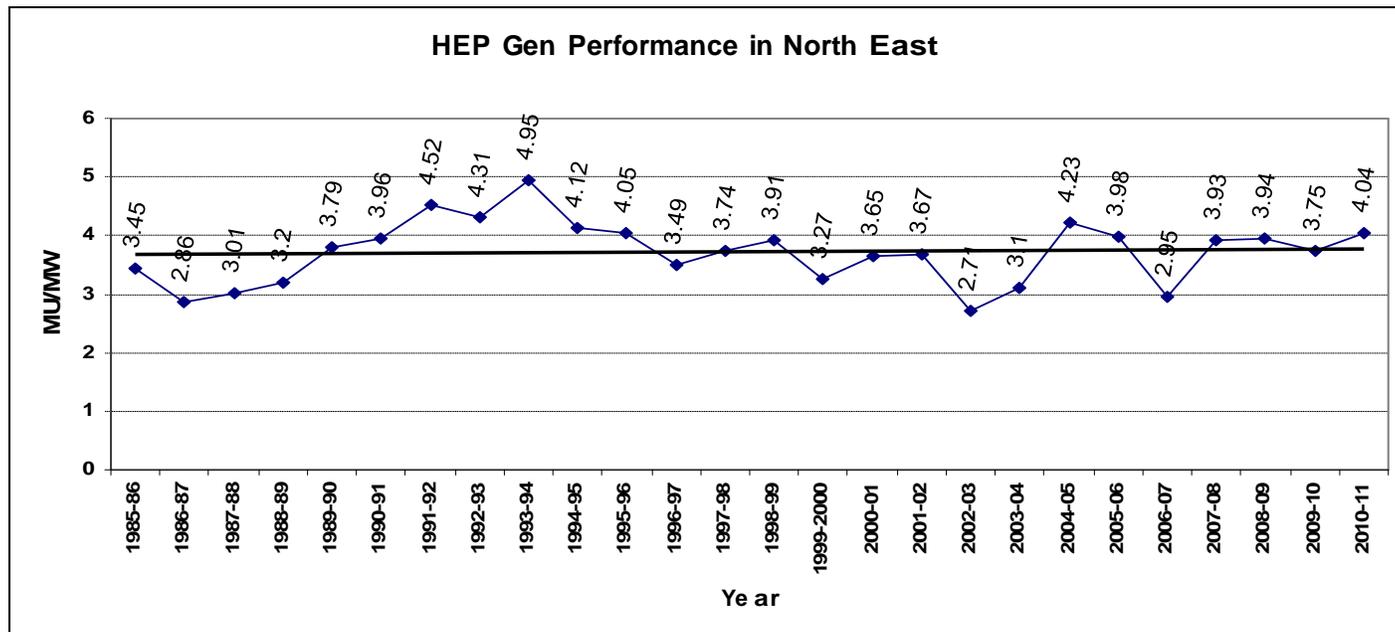
| Project (Installed Capacity) | Best - worst Performance (MU/MW) | Average Performance (MU/MW) | Design 90% dependable generation (MU)-A {MU/MW} | Actual 90% dependable generation (MU) | % Under Performance |
|------------------------------|----------------------------------|-----------------------------|---|---------------------------------------|---------------------|
| Arunachal (405) | 4.05 - 0.47 | 2.94 | 1876 {4.63} | 958 | 48.93 |
| Assam (325) | 6.53 – 2.61 | 4.17 | 1543 {4.75} | 976 | 36.75 |
| Manipur (105) | 6.72 – 3.57 | 4.93 | 490.29 {4.67} | 405 | 17.35 |
| Meghalaya (206) | 3.77 – 2.13 | 3.18 | 812.63 {3.95} | 527 | 35.15 |
| Nagaland (75) | 3.57 – 1.59 | 2.55 | 227 {3.03} | 141 | 37.89 |
| Tripura (15) | 4.67 – 2.4 | 3.46 | 38 {2.53} | 40 | +5.26 |
| Sikkim (570) | 6.18 – 3.35 | 5.26 | 2922 {5.13} | 2902 | 0.68 |
| Total (1701) | 4.95 – 2.71 | 3.72 | 7908.92 {4.65} | 5949 | 24.78 |

In the graph below we have plotted the MU power generated per MW installed capacity for all the projects of the states of North East India for the last 25 years. Even though the graph is flat, we can see that the generation in recent years has been below 4 MU/MW, about 19% below the peak of 4.95 MU/MW reached in 1993-94. The 90% dependability

figure for the state is 4.65 MU/MW, as can be seen from the table that follows, and in the entire 25 years period, the state has crossed this figure just ONCE, when it should have achieved it for at least 22 years. It is clear that the power generation performance in the state is pretty dismal and it is not improving for the last 25 years.

In the table above we have given a glimpse of state wise performance of large hydropower projects in the North East States, taking the analysis from the state wise details above.

It is clear that only 4 of the 12 projects of North East generate at projected 90% dependability or higher. The total capacity of these 4 projects is 221 MW, which is less than 13% of the region's hydro installed capacity of 1701 MW. So 87% of installed capacity and 67% of projects generate at less than the promised generation level. For the region as a whole, the under performance is around 25%, and if we see the generation figures of last few years, we see no improvement.



The trouble is that this kind of analysis is not even being done by the concerned agencies at the state or the central level, leave aside making any attempts to improve this performance. It may be better for the state and central governments, operators and those others advocating more hydro projects in the region to rather try and understand the reasons for this huge under performance and see how this can be improved. There are two broad categories of reasons why this is happening. Lack of proper repair and maintenance, lack of attempts at optimization of generation (e.g. in case of multiple projects on the same river) and lack of catchment area treatment to reduce the siltation, is one group of reasons, if tackled properly this can improve performance. Second group of reasons is related to flawed appraisal, decision making and governance mechanisms due to which unviable projects or capacities have been set up. For the projects that have already been set up, this may not help immediately, except in cases like Gumti, where it can help take decisions for decommissioning. However, lessons learnt from such analysis can help achieve better decisions in future. It would be better for all concerned to follow this path rather than pushing more hydro projects in the region, which will only worsen the situation for the people of the region.

Even on Supply side options for the region, there is the excellent example¹ of the Anjaw district in Arunachal Pradesh, where, through the help of four sub MW (less than a MW) capacity hydro projects operating, five sub-MW hydro projects under construction and one 16 MW hydro project would make the district surplus in power generation, while catering to the needs of three more districts. However, there are no transmission lines set up by the state till now to transfer the power that will be generated. NE India has a huge scope for such sub MW projects, which is appropriate for the region, considering the dispersed populations. Such projects would still have some local impacts, though on a hugely lower scale as compared to large projects. Importantly, the impacts of such small projects are easier to assess, compensate and adapt to. In such projects, local communities can also be partners from planning to operation stage and have a much lower footprint from the point of view of climate change adaptation, biodiversity and natural resources. Unfortunately, No serious attempt is being made to pursue this path.

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an edited version of this was published on www.infochangeindia.org)

¹ See: <http://timesofindia.indiatimes.com/city/guwahati/Anjaw-shines-in-hydro-power-sector/articleshow/11333208.cms>

Indian Express Journalism Awards sponsored by Jaypee and Mahyco:

There is conflict of Interest here, Sir

On Jan 10 and 11, 2012, half page advertisements in the Indian Express (IE) newspaper (at least in Delhi edition) announced that on Jan 16, 2012 the IE Excellence in Journalism awards will be given. The advertisement also said that the main sponsor is Jaypee Group & among other sponsors include the Mahyco Monsanto.

One may recall (for details see: <http://www.thehoot.org/web/home/story.php?storyid=4901&mod=1&pg=1§ionid=21&valid=true>) that Indian Express has been on a campaign mode advocating big dams in general. It has been specifically campaigning against the movements like the Narmada Bachao Andolan. In March April 2006 the paper specifically ran a campaign against NBA and also against the then Union Minister Prof Saifuddin Soz². In Oct 2010 the paper ran a campaign for large hydro projects in the North East India when the then Environment Minister Jairam Ramesh held an open public hearing on these projects in Guwahati and then wrote to the Prime Minister, raising concerns about so many hydro projects being taken up in NE India and the impacts thereof.

Now it is well known that the Jaypee group is India's largest dam building contractor, largest private sector developer and plans to develop many more including in the North East India, which was the subject of Indian Express campaign in Oct 2010. Jaypee group is also the contractor for the largest of Narmada Dams, namely Sardar Sarovar Project. The group is planning to develop the 2700 MW Lower Siang and 500 MW Hironag Hydropower projects in Arunachal Pradesh, for example. It may also not be irrelevant to mention here that the Jaypee group has pathetic records in terms of social, environmental and human rights issues³ in the projects it is involved in. More recently, in January 2012, India's market regulator Sebi fined Jaypee Group Rs 6 million for illegal practice of insider trading⁴. All these facts are very much relevant for any business group to sponsor awards for excellence in journalism, particularly when the awards are also for "ethics in reporting"⁵.

The Indian Express campaign in Oct 2010, *willy nilly* helped the Jaypee groups' interests. And now Jaypee is sponsoring the IE Journalism award. Shall we call this conflict of interest or quid pro quo? Should a media house accept such sponsorship from a group that has

directly benefited from the campaign that was run by the media house? And when the business group has such abysmal reputation?

Earlier in January-February 2010, when Jairam Ramesh held a series of public hearings to get a cross section of views on Bt Brinjal, Indian Express had launched a campaign⁶ against Jairam Ramesh and FOR GM crops. It is clear that the campaign hugely benefited GM crop companies and the biggest among them in the world (Monsanto) has an Indian arm Mahyco Monsanto, which is the biggest GM seed company of India. Mahyco Monsanto now is one of the sponsors of the Indian Express Excellence in Journalist awards.

So the same set of questions that arise about relation between Jaypee group and IE also arise for Mahyco Monsanto: Is this conflict of interest or quid pro quo? Is this not intellectual dishonesty? Should not the lobbyist media groups like Indian Express keep away from getting sponsorships from the organisations that their lobbying helps? This is particularly true if media group wants to retain any credibility to the effect that it is still speaking in public interest, which we assume they should be.

We would like to clarify that we are not raising any doubts about the genuineness, independence and excellence of the jury or those journalists who may get this award.

[Prashant Bhushan](#), Senior Supreme Court Lawyer, Delhi
[EAS Sarma](#), Former secretary, Govt of India, Andhra Pradesh
[Ramaswamy Iyer](#), Former Secretary, Govt of India, Delhi
[Himanshu Thakkar](#), SANDRP, Delhi
[Shripad Dharmadhikary](#), Manthan Adhyayan Kendra, MP
[Manshi Asher](#), Him Dhara, Environment research & action collective, Himachal Pradesh
[Joy KJ](#), Soppecom, Maharashtra
[Dr Latha Anantha](#), River Research Centre, Kerala
[Ashish Kothari](#), Kalpavriksh, Maharashtra
[Bharat Jhunjhunwala](#), Former Prof, IIM Bangalore
[Soumitra Ghosh](#), NESPON, W Bengal
[Hemant Dhyani](#), Ganga Ahvahan, Uttarakhand
[Devinder Sharma](#), well known agriculture expert
[Parineeta Dandekar](#), SANDRP, Maharashtra
[Sowmya Dutta](#), BJVJ, Delhi
[Gopal Krishna](#), Water Watch Alliance, Delhi
[Shekhar Pathak](#), Pahar, Uttarakhand

(PS: This statement was carried by a number of websites, including: [kafila.org](#), [countercurrents.org](#), [governancenow.com](#), [wearethebest.wordpress.com](#). Both the Vice President and Indian Express editor referred to the statement in their speech, but we would have liked to see bigger impact of this statement.)

² See for example: <http://www.indianexpress.com/news/muddying-the-waters-soz-passes-the-narmada/2594/>, <http://www.indianexpress.com/news/narmada-dam-hike-after-all-proposed-soz-wants-to-dispose/1126/2>,

³ For some photographic evidence of violations by Jaypee projects, see: http://www.sandrp.in/hydropower/Violations_of_Environment_Norms_by_Four_Big_Himachal_HEPs-Photographic_Evidence_Feb_2011.pdf

⁴ <http://economictimes.indiatimes.com/markets/regulation/sebi-slaps-rs-60-lakh-fine-on-senior-jaiaprakash-associates-executives-for-insider-trading/articleshow/11396444.cms?inttarget=no>

⁵ <http://www.indianexpress.com/news/time-to-celebrate-the-finest-in-indian-journalism/899201/>

⁶ See for example: <http://www.indianexpress.com/news/ramesh-faces-public-fury-over-bt-brinjal/573660/>, <http://www.indianexpress.com/news/govt-refuses-permission-to-bt-brinjal/577715/>, <http://www.indianexpress.com/news/ramesh-said/583749/>, <http://www.indianexpress.com/news/panel-which-cleared-bt-brinjal-to-meet-today-to-discuss-ban/580805/> to list only a few.

Not the Farmers, Not the Environment

Draft National Policy 2012 largely seeks to help the vested interests

National Water Policies are supposed to be important legal and institutional tools as they reflect the basic intent and direction that the government is planning to take regarding water resources. To ensure that this is a direction acceptable and beneficial to all, open public consultations need to be the backbones of such policies. It is extremely important to have consultations on the recently published Draft 2012 National Water Policy⁷, especially at the grassroots levels right upto the gram sabhas so that the ground concerns get reflected in the policy. Having limited participation of communities in the process threatens to make the exercise undemocratic and is likely to be hijacked by the vested interests. Though it has been stated that some consultations about the Policy have been held⁸, these are far from adequate and have not been publicised enough to ensure wide participation. Most of these were not open consultations, but consisted of invited delegates. This cannot be called as an open, inclusive process. It is claimed that four regional consultations were organised with Panchayati Raj representatives. It will be too pretentious to assume that four such meetings in cities can reflect rural concerns from across India. As it is, many of the important points raised in the Panchayati Raj institutions consultations do not find a mention in the Draft Policy.

The exercise of reformulating the NWP was taken up also in the context of Climate change, as mentioned in the National Action Plan for Climate Change and the National Water Mission, and that makes it all the more important that vulnerable sections (tribals, rainfed farmers, small and marginal farmers, coastal communities, hill communities, fisherfolks, women and rural populations, the populations in the north east and western ghats) are all consulted in the process, which does not seem to be the case with the current draft.

The draft National Policy 2012 differs greatly from its 1987 and 2002 predecessors in the direction it seems to be taking as well as some of its basic premises. Hence, the significance of a transparent consultation process before proceeding forward becomes even more crucial. Some of the major areas of concern from the draft of the National Policy include:

The preamble does not even mention groundwater though groundwater is India's water lifeline. Each sector of user is majorly dependent on groundwater and with each passing day such dependence is increasing for each sector and is likely to continue in the foreseeable future. Such dependence is not sustainable and that it is

likely to create a crisis of quality and quantity in many areas, in some areas the crisis is already here. Hence a major challenge of the NWP is to ensure sustenance of the groundwater lifeline of India. The NWP needs to emphasise the need to protect existing groundwater recharge mechanisms, to create more such mechanisms, ensure demand-side management, including avoiding non-essential water intensive activities in deficit areas and most importantly, work towards decentralized, bottom up groundwater regulatory mechanisms.

Unlike the previous policies, this policy does not spell out the clear priorities of water allocation. It accords **first stated priority to basic livelihood needs and ecosystem needs**. This can be considered as a welcome step only if all the specificities, implementation mechanisms, institutional and legal steps for achieving these water allocation objectives for livelihoods and ecosystem needs are worked out, discussed and accepted along with the necessary preconditions. In the absence of any of these, just a statement that "After meeting the minimum quantity of water required for survival of human beings and ecosystem, water will be treated as an economic good" may end up making water ONLY an economic good.

There seems to be a blind belief that by making water and economic good, people will start valuing water. This is far from true, there is no evidence to support this premise. In practice, those who have the money would continue to waste water when they have the money to pay for it. Can this be even acceptable when millions do not have water even for their minimum needs? This is also relevant when we do not have any credible system in place to ensure that the wastewater generated from use of freshwater is properly treated.

The National Policy of 2002 had also stated that minimum flows will be maintained in rivers, but in the absence of any further steps, nothing happened on this front for the last 10 years anywhere in the country, and the state of Indian rivers have only worsened in the period. When the South African Water Act was passed in 1997, based on the White Paper on South African Water and Sanitation Policy, 1994, the policy took a detailed look at defining water for basic human needs, its quality, quantity, access, distance, etc, as well as various issues related to water and environment. It was only with this background that South Africa could take the revolutionary step of securing water for basic human needs and ecological reserves first. It went through a rigorous, extensive process of consultations with the communities and other stakeholders (which still continues) to actually calculate the reserve, implement it and monitor it.

⁷http://mowr.gov.in/writereaddata/linkimages/DraftNWP2012_English9353289094.pdf and http://mowr.gov.in/writereaddata/linkimages/DraftNWP2012_Hindi182295781.pdf & PR at: <http://pib.nic.in/newsite/erelease.aspx?relid=79981>

⁸ <http://wrmin.nic.in/index1.asp?linkid=201&langid=1>

When India's Draft NWP 2012 mentions that '**Access to safe and clean drinking water and sanitation should be regarded as a right to life essential to the full enjoyment of life and all other human rights**', this statement needs to be strongly qualified in the context of exhausting all local options, demand side management measures and ensuring maximum reuse and recycle. In the absence of this, large dams and infrastructure projects will continue to be planned and justified for wasteful needs of large cities like Mumbai and Delhi as is happening now, without considering the carrying capacity and sustainability of ecosystems involved.

A key aspect that is missing in the NWP is that the water using activities needs to be regulated keeping in mind the local geo-climatic, hydrological situations and non-essential water intensive activities cannot be allowed in water deficit areas. Without such regulation, all other principles will go for a toss.

In the Sections 3,4 and 5 (or for that matter in the policy document), there is no mention of the Major and Medium irrigation projects, the biggest single technology fix on which the Government spends most of its money and over 95 per cent of India's large dams are built for this. And these projects are not delivering. Since 1991-92 when India's net irrigated area, served by M&M projects, reached a peak of 17.79 m ha, there has been no addition to NIA, even though India spent over Rs 200,000 crore during the period. This reality needs to be acknowledged in the NWP. But there is no attempt at institutionalizing post-facto evaluations or learning from the experiences of the past.

The sub section on **Adaptation to Climate change** and the statement that special attention will be given towards mitigation at micro level by enhancing the capabilities of community to adopt climate resilient technological options is welcome. However, the crucial lesson which is being learnt the world over, of how to make the huge existing water infrastructure (which is currently causing more problems in face of unpredictable climate change) more responsive and adaptable to climate change is not addressed here. This is particularly relevant for India as we have the world's largest irrigation infrastructure. Also the need for sustainable practices like increasing soil's capacity to retain moisture by increasing soil carbon content, protection of grazing lands and enhancing the productivity their productivity through measures like the Chauka system of GVNML (www.gvnml.org), System of Rice Intensification (SRI), organic farming, etc., as coping measures for climate change also do not find a mention. The world over, ecological coping strategies like flood forecasting, flood preparedness, flood regulation zones, riparian belts, mangrove protection, wetlands and local water systems protection, biological bank stabilization methods etc., are used as coping and adaptation measures. These biological, low impact and low investment measures do not find a mention on our draft policy, but infrastructure-

heavy interventions like inter-basin transfers, dams and embankments have been pushed again.

Though the policy does not say a word about increasing the capacity of soil to hold moisture content, which actually should be the first objective of all irrigation strategies, **it supports and even encourages inter basin water transfers from so called 'open basins' to 'closed basins'**. This is highly inappropriate. Firstly we need to assess the exhaust the potential of sustainable options like watershed development, local water harvesting systems, rooftop and other rainwater harvesting, local ground water recharge, demand side management, including water saving methods like SRI, SSI (Sustainable Sugar Initiative), water saving cropping patterns, and also avoid non essential water intensive activities, recycling by water intensive industries and so on in various river basins. In the absence of such concerted efforts in any basin or even sub basin of the country to either assess or exhaust such potential, and in the face of the high inefficiency, social and ecological impacts of large infrastructure projects, such encouragement to inter basin transfers is unjustified, unviable and unacceptable.

The section on **project planning and implementation** begins, as expected directly with large multipurpose infrastructure projects, without even mentioning the appropriateness of subsidiarity principle. Emphasis should have been laid on units like the gram sabha or the gram panchayat, watershed and how this will be federated upwards. Today, even the highest body of The Advisory Committee for consideration of techno economic viability of Irrigation, Flood Control and Multipurpose Project Proposals (called TAC in short, it is a standing institutional arrangement chaired by secretary, Union Ministry of Water Resources and serviced by the Central Water Commission) that the Planning Commission depends on has absolutely no norms for transparency, accountability or participation. Only very recently, following [SANDRP advocacy through letters to various responsible parties including the members of the National Advisory Committee chaired by UPA chair person Mrs Sonia Gandhi](#), has CWC made the TAC minutes public (see: www.cwc.gov.in/main/webpages/TAC%20minutes.html) as only the first step towards rectifying this anomaly.

In the **safety mechanism for each dam**, the vulnerable community representatives and independent experts should get about 50% of the seats. The safety is not just construction or structural safety, but also operational safety, since an unsafely operated dam can inflict big disasters as has happened in several cases. There is also a need for basin level safety, besides project level safety, since a cascade of projects can create a risk greater than the sum of the individual projects.

After making a number of statements about participation, etc, it goes on to make a shocking statement that all '**All**

water resources projects, including hydro power projects, should be planned to the extent feasible as multi-purpose projects with provision of storage’.

This is an unfounded, dangerous statement to make. Giving privileged position to such mega storages compared to other storage options (e.g. increasing soil capacity to retain moisture, local storages, underground storages) and optimising use of existing storage capacities of all sizes is uncalled for. There is a huge potential here which should be acknowledged and prioritised. Secondly, there is need for basin wide carrying capacity, cumulative impact assessment studies in each basin in a credible independent way to ensure that unviable capacities and storages are not added.

The section on **Resettlement and Rehabilitation** needs to list out basic principles of avoiding and minimizing displacement and ensuring that only a project that has come through bottom-up planning process like the one recommended by the World Commission on Dams shall be considered. The first principle of R&R should be that all affected families will be rehabilitated to ensure that they promptly achieve living standards that are equal or higher than their living standard before the projects began. Moreover, it needs to be acknowledged that the past experiences in this respect has been most disappointing and millions of people have been displaced by dams in India without any credible R&R in any of the large dams and hence, first there is need to ensure justice to those already displaced.

The section on **Institutional Arrangements has some unpleasant surprises.** It begins with the statement that **Water Resources Regulatory Authorities (WRRAs) are a must in each state.** WRRAs were first established in Maharashtra in 2005 through the MWRRRA Act. The centralised, top down bureaucratic authority with no space for community representatives has been ineffective in achieving any worthwhile objective or making water resources management pro poor or pro environment or stopping inter sector water allocation. The act has now been amended by an ordinance which gives rights of water allocation to the cabinet, which chose to change water allocation from farmers on verge of suicides in Vidarbha to thermal power plants. Now the MWRRRA has recently come up with a proposition to allow farmers to trade water entitlements. This is being proposed, when there is no credible system of allocating, ensuring and protecting the entitlements in an equitable way. There is little that inspires confidence in this experience with MWRRRA so far. In states like Uttar Pradesh, Andhra Pradesh and Arunachal Pradesh, where too attempts have been made to set up WRRAs, but nowhere has this been fully implemented. So on what basis are WRRAs being pushed in the NWP, **apart from the fact that it is pushed by the World Bank?**

A most shocking statement in the Policy is the assertion that **“The “Service Provider” role of the state has to be gradually reduced and shifted to regulation and**

control of services. The water related services should be transferred to community and / OR private sector...” “Public Private Partnership” model under the general superintendence of the State or the stakeholders basically means privatisation by other means. Thus the NWP draft seems to signal a blanket go ahead for water privatisation, which has been proved to be anti people, anti poor, pro private water utilities and hence unacceptable. Privatisation has not succeeded anywhere and is not likely to succeed in any case in India, and will only work towards worsening the water services scene, particularly for the poor, but actually for everyone. Particularly when we have no credible mechanisms to ensure transparent, accountable water resources management, nor do we have laws to ensure legally enforceable right to water and democratic norms.

The attention given in the Draft NWP 2012 to information sharing, climate change, priority to basic human needs and ecosystems are welcome, but these are likely to remain at superficial lip service level without clearly defined norms and credible mechanisms to achieve these objectives. None are in place today.

On the whole, the anti farmer, pro private company, anti poor stance of the current draft is disappointing and it seems the water resources establishment has refused to learn lessons from the past. There has been only a notional attempt at a democratic process in the formulation of the new draft policy and it seems an opportunity that comes once in a generation may be lost if we hurry too much to proceed without open, credible, publicised consultations right down to gram sabha level, conducted by an independent panel. We urge the water resources establishment, including the Union Ministry of Water Resources, Central Water Commission and the Planning Commission to reinstate a credible participatory, democratic process for formulating new National Water Policy in the changing climate, keeping societal and ecosystem sustainability and equity in mind. A mere 29 days period for comments from the date of publication, that too when the draft policy is put up only on the website is totally inadequate for ground concerns to reach the administration.⁹ We urge the administration not to hurry through this critical part of public consultation, on the other hand, encourage grassroots participation. It is supposed to be the people’s policy after all.

Draft NWP is out for comments till the 29th Feb 2012.
Comments to be sent to: nwp2012-mowr@nic.in.

If you agree with the points raised above, please consider signing a petition on the same at: www.change.org/petitions/ministry-of-water-resources-india-make-the-new-water-policy-democratic-pro-people-pro-environment#share.

SANDRP

⁹ Last date for sending comments on the Draft Policy is 29th Feb 2012. Comments should be sent to: nwp2012-mowr@nic.in.

MoEF overrules all the independent NBWL members

Wildlife clearance for Lower Demwe Project will be disastrous for the biodiversity

The [Wildlife Clearance given by the Union Ministry of Environment and Forests to Demwe Lower](#) is not just a technical clearance, but a case having large scale implications. The 1750 MW Demwe Lower on River Lohit in Arunachal is no ordinary dam. If it comes up, it can change the course and the way of a river which has flown unfettered for millennia. It will lead to extreme flow fluctuations in the downstream, at the trijunction of Lohit, Siang and Dibang and much further downstream, right upto Dibrugadh in Assam and perhaps even further. Lohit river basin will have as many as thirteen dams, Demwe Lower being the last in the cascade of seven on the main Lohit River, proposed at an ecologically significant site just where the river meets the floodplains.

An Environment Impact Assessment, Basin Study and a Study about impacts of peaking on the downstream Dibru Saikhowa National Park have been conducted so far. Of course none of this happened *suo motto*, a number of organizations and individuals rallied hard for this. And none of these studies have been conducted by a multidisciplinary team of experts with community involvement; the Lohit Basin Study and Impact of Peaking study on Dibru Saikhowa National Park (DSNP) have been done by WAPCOS (Water & Power Consultancy Services), an agency known for its serious conflict of interest and severe limitations about dealing with wildlife issues. A number of organisations and individuals raised serious objections about both these studies, SANDRP's (South Asia Network on Dams, Rivers & People) critique of the WAPCOS study can be seen at: [Comments on WAPCOS Study on impact of hydro-peaking on dams in Arunachal Pradesh on Dibru Saikhowa National Park](#).

Jagdish Krishnaswamy, a hydrologist at the Ashoka Trust for Research in Ecology and Environment, says that post project, the river "will become inhospitable" for the Ganges dolphin, a critically endangered species.

As Janaki Lenin wrote in [an excellent article](#), it's not only the wildlife fraternity that opposes the project, the people of Assam downstream of the dam, who fear their livelihoods will be severely affected, are against it as well. But the authorities want this project so badly that they're not playing by the rules. The proposal to the SC-NBWL states that the Lower Demwe project is not sub judice, when it most certainly is. An appeal challenging

the environmental clearance was filed at the National Environmental Appellate Authority, now transferred to the National Green Tribunal, where the case is being heard.

Additional misinformation includes the estimated distance of the reservoir from Kamlang Wildlife Sanctuary. The application to the SC-NBWL said 0.5 kilometres, while its submission to the Forest Advisory Committee (FAC) said 50 metres. To the SC-NBWL, it mentioned 43,000 trees will be cleared, but to the FAC, 1,24,000 trees. A 26 per cent stake in the power project makes the State Government a project promoter, not an impartial administrator of the state.

The Arunachal Forest Department claims the people of

the state are frustrated by the delay caused to this project, this is clearly wrong. Among others, it appears to have ignored the August 2010 appeal by an indigenous group, Arunachal Citizens Rights, to save its people and their livelihoods from mega-dams. At the same time, the Arunachal State Government has no qualms about blithely recommending the displacement of people, not only from two villages in Dibru-Saikhowa in Assam, but from river islands within its own state.

In February 2011, the Krishak Mukti Sangram Samiti, an activist group fighting for farmers' rights, wrote to Jairam Ramesh, the former Minister of Environment and Forests, accusing Athena Demwe Power Ltd., the company building the dam, of violating the Forest Conservation Act. The Ministry forwarded the complaint to the Arunachal State Forest Department for enquiry. The state appears to have merely asked the company for clarifications and the resulting verdict: there were no violations. In December 2011, the group wrote again to Natarajan with evidence; it enclosed photographs of the company constructing roads on forest land for which approval had not been obtained.

As Tseten Lepcha, the Honorary Wildlife Warden of North Sikkim, pointed out in a letter to Ramesh in April 2011, the same company has already been violating the Wildlife Protection Act (it killed a serow, a goat-like antelope that enjoys the highest protection) in Sikkim in its implementation of the 1200 MW Teesta III project. Besides, the dam promoters ignored the law and did not apply for wildlife clearance for three years after starting

In the 24th Meeting of the National Board for Wildlife, under the Chairpersonship of Hon. Minister Jayanthi Natarajan (13th December 2011), ALL the NBWL Standing Committee Members who spoke have categorically Rejected Demwe Lower project. Some have been so blunt as to say that we will not put our signature on this project. Why did the ministry overrule the opinion of ALL these members? Whose interests is the ministry serving?

the project. Although it is now two years since they finally did, it hasn't even figured in the agenda of the SC-NBWL although the dam is more than 60 per cent complete. Instead the Ministry has now given the wildlife clearance to a later project, the Lower Demwe dam.

In a blatant case of conflict of interest, the Ministry allowed P. Abraham, who served on the Board of Directors of several power companies as well as PTC Ltd., one of the promoters of Athena Demwe, to chair the Expert Appraisal Committee when the environmental clearance of Lower Demwe was being considered. A Ministry-commissioned Lohit Basin study was to assess the cumulative impact of all the dams coming up on that river and its tributaries. Abraham's Committee dissociated the results of this study from affecting the environmental clearance process of Upper and Lower Demwe dams. After SANDRP wrote to the minister, Abraham resigned from the Committee. We also wrote to the minister to place all the projects he approved where conflict was involved under review, but the minister has allowed the damage Abraham wrought to fester.

Janaki has added, "[There is now another bogey, China](#), being used to ram this project through the approval process. India and China do not have a treaty on water sharing and, therefore, India wants to build dams quickly across the Siang, the Dibang and the Lohit rivers to claim "first user rights." A similar argument was used in April 2010 to appeal for the construction of the 2700 MW Lower Siang Hydroelectric project... is damming a river the only way to use it? Don't centuries of irrigating, navigating, fishing and drinking its waters count as "use"? As far as can be ascertained, the principle of "first user rights" has its roots in the American Wild West. This could arguably be the Wild East, but both Tibet and Arunachal have been settled for centuries. Besides... Would it (China) respect any Indian assertion of "first user rights"? Instead of acting like cowboys in a lawless world, India ought to talk to China and negotiate a treaty."

The project has received an Environmental Clearance and the fate of downstream (and upstream too, as the so called 'Run of River' scheme with 163.12 m high dam would submerge 23 kms length of the river) hinges on the Wildlife clearance from the National Board for Wildlife (NBWL).

To get a picture of the possible impact on the fauna and flora, particularly globally threatened species such as the Bengal Florican, the MoEF constituted a team of NBWL representatives Dr. Asad Rahmani, Director, Bombay Natural History Society and Mr. Pratap Singh, Chief Conservator of Forests (Wildlife), Arunachal Pradesh Forest Department "on the feasibility of the proposal" through a site assessment study. The study took place for three days in Nov 2011 when the committee travelled the entire length from Demwe site to DSNP and met a

number of stakeholders, including the VPs of Athena Demwe, the private company building the Demwe Lower (also two more dams on Lohit), District collectors and Forest officials.

Looking at several serious concerns raised by a number of wildlife experts, NGOs, individuals across the country, this site assessment was to be a crucial factor in the final decision making related to Demwe Lower.

Dr. Asad Rahmani in his report wrote: "Under no circumstances should wildlife clearance be given based on current information/impact assessment reports".

Dr. Asad Rahmani's submission is a clear statement of the facts and ambiguities in the present situation. He clearly states "the presently available downstream impact assessment reports do not provide us adequate information to take a decision to grant or reject wildlife clearance to the project on the aspect of downstream impacts," but prima facie there seem to be several serious impacts on many globally threatened, critical and endangered animals and ecosystems and he categorically states that "under no circumstances should wildlife clearance be given based on current information/impact assessment reports".

He has stated at a number of places that flow fluctuation of 70 cumecs and 1729 cumecs in a single day in lean season is envisaged to have negative impacts on the entire biodiversity as well as social systems in the region. Though some of the extreme fluctuation may get attenuated (it will still be very severe) by the time it reaches Dibru Saikhowa National Park, the Important Bird Area (IBA) of Lohit starts immediately downstream of the dam, at Brahmakund bridge. Rahmani reported the dramatic repercussions likely to affect the ecology of river islands, Dibru-Saikhowa Wildlife Sanctuary, the foraging grounds of the Asian buffalo and hog deer, and the Bengal florican. Most critically, the dam will act as a bulwark against any attempt by fish like, golden mahseer, to migrate upriver.

He exercises the precautionary principle wisely, calls for a detailed multidisciplinary study regarding impact of flow fluctuations and diurnal variations, recommends a team of experts from Arunachal and Assam to study impact on endangered and iconic species like Bengal Florican and Gangetic Dolphins and reiterates that "Under no circumstances should a decision regarding clearance to Demwe Lower be taken before their inputs are received on the detailed downstream impact study about to be completed soon."

He recommends for:

"Rejection of a mega hydropower project at the present site of the Demwe Lower project at Parshuram Kund to protect an ecologically sensitive stretch of the lower reaches of the Lohit River and its tributaries in

close proximity of Kamlang sanctuary (the only Protected Area in Lohit and Anjaw districts). Dropping the project will also help maintain a degree of longitudinal connectivity between the plains and uplands, considering the fact that a cascade of seven large hydroelectric projects proposed on the main Lohit river will lead to a serious fragmentation of the river. This will also help protect the environment in and around the cultural heritage site, Parshuram Kund.”

An independent consortium of scientists/groups should be set up to peer review the existing reports on Demwe Lower, identify gaps for additional study, & conduct the necessary additional studies in the next 2-3 years.

A decision regarding wildlife clearance should be taken after the process outlined above is completed. Under no circumstances should the above mentioned process be carried out post-facto.

Since flow variations will take at place at DSNP, permission should also be sought under section 35 (6) of the Wildlife (Protection) Act, 1972 from the Chief Wildlife Warden, Government of Assam.

Mr. Pratap Singh, Chief Conservator of Forests, Arunachal Pradesh: “Downstream impacts of the project can be studied simultaneously if the project is approved as corrective measures, including flow regime variation, will be possible post –facto.”

Mr. Pratap Singh, CCF, Arunachal Pradesh, decided to submit a separate report. Looking at the extreme divergence in his views with Dr. Rahmani, it is not surprising. Mr. Singh’s report tows the govt line, which is shocking, to say the least.

As the CCF and responsible for protection of wildlife in one of the most biologically diverse and rich states in the country, the CCF was expected to uphold the interests of wildlife and the **precautionary principle**. What we see is exactly the opposite, while Mr. Singh goes on to question Dr. Rahmani’s mandate about addressing issues like First user rights and impacts on communities, he has by far violated his mandate by stating repeatedly that the project should be approved and “studies can be undertaken simultaneously and if impacts are found to be immitigable by other means, water flow can be suitably modified to minimize the impacts.”

Was lobbying for the project a part of Mr. Singh’s mandate? How can range of social and ecological impacts of fluctuations as high as 70-1729 cumecs be mitigated by changing the flows if such changes put in question the very viability of the project as it will have impact on the electricity generation from the project?

He also defends the WAPCOS study, which has been found to have very serious issues related to contradictions, authenticity of data and integration of wildlife issues, by saying that though WAPCOS has conducted no field studies to back their report, “the study has primarily modelled the river flow regimes and is

relevant in that perspective”. However, the mandate of the study was to study the impacts of peaking of the dams on the three rivers on DSNP, and not modelling of river flows. How can such a study be conducted without even visiting and considering the ecology of the National Park? How can a CCF support such shoddy report?

The point Mr. Singh has repeatedly made in his submission is that the project should be approved and studies about downstream impacts, diurnal fluctuations should go on simultaneously. He even goes to the extent of saying that “some of these impacts can be studied only after the actual diurnal fluctuations take place”, suggesting that even for studying impacts, the project should be approved! The CCF is thus blatantly lobbying for the Demwe Lower project and he is clearly violating the duties of CCF and does not deserve to remain in that post.

He has raised this point for defending several serious concerns pertaining to endangered and globally threatened wildlife like the Bengal Florican and also Chapories downstream of the Demwe Lower Dam site.

Even with a little bit of understanding of ground realities and pragmatism, it is clear that projects once sanctioned, with PPAs signed and in place will never change their peaking operations to benefit downstream ecology. On the contrary, we have evidence from all across the country that projects do not release even the legally binding e-flows (Avay Shukla Committee report, HP which shows that for all 11 HEPs with capacity over 100 MW assessed by that committee, NONE was releasing the stipulated 15% average flows downstream as required by the Himachal Pradesh law).

So how does Mr. Pratap Singh assume that the project proponents will agree to change the peaking operations, which are said to be the main profit earners of these dams? Who will take this responsibility? And in the absence of this, how can a CCF leave precautionary principle to the winds and actually recommend approving the project where downstream impacts on ecology and livelihoods are evidently so severe?

He says that points related to Parshuram Kund (cultural impacts) are outside the mandate of the site assessment committee, but he himself goes on to defend the project proponent about water releases to the kund during festivals, indicating indirectly that there will be impacts on the cultural site. The dam site is hardly 1-2 kms from Parshuram kund, where this year thousands of devotees came for the holy bath during Sankranti (January 14). He also goes on to reiterate the PPs demand to increase financial allocation to Parshuram Kund, thus implying that cultural issues can be handled just by increasing financial allocations from 2 crores to 10 crores.

Most shockingly, the only contribution he makes towards conserving DSNP and the Chapories on Lohit is suggesting that “Dibru-Saikhwa National Park has two unauthorized villages having 27 sq Km area located within it. If these villages are shifted out by offering

suitable package, the vacated area can soon become suitable habitat for many of the species. Similarly, wildlife habitats on other Chaporis upstream in Arunachal part can be made available by removing illegal occupants on the Chaporis.”

The fact that this is the only wildlife management strategy that a CCF can think of is extremely disturbing. It is also very shocking to see that Mr. Singh demands for further multidisciplinary studies to study downstream impacts, but very easily recommends eviction of traditional dwellers from forest villages, without any studies about their resource use impact on habitat. In any case, individual and community rights of the forest dwelling communities who have been living in DSNP and Lohit Chaporis for decades have to be ascertained according to Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 and simply their eviction will not be just, fair or legal. Such moves in any case cannot stop the flow fluctuations due to the project and the impacts thereof.

By committing all these serious blunders of commissions and omissions, Mr. Singh has discredited his report.

Arunachal Pradesh Government: “As such clearance to the project may be accorded.”

Arunachal Pradesh Government has also submitted a rejoinder, mainly to counter points raised by Dr. Asad Rahmani. This was expected and not surprising. Unfortunately, Arunachal Pradesh Government has not even tried to be objective about the facts. It seems as if the state government, after accepting Rs 93 crores as up front processing fees for Demwe Lower Project, is compromising its constitutional duties of protecting the interests of the state, its environment, its people and its indigenous populations. The state government also has statutory duty in terms of public hearings, giving consent to establish and operate and also giving first stage clearances, but it is now seen only as a supporter of the project. The state government, thus, has abdicated its duties.

The Arunachal Pradesh (AP) Govt Report has singled out Dr. Rahmani’s report, which as he has stated was based on a number of reports, site visit and also submissions that NBWL had received from organisations and individuals across the country about Demwe Lower. AP govt, in the first stroke has alleged that the “the report was pre-meditated and there are questions even on its neutrality and objectivity.” This is attributed to the fact that some of the line of argument is similar to one raised in a petition submitted to the erstwhile National Environment Appellate Authority, now transferred to National Green Tribunal.

The moot point here is not whether any points made in Dr. Rahmani’s report are similar to ones raised in NGT or not, but whether they are true or not. But truth does not seem to be a concern here.

The report makes blanket and irresponsible statements like “The apprehensions of Dr. Rahmani that water level variation due to Demwe Lower HEP peaking will have major impact on DSNP are hypothetical and alarmist in nature without either any study or precedence. It is found that no significant impacts are foreseen on the DSNP due to its distance of 100 km from the Dam site.” This is a blatantly wrong statement. Even the WAPCOS report on Effects of peaking of upstream dams on DSNP states that: The maximum water level fluctuation in DSNP during lean season peaking will be 0.78 meters that is 2-3 feet and a number of wildlife experts have claimed that this will have substantial impacts on the park. In any case, it is not only the DSNP which is of ecological importance, but also the entire Lohit stretch downstream of Demwe Lower, as it enters the floodplains as well as Chapories in the river, which will be affected by the extreme fluctuation.

The AP govt recommends here that “Impacts prima-facie seem to be mitigable, either by adopting some engineering/biological measures etc., or by modulating peaking flows of the project, there is no justification for holding the NBWL clearance.”

Can the AP govt share any engineering/ biological methods which can mitigate impacts of 70 -1729 cumecs daily fluctuations on an IBA and proposed Ramsar site with globally threatened biodiversity, without changing flows? Please also note that in Mr. Singh’s submission as well as AP government’s submission, changing the flow regime is stated as the last option.

Regarding points about Bengal Florican and Lohit Chapories, AP Govt is very happy to toe the line of Mr. Pratap Singh, of giving permissions first and then think of modifying flows (only if there are no other options!). We have seen that this will be impossible after permission is granted. In any case, WAPCOS is conducting the downstream impacts study and knowing the pro large dam stance of WAPCOS along with its inability to deal with wildlife issues, little can be expected from this study.

AP Govt also goes on to advise Dr. Rahmani that “The need is to look beyond the narrow interpretation of animal and plant biodiversity and think of people who are as much a part of the same biodiversity and need green and clean power for their sustainable development.” AP govt is happy not to mention who will get power benefits from the project as most of the power from the project is destined to be transported outside the region.

Ironically, the same Govt. did not even bother to include the impacts of flow fluctuations on the downstream communities in Arunachal Pradesh in the pre clearance conditions. AP govt has stated that in the study of riverine islands and tracts of the Lohit River that there is extensive human use of the area - agriculture, livestock

rearing, grazing, fishing, navigation, both permanent and floating populations of people. However, this was not a part of the pre clearance study, but will be studied as post clearance impact. So much for sustainable development of people!

On the crucial aspect of downstream impacts, AP govt says that they will be confined only to lean season (which is not true, they will only be more severe in the lean season, but the impacts are likely to be felt all year round). It also goes on to make an extremely unqualified and unscientific statement that "low lying flood plains in Brahmaputra basin would be positively impacted of increased availability of water during non-monsoon peaking hours that would support winter agriculture." Surprising to see that the state felt no need for any 'studies' to establish this, when it has been advocating so volubly studies in case of flow fluctuations elsewhere.

In the end, as expected, the AP govt has recommended the project for clearance.

It is pertinent to note here that these three reports were discussed at the 24th Meeting of the National Board for Wildlife, under the Chairpersonship of Union Minister of state (Independent charge) of Environment and Forests Jayanthi Natarajan on the 13th of December 2011. PCCF and Principle Secretary, Arunachal Pradesh were also present at the meeting. They raised the same points as mentioned in AP govt's submission and initially put forth a number of non-wildlife issues for consideration.

Significantly, ALL the Standing Committee members present at the meeting who have been minuted, with the exception of the Chairperson, have:

Categorically supported Dr. Rahmani's Report,

Found serious lapses in Shri. Singh's report, including not upholding precautionary principle, and

None of the Standing Committee members have indicated any support for Demwe Lower Project.

On the other hand, they have raised several additional issues like absence of cumulative impact assessment study for Lohit, inadequacies in the WAPCOS report, impact of communities in the downstream, etc.

The members have also indicated that the once clearance is issued for the Demwe Lower the lowest project in the cascade of projects, the proponent always pushes for upstream projects by saying that the lowest project will not be viable without clearing those in the upstream.

So now, Demwe Lower is a test. Do we really abide by norms like participatory and sustainable development, informed decision making after all due studies done in credible and independent manner, or are we happy to take the easy way out and take decisions which will

change a river and a region for ever, from where there is no turning back?

All available information overwhelmingly suggests that the wildlife clearance for the Demwe Lower project should be rejected. The Hon. Minister, at the end of NBWL Meeting has said that "the issue cannot be delayed any further". All concerned had hoped that the decision thus taken would have responded to the urgency and gravity of the situation. Unfortunately, that was not to happen.

Shockingly, Demwe Lower received Wildlife Clearance on Feb 14, 2012

It was like a valentine day gift (it happened on Feb 14) from the minister to the Chief Minister of Arunachal Pradesh and also to the Prime Minister and the Finance Minister of India as they all wanted green signal for the project.

To top this, the Ministry has recommended that Cumulative Impact and Ecological Impact Assessment Studies for the project will be done by IIT Roorkee. The MoEF itself is yet to accept the erroneous [Cumulative Impact Assessment Report done by AHEC](#), IIT Roorkee on Upper Ganga Projects. The clearance letter also states that the report will not precede the project, but will go on 'concurrently'.

The ministry seems to be hell bent on pleasing all private hydropower companies. Recently it gave clearance to 300 MW Badrinath (Alaknanda) project by GMR in Uttarakhand, which was rejected twice by FAC, and negatively recommended by WII and now its sanctioning a project rejected by all independent NBWL Members, which will have impacts on downstream communities, ecosystems and future generations and their ability to cope with Climate change. All for hydropower generation benefits, which are questionable.

This decision is likely to face bigger opposition in North East than what the lower Subansiri is facing now. As Janaki Lenin concluded, "A system where companies have to borrow enormous sums of money from banks to pay the state, before the project is even cleared, brings tremendous pressure to bear on the Ministry of Environment and Forests to give its seal of approval. Abdicating their primary role of exercising due diligence on behalf of our forests, wildlife and people ([see the Supreme Court judgment on the government's constitutional duty](#)), the State and Central Governments act as minions of banks and private companies...

By approving this ecologically disastrous project, the State and the Centre have made a mockery of rule of law while drowning India's avowed commitment to protect its wildlife with this misbegotten dam."

Parineeta Dandekar and Himanshu Thakkar

CLIMATE CHANGE & WATER SECTOR

Diverse ecosystems as climate change buffer

Preserving diverse plant life will be crucial to buffer the negative effects of climate change and desertification in the world's drylands, according to a new study. The findings of the multi-author study are based on samples of ecosystems in every continent except Antarctica. **They confirm for the first time that the more diverse an ecosystem is the more ecological functions it performs. It also has implications for carbon sequestration and soil health.**

According to the study, dryland ecosystems cover about 40 per cent of the Earth's land surface, support 40 per cent of its people, and are particularly vulnerable to environmental changes and desertification. "Our findings suggest that plant species richness may be particularly important for maintaining ecosystem functions linked to carbon and nitrogen cycling, which sustain carbon sequestration and soil fertility," says co-author Professor David Eldridge, of the UNSW School of Biological, Earth and Environmental Sciences.

In this study, a team of scientists from 14 countries evaluated how the diversity of perennial plants, and a range of climatic and landscape variables, were related to multi-functionality in 224 dryland ecosystems. Researchers assessed 14 functions all related to the cycling and storage of carbon, nitrogen and phosphorus. According to researchers, "Climate change will reduce the ability of dryland ecosystems to perform multiple functions related to the cycling of these elements. Changing climate is also likely to reduce plant richness and increase the areas affected by desertification." (University of New South Wales [News](#) 120112)

These conclusions give more reasons to protect free flowing rivers for their multi functionality and also for protecting riverine and morphological features like riffles, pools and lakes which are destroyed by dams and embankments. It has been documented before that free flowing rivers support significantly higher biodiversity than their dammed counterparts and are also [more resilient to climate change impacts](#).

Demilitarize Siachen to Protect Glaciers

Independent experts have urged Pakistan and India to declare all Himalayan glaciers as 'Protected Areas,' and consequently demilitarise Siachen to preserve the second-longest glacier in the world for exclusively feeding into the Indus water basin. According to Arshad H Abbasi, water and energy expert at the Sustainable Development Policy Institute, Pakistan, such solutions have been arrived at after a series of dialogues with water and energy experts, intelligentsia and environmentalists in New Delhi, Islamabad, Bangkok and Dubai.

The experts has proposed setting up an independent Indus Water Commission under the direct control of United Nations, and comprising neutral experts from various international agencies including the United Nations Environment Programme and the European Union. The proposed commission would have the mandate to compile and post real time data on a web portal, including information on all tributaries at all head-works and dams, and three-dimensional models of dams representing their flood storage data and hydropower projects. Mr. Abbasi said that a satellite-based, real-time telemetry system in Indian Kashmir, installed at a minimum of 100 locations for monitoring water quality and quantity would help remove mistrust on data exchange. ([The Express Tribune](#) 120112)

Climate Change in the Economic Survey In a Workshop on Climate Change Financing in New Delhi, Shri R.Gopalan, Secretary, Department of Economic Affairs, Ministry of Finance said that for the first time, the forthcoming Economic Survey of India will have a chapter on Climate change. While this attention to Climate change concerns is welcome, the statement that global financial transfers are required is significant, looking at the rampant and unjustifiable CDM credits that private and public agencies are appropriating, largely at the cost of ecology and local communities. Particularly when the Union Ministry of Environment and Forests, India's designated National Entity is doing so little to ensure that only deserving and sustainable projects are given ok. ([PIB](#) 140112)

India's 'neglected' informal economy In an upcoming project, experts from the University of Oxford and Indian researchers are looking into the impact of climate change policies on India's informal economy, and to diagnose ways of reducing CO2 emissions and improving jobs. The global response to climate change has mostly ignored informal economies and yet the larger part of India's economy and almost all its jobs are informal and not directly affected by government policy. Field studies are expected to start in March-April 2012 to examine the environmental impact of a range of technologies for paddy-rice. The study is likely to be completed in June 2013.

Researchers will also examine the number and type of jobs created in the production and distribution of rice. Fieldwork will centre on Orissa, Andhra Pradesh and Tamil Nadu. The project seeks to compare the amounts of water, energy and carbon dioxide emissions used in the life cycle of rice. The researchers will compare these environmental measures, and the jobs created for those farming and distributing the rice. It will look specifically at four different types of rice production: high-yielding varieties that use fertilisers and agricultural chemicals; System of Rice Intensification that use less water & fertiliser; rice certified as organic; and rain-fed rice that is not certified as organic but uses few agro-chemicals.

The project will be co-ordinated from the University of Oxford and will involve researchers from the Institute of Human Development, New Delhi; Madras School of Economics; Jawaharlal Nehru University and Jindal Global University. The project aims at developing new models that can be used to investigate the environmental effects of production and distribution systems that operate in the informal economy outside the reach of state regulation. ([The Economic Times 110112](#))

Thawing permafrost reduces river runoff in Yangtze

Chinese researchers have revealed that the amount of water entering the Yangtze River near its source on the Tibetan plateau has fallen by 15% over the past four decades, despite a 15% increase in glacial melt and increased rainfall over the same period. Chinese ecologists from Institute of Mountain Hazards and Environment, part of the Chinese Academy of Sciences (CAS), say that the findings came as a surprise. "It is in contrast to results from the Arctic where global warming has generally caused increased river discharge." CAS and Cold and Arid Regions Environment and Engineering Research Institute (CAREERI) in Lanzhou, have just completed a five-year project to document changes in glaciers, snow and permafrost and to assess their impact on water resources in western China.

CAREERI notes that by contrast, many other river systems in western China have seen more water input as glacial retreat and rainfall have increased with a warming climate. The runoff into the Tarim River headwaters has increased by 13% since 1961, mainly as a result of increased glacial melt, which has risen by 26%. "But the Yangtze headwaters are an exception." The decrease in runoff into the Yangtze is accompanied by widespread changes in permafrost. Across the Tibetan plateau, 10% of the permafrost has degraded in the past decade. The area of alpine wetland and high-vegetation-cover alpine meadow has decreased by 37% and 16%, respectively.

The researchers found that the depth of the 'active' ground layer part that freezes and thaws every year is crucial for water passage. Runoff increased if the thawing layer was less than 0.6 m deep, but decreased if the thaw went deeper. The reasons are unclear but the researchers suspect that when more of the permafrost thaws, the thickened active layer may act like a sponge, soaking up water that would otherwise have run off into the river. Alternatively, more water may leak deep into the ground, also reducing surface discharge.

The thickness of the active layer is dictated both by air temperature and vegetation cover, especially during thawing seasons. **The researchers found that nearly twice as much heat gets into severely degraded permafrost alpine meadow compared with healthy meadows.** "So the soil is easier to thaw and more difficult to freeze, thereby deepening the active layer."

According to researchers, Wetland degradation may be even a bigger killer of headwater discharge. Runoff from moderately degraded wetland was up to 40% less than in healthy wetland. Researchers say "the hydrology of the Tibetan plateau seems to be responding to a warming climate differently from the Arctic". In central Alaska, for instance, permafrost degradation has resulted in the expansion of wetlands, whereas on the Tibetan plateau, it has caused the land to become drier and more prone to desertification.

Until recently, the role of permafrost in water resources was largely neglected, with glaciers hogging the spotlight. But permafrost constitutes up to a quarter of Earth's land surface. "It could be just as important [as glaciers] in terms of water resources, especially in places like the Tibetan plateau where you have a lot of it." A better understanding of the various components of runoff processes will help to develop permafrost hydrological models, says Wang, researcher in the project. ([The Nature 060112](#))

Blame climate, not Government The controversy over September 2011 floods caused by mismanaging the Hirakud Dam refuses to die down. The issue resurfaced in the Assembly with the Congress claiming them man-made and the State Government blaming the climate change. The back-to-back floods played havoc taking at least 87 lives. During an adjournment debate, Congress alleged that the **Govt created the floods in Sept 2011 to woo people by distributing relief, he charged.** A BJP member also termed the floods man-made: "We claim that the floods are man-made as the Govt didn't take any preventive measures to avoid them."

However, Revenue and Disaster Management Minister S N Patro strongly defended the Government. "The floods were an impact of the climate change at global level. The change is certainly man-made, not the floods." ([IBN Live 231211](#)). Whether or not Climate change had a role to play in the rainfall, the mismanagement of Hirakud yet again was a clear cause of floods in Orissa. (See: [Dams Rivers and People Sept Oct 2011](#), p 24-25)

CDM HYDRO PROJECTS

Meghalaya eyes CDM credits to recuperate loss under Leshka HEP In order to bail itself out from the huge financial pandemonium that has gone into Myntdu Leshka Hydro Electric Project, Meghalaya government is now banking on the Clean Development Mechanism (CDM) credits to help it recuperate some cost. If the Project Design Document (PDD) submitted by the erstwhile Meghalaya State Electricity Board (MeSEB) is approved by United Nations Framework Convention on Climate Change (UNFCCC), one tenth of the total cost of the project will be recovered. **Till date, Leshka project has consumed more than Rs. 900 Crores, an almost three fold increase from its original estimate**

of Rs 363.08 Crores. The government would be able to recuperate about Rs 90 crores, if the PDD is approved.

The CDM – PDD was submitted by MeSEB about two years back. But it is still under the process of validation, wherein the PDD is put on public domain and open for comments for a month before it applies for registration, which it has yet to apply. However, SANDRP has strongly opposed granting credits for this project which was taken up even before UNFCCC got a legal status in Feb 2005. ([The Meghalaya Times](#) 111111)

DAMS FOR MUMBAI AND SURROUNDING AREAS

Illegal Balganga Dam: no permission, 85% complete

What the contractor FA Enterprises, has done on the Balganga River in Pen, in the Raigad district, is stunning in its supreme contempt for the laws of the land. Interestingly, the same contractor has been working on the Kalu dam and also Susari and Shai Dams being planned for water supply to Mumbai and adjoining municipalities. Over a km long, 40.15 m high dam on the Balganga river which is standing right now is a monument to the state's tradition of illegal, unnecessary dam-building: this nearly complete dam violates more than eight Acts related to land acquisition, rehabilitation, and forest, wildlife and biodiversity conservation. Like in every project undertaken for the sole benefit of the contractor lobby, here too, the irrigation department has ignored protests by the 8,000 plus villagers belonging to the 13 villages which face submergence.

The villagers have been protesting against the dam since August 2009. But the several demonstrations, sit-ins, and confrontations only resulted in the authorities speeding up a project that will submerge 1,240 ha (602 ha paddy fields and 265 ha forest land). The idea, obviously, is to present the finished dam as a fait accompli and fob off the villagers with some compensation. The impunity with which work continues despite sharp observations by Justices D K Deshmukh and Anup Mohta of the Bombay high court, on how such work can be commenced at all without any procedure for land acquisition and rehabilitation.

"We have orders to complete the dam as fast as possible and have told the contractor that it should be ready by the monsoon this year," said RC Rithe, the irrigation department's Raigad division executive engineer. "At a meeting called by the deputy chief minister Ajit Pawar last week, minister for water resources Sunil Tatkare ordered officials to tell people that compensation would be hiked, thereby hopefully making it easier for all the procedures to be completed before the next court hearing." Another official said, "If we show that we have completed all the procedures, and point out to the court the amount of public money already spent on the project, it will not rule against the dam. And this will take care of all the opposition to the dam. Unless the actual river gorge is filled, it does not

amount to building the dam. That we will do when all the 18 NOCs are obtained." The officers also defended their decision to go ahead with the work. "This is not some privately built dam. This is all government work and you should know that the permissions will come eventually."

Sarpanch of Varsai, who is a petitioner in the case against the dam, says "We have consistently opposed the dam but the government has, on the one hand, continued building it, and on the other, kept enticing people with increased compensation to break their unity. If the dam isn't stopped, we will lose everything in the monsoon." Surekha Dalvi of the Shramik Kranti Sanghatana, which is working closely with the locals on the issue said, "Even at this stage, the government can, and should, step back, dismantle the wall and let nature take over." ([DNA](#) 080112, For more details on Balganga struggle see: [DRP, April-May 2011](#))

Court directs MoEF to take call on Kalu dam The Bombay high court directed the Union ministry of environment and forests (MoEF) to take the final decision on a proposal forwarded by state government seeking permission to utilise nearly 999 hectare of forest land for construction of a dam on Kalu river in Thane district. MoEF counsel had sought six weeks' time for taking a decision, but the division bench of justices DD Sinha and VK Tahilramani reduced the period to four weeks saying that the central ministry should have already taken a call by now.

The court has been hearing a public interest litigation filed by Shramik Mukhti Sanghatana, alleging that the dam over the river was being built without required permissions from the forest department.

According to Adv. Gayatri Singh, Sangathana's counsel, the work order had been issued on May 29, 2010, and only after the filing of the PIL did the state government apply for permission to the chief conservator of forests, in June 2011. Singh sought stay on further construction, but the court rejected the plea, noting, "This is a matter of public interest where the society is going to be affected if water is not provided, and therefore stay cannot be granted." The matter will now come for hearing on February 17. ([Hindustan Times](#) 120112). This is despite the fact that Kalu Dam and other dams planned for Mumbai have not been paying any heed to the PESA Act and are set to destroy livelihoods of thousands of tribals, while destroying life supporting ecosystems too. (For more details on Kalu Dam and Dams for Mumbai, Please see: [www.sandrp.in/dams/Industrial_and_Domestic_Water_Supply_Dams_for_Mumbai-No_EIA_No_PH_No_Clearances_No_Monitoring.pdf](#))

Dahanu tribals oppose Susari dam The submergence of 853 ha of land-on which 13 hamlets stand-for a dam on the River Susari at Ramshet in Dahanu is becoming the focus of an agitation. The project, which will cost Rs 390 crore, is being undertaken by the Maharashtra govt to provide drinking water to Vasai-Virar. Residents of the

tribal hamlets and activists are questioning the very concept of submerging land to make way for drinking water projects. Activist for tribal rights, Brian Lobo of the Kashtakari Sanghatana, said they have formed Susari Dharan Virodhi Sangarsh Samiti comprising residents and members of several political parties.

"In Vasai-Virar, ponds which have dried up can be revived and wells which have been filled up can be reopened. Rainwater harvesting can be started in most areas. Why should adivasis suffer? Why their traditional habitats must be submerged to make way for drinking water supply in Vasai-Virar," he asked. Mumbai Metropolitan Region Development Authority will provide Rs 4,731 crore for the two dams on Poshir and Kalu rivers in Thane district. ([The Times of India](#) 230112)

DAMS

Purna dam: WAPCOS and CWC designs differ by 180 crores! The Vidarbha Irrigation Development Corporation's (VIDC) undue hurry to award the contract for building a barrage on Purna River in Akola district will cost the government Rs 180 crore more. The company that got the deal is a joint venture between SMS Infrastructure and D Thakkar and Co. One of the directors in SMS Infrastructure is a member of BJP's national executive and known to be close the party chief with equal connections in the ruling party, especially with the state's deputy chief minister Ajit Pawar, who had held the irrigation portfolio earlier. The area where the dam is being built has typical strata with soil having high saline content, which is not strong enough to hold a structure like a large dam unless a specialized design is used. New Delhi-based agency **WAPCOS** was approached to make the design, which suggested a plan costing estimated Rs **638 crore**.

Due to the peculiarity of the case, CWC came up with a parallel design of its own. **This plan required Rs 180 crore less than the expenditure WAPCOS' design entailed.** However, it is too late as the very structures on which the expenditure could be curtailed have been already built and now the VIDC would have to go-ahead with the WAPCOS plan that needs a higher expenditure. A technical approval has been given to the project and it is now up to the ministry to sanction the funds. The move has raised many eyebrows & irrigation contractors have cried foul. Issues are also bound to be raised about the competence of WAPCOS that came up with the design costing Rs 180 Cr more. ([The Times of India](#) 140112)

JP Associates held for insider trading Capital market regulator Sebi has pulled up Jaiprakash Associates chairman Manoj Gaur, his wife Urvashi Gaur, brother Sameer Gaur, S D Nailwal, whole time director of the company, and Harish K Vaid, senior president corporate affairs and company secretary, for alleged **insider trading in the company's shares**. A total of Rs 60 lakh

fine has been imposed on them. The regulator has alleged that these individuals had taken advantage of their position by trading shares of Jaiprakash Associates while they were in possession of unpublished price sensitive information. The regulator has said that Manoj Gaur, who was in possession of unpublished price sensitive information with regard to the company, had communicated the same to his wife and brother, who traded in the stock, thereby making use of certain prior information. ([The Economic Times](#) 070112)

Ranjit Sagar Dam threatens to drown village More than 2,000 villagers in Kathua district, are on the brink of displacement as their village on the banks of the lake of Ranjit Sagar Dam is sinking. Sabbar village is now surrounded by water on three sides except a 200-m stretch that connects it with the main land. A temple and a playground on the fringes of the village have submerged. Nearly 80% of the houses have developed massive cracks. Of the 250 families living there, those who could afford to relocate have already moved to Jammu or Kathua town. A team of geologists from the University of Jammu visited the village and submitted a report stating that the Ranjit Sagar Dam, one of the highest earth-fill dams, **was built on mud rocks**. These had absorbed water over the time and were now gradually giving in.

"The land on which the dam has been built is made of mud and sand rocks. These rocks swell after absorbing water. It is a gradual process, but the village is bound to sink. It's just a matter of time," said the head of Geology Department of the university. He also advised to construct only single-storey buildings in the village. Sabbar village is in the Kishanpur Mandi zone and has been facing a gradual process of land creeping for the last eight years. According to the Sarpanch, "During the monsoon, most houses developed big cracks and we spent a fortune repairing them. But the cracks are back." The sarpanch said they had made several representations seeking rehabilitation and relief, but were yet to receive any help. District Development Commissioner, admitted that the situation was alarming and said a ground report to relocate the residents was being prepared. Irrigation and Food Control Minister Taj Mohiuddin was unaware of the danger to the village. ([The Tribune](#) 241211)

Ranjit Sagar Project has an installed capacity 600 MW & 160 m high earth core cum gravel shell Dam. Dam is located in a gorge near village Thein of J&K and is also known as Thein Dam. It is 24 Km upstream of Madhopur Head Works. Ranjit Sagar Reservoir spreading in an area of 87 sq km falls in the states of J&K, Punjab & Himachal Pradesh. ([Department of Irrigation, GOP](#))

TN gets World Bank Dam Rehabilitation project Tamil Nadu has launched an exercise of improving the safety and operational efficiency of select dams with 80

per cent loan from the World Bank. The project 'Dam Rehabilitation and Improvement Project' (DRIP), estimated to cost Rs.745.49 crore, is being executed in four phases and expected to be over in 6 years. A total of 104 dams, being maintained by both the Water Resources wing of PWD and TNEB are being covered under this project, which has three major components — rehabilitation and improvement; safety and strengthening; & management. It is proposed to carry out sedimentation studies in 60 dams including 45 PWD dams & 15 TNEB's.

Agricultural Engineering Department will improve catchment areas of Krishnagiri Dam and Kundah reservoir in Nilgiris at a cost of Rs 15.41 crore. To monitor the project, a State Project Management Unit has been set up. The first two phases will have a total of 55 dams, the next two phases will cover 49 dams. The works include treatment of leakage and reduction of seepage, improvement of internal and external drainage. The works on the Stanley reservoir in Mettur, which has been allotted a sum of about Rs 7 crore, will be taken up shortly. ([The Hindu 030511](#)) It will be interesting to note here that Tamil Nadu was one of the original beneficiaries of World Bank's first Dam Safety Project in 1990s, but the state was dropped from the project due to poor performance. Kerala too has received an assistance of Rs 280 crore to repair 31 dams; Madhya Pradesh got Rs 315 crore to repair 50 dams and Orissa Rs 148 crore under the same project. ([Oman Tribune 060112](#))

SARDAR SAROVAR PROJECT

Jamin Hak Satyagraha in Jobat Hundreds of adivasis displaced by the Sardar Sarovar and Jobat Dams are on an indefinite 'Zameen Haq Satyagraha at the Jobat Govt. Seed Farm with full vigor and determination. The Satyagraha began on 24th Nov 2011. All the men, women and children stated in chorus that "All Gov land is our land. If it is 'legal' for the State to submerge our farms and homes without prior rehabilitation, then it is equally 'legal' for us to occupy Govt. land until we are given alternative cultivable lands.

Hundreds of oustees have faced illegal submergence of their land, standing crops and houses since 1994, but they have not been rehabilitated in Madhya Pradesh as per binding legal provisions and Supreme Court's Judgments with cultivable, un-encroached land and house plots in developed resettlement sites. The ongoing Satyagraha is an ultimate challenge to the illegal submergence and unfinished rehabilitation. For the past 25 years, the oustees have only resorted to a peaceful and democratic path of struggle. They have had innumerable rounds of 'dialogue' with the state and central authorities, submitted countless memoranda, undertook long agitations, courted arrests, went to jail, sat on fasts and also engaged with the Courts, which endorsed their legal right to land and rehabilitation, as part of their right to life under Article 21 of the Constitution. However, the MP Govt has not offered

cultivable, un-encroached land to any of the oustees till date, which is nothing short of a 'mega-atrocity' on the adivasis.

On the third day of the Satyagraha, more than five hundred oustees took out a rally through the main streets of Jobat Tehsil and challenged the Chief Minister, Prime Minister; the State and Central Govt to convert their promises and laws on paper in to actual action and allot land. Bava Mahariya of Jalsindhi, who has been battling for the past 25 years challenged the notions of 'public purpose' and 'development'. He said, "There is no excuse for the common man if he does not know law and violates the same. But the Govt. of M.P has been openly flouting law, Supreme Court's Judgments and the Constitution. If all of us are equal before law, should the successive Chief Ministers and authorities not be punished for their illegalities?"

The oustees submitted a memorandum to the Tehsildar in the name of the Chief Minister, Mr. Shivraj Singh Chouhan and called for his immediate intervention to ensure that all the project-affected families are rehabilitated with cultivable land, as per law. They stated that the State has no right to violate people's right to life. Speaking out the Tehsil Office, where the oustees, as usual were greeted with closed gates and police force, Jankibai of Jalsindhi said, "Why is the State scared of us? We are not criminals, we are farmers and adivasis, we are hard working women, we have come here with our flags and banners, not weapons; we seek justice for our families; we don't want bits of money, we want land, land is our life".

Jobat Dam affected tribals recounted how the NVDA officials cheated and looted the illiterate adivasis, scaring them into accepting meager cash compensation in small installments and depriving them of land. Along with the adivasis and other farmers from the plain areas in Nimad, the children of the Narmada Jeevanshalas (life-schools) are also actively participating in the struggle. The oustees have also been receiving over whelming support from the common citizens of Jobat. (NBA Press Release on several days)

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On Jan 13, 2012, to mark the 50th day of the Satyagraha, all the adivasis sat on a symbolic fast. More and more social activists and eminent personalities are joining the struggle and declaring solidarity. In a separate letter addressed to the Chief Minister, eminent people's poet and Jnanpith winner Mahasveta Devi has stated that after years of dispossession, the adivasis are sitting on a Satyagraha in the biting winter & are only demanding right to land, which is perfectly a legal one. The Govt must take immediate steps to ensure the same.

It is striking that so far no representative of the state authorities has come onto the site; the protest is not receiving the attention it deserves. In 2007, the NBA

organized a similar occupation in Badwani, but on the 12th day, the villagers were assaulted and lathi-charged while they were having dinner and then conducted to jail. After the opening of a court case on this episode, the state was compelled to pay to 92 oustees a compensation of 10,000 rupees. Perhaps fearful of a repeat episode, the govt has not undertaken any forcible vacation of the protest site, nor has it used violence against the people. However, after the first week, water and electricity supplies were cut, leaving the site in darkness and endangering the cultivation of crops. All the villagers, 40 of which are children, eat, bathe and cultivate the land using a single, private water-pump. In Maharashtra, a similar occupation took place in 2003 for less than 20 days in a place called Somaval. After that, three resettlement sites were set up in Javdavadi, Vadchil and Chikli. ([Open Democracy](#) 261211)

Court judgment vindicates NBA In an important judgment, the Court of First Division Judge at Khandwa exonerated all 21 activists of the Narmada Bachao Andolan including senior activists Alok Agarwal, Chittarooma Palit, Kamala Yadav and the oustees of the Omkareshwar and Indira Sagar dam of the false case filed against them by the State Govt in 2009. NBA welcomed the judgment which establishes the falsity of the allegations made by the State Govt against the oustees and the activists of NBA who were demanding their rights and entitlements from the State Govt.

On 28th of Oct, 2009, around 15,000 oustees of the Indira Sagar and Omkareshwar Project had marched in Khandwa town under the aegis of the Narmada Bachao Andolan, and had sat on dharna at the Collector's office

on 28th & 29th of Oct 2009, with the demand that the State Govt provide land and all the R&R entitlements to the dam oustees. The oustees had also demanded that

the State Govt and the NHDC should hand over the cheques for rehabilitation grant prepared in the name of the oustees which the authorities had illegally suppressed, to the oustees, as directed by the High Court. However, the State Govt and the NHDC refused to hand over the cheques or even to meet the oustees on 29th Oct 2009. Instead, they posted police to intimidate the oustees.

When the oustees entered the Collector's office on 29th Oct, to give their Memorandum of demands and to ask for a reply, the oustees were brutally beaten and dispersed, and 21 oustees and activists arrested with false charges fabricated against them. NBA office in Khandwa was illegally raided by the police, and their computer examined. (NBA Press release 070112)

HYDRO PROJECTS

THDC MOU with NPCIL for Pump Storage in Mah MoU has been signed by the Tehri Hydro Development Corporation with Nuclear Power Corporation of India Ltd (NPCIL) for the development of Pumped Storage

Schemes and Hydro Projects in India and abroad. Under this MOU, THDC and NPCIL has taken up works of updation of DPR of 2 PSPs namely Malshej Ghat (600 MW) & Humbarli (400MW) in Maharashtra. This is indeed a strange collaboration. (www.thdc.gov.in accessed on Feb 22, 2012)

ALSTOM under scrutiny by Norway on corruption issues In [a report in December 2010, the Norwegian Council on Ethics for the Norway Government Pension Fund Global](#) (GPF) investment in global corporations said about the company Alstom S A (a French multinational company that specializes in energy and transport infrastructure through its divisions Alstom Power and Alstom Transport), "The Council notices however that there are three documented cases of corruption, that there are five ongoing corruption investigations against the company... In several countries, Alstom's employees are accused of having bribed both private and public officials in order to secure contracts... In view of the above, the Council deems it improbable that Alstom will be able to prevent future gross corruption. Based on an overall assessment the Council finds that there is an unacceptable risk of continued use of bribery in the future... The Council on Ethics recommends that Alstom SA be excluded from the investment universe of the GPF." The Council arrived at this decision after going through all available information, and also giving Alstom a chance to respond. As of December 2009, the Norway's GPF held equity holdings in Alstom amounting to a market value of NOK 1.6 billion (USD 282 million).

On [Dec 6, 2012, the Norway Finance Ministry](#) "decided to put Alstom S.A. on its observation list due to the risk of gross corruption in the company's operations. The Council on Ethics shall observe the company over a four year period." India's controversial NHPC Ltd has major links with Alstom, it has current ongoing orders worth several hundred crores for supplying electro-mechanical equipments including generators and turbines for the 2000 MW Subansiri Lower, 231 MW Chamara III and 240 MW Uri II hydropower projects. Complaints have also been raised with the Council of Ethics for the GPF investments in NHPC Ltd, by Norwegian and other organisations. (FIVAS, SANDRP)

SEVEN killed as TNEB dam suddenly releases water

Seven persons, including three women and a child, were feared drowned as the water gushing from the sluice of the newly inaugurated 30-MW Bhavani Kattalai Barrage-II built across the Cauvery river at Odapalli, connecting Pallipalayam and Erode, washed them away. "If there was a siren to warn people before the release, the mishap could have been averted," an eye witness fisherman he felt. The people living on the banks opined that if the TNEB releases water without informing the public in advance, mishaps are bound to happen. People have no idea of exact timings of water release. ([IBN Live](#) 090112, [The Hindu](#) 090112)

This is not the first incidence when irresponsible, uncoordinated and sudden release of water from the hydro power projects have led to death and destruction in the downstream. In 2005, in one of the worst incidences of its kind, more than 65 Hindu pilgrims were killed by the torrential waters that came gushing down from the Indira (Narmada) Sagar Dam project authorities opened water channel gates. Again there was no warning to downstream people. The banks of the holy river were crowded by devotees that day for a festival. Water levels rose to five feet in a matter of minutes when NHDC (Narmada Hydro-electric Development Corp, a joint venture between Madhya Pradesh govt and NHPC) suddenly released water from the dam without warning. A similar incident occurred in Deola tehsil in Nashik district in Maharashtra on Aug 5, '07 when due to sudden release of large quantity water from the Chankapur dam (742 cusecs) and from Thengade weir (8,313 cusecs) into river Girna river (a tributary of Tapi River) led to washing away of four persons, including three children. The district magistrate, as usual, claimed that it was routine release and did not require warning. (For more details, see: www.narmada.org/sandrp/MarApr2005.pdf, www.sandrp.in/hydropower/NHPC_TRACK_RECORD_Aug07.pdf) In another such incident, 39 people were killed in Shivpuri district in Madhya Pradesh when water from Manikheda dam on Sind river was suddenly released when a religious festival was on in the downstream area on Oct 1, 2006 (see [Dams, Rivers & People, Oct Nov 2006](#), page 18). Such incidents have happened at Chamera dam in Himachal Pradesh.

These sort of callous operations, absence of clear responsibilities, absence of penal actions seem like standard operating procedures of hydro dams in India, made worse by peaking. One can only imagine what will be the disastrous consequences of hydro peaking for dams in the North East where the **daily lean season fluctuation in water levels will be thousands of cusecs and more than seven feet even 100 kilometres downstream of the dam sites**. What sort of warning mechanisms have been planned to mitigate the disastrous impacts of such dams and who will be responsible for the loss of life and property in case of sudden releases?

HYDRO PROJECTS IN NORTH EAST INDIA

10 injured in firing on anti-mega dam agitators At least 10 anti-mega dam agitators sustained injuries when the Dhemaji district police opened fire on an assembly of protestors at Thekeraguri under Boginadi Police Station of Lakhimpur district on Jan 13, 2012. The Krishak Mukti Sangram Samiti secretary Akhil Gogoi said that the State Government seemed to be keen on turning the process of its discussion with the anti-mega dam agitators into a farce. Or else, there is no logical reason as to why it is applying force to facilitate transportation of huge quantities of diesel and other

construction materials to the Gerukamukh site of the Lower Subansiri Hydroelectric Power Project. The KMSS and its allies – Takam Mising Porin Kebang, Asom Jatiyatabadi Yuba-Chatra Parishad, All Assam Minorities Students' Union were protesting the administration's bid to send five diesel tankers and several construction material-laden trucks to the LSHEP's Gerukamukh site. Later, they withdrew the blockade when around 100 anti-mega dam activists detained by the Boginadi Police were released following a discussion between the leaders of the organisations spearheading the agitation and the Lakhimpur district administration. The Dhemaji police entered the scene just when the agitators were withdrawing from the NH-52 and opened fire on them. ([The Assam Tribune](#) 140112)

Anjaw's micro hydel revolution While mega hydro power dams are being wrongly thrust on local communities in the north East as the only clean and green option for generating electricity, a small remote village on the border in Arunachal Pradesh is setting a shining example of how decentralised, green hydro can actually look like. Kaho, a village in the district located near Kibithoo along the tri-junction of the China-Myanmar-India border, had created a record in 2007 by becoming the first village in the state to have round-the-clock power supply besides supplying power to the Army personnel guarding the frontier. This feat was achieved due to the determination of the elected representative of the district, Kalikho Pul, and deputy commissioner, Prashant S Lokhande. The two officials were instrumental in commissioning a micro hydel project in the last border village, a 24-hour trek away from last pitch road, for which all the machines and material had to be transported manually.

The 2X100 KW Yapak, 2X50 KW Khrowtipani, 2X250 KW Matinala and 2X250 KW Teevani projects were commissioned recently and have made the border district self-sufficient in power. At the moment, 7 administrative centres and adjoining villages are getting 24-hour uninterrupted power supply. The district is spread across an area of 9,936 sq km and crisscrossed by numerous perennial rivers, including Lohit, Dav, Dalai, Lati, Kulong, Syang, Helei, Yapak and Kathang. The projects - 2X50 KW Hatipani at Goiliang, 2X30 KW Ashapani, 2X100 KW Kachopani, 2X30 KW Maipani and 2X200 KW Langpani at Gamliang - are likely to be commissioned within a month or two. The 16 MW Haleipani project is at an advanced stage, is likely to be commissioned within 2012. It will cater to the needs of Lohit, Dibang and Changlang districts besides meeting the requirements of Anjaw. According to official sources, no steps have been initiated so far for erecting transmission lines for evacuation of excess power to be generated by the Haleipani project. Once the transmission lines are commissioned the state would be almost self-sufficient and would not need to purchase power from outside. ([Times of India](#) 020112)

Agitation against Lower Subansiri: Assam Meeting between GOM, experts and civil society The group of ministers met experts and civil society groups. Without using the word “structural change” as recommended by the Dispur-instituted eight-member expert group, whose 2010 report has been the basis of the anti-dam protests, the GoM appeared to be in favour of changes in the project. Professor Nayan Sarma of IIT Roorkee exposed himself by suggesting that the project can be converted to a multi purpose project. The GoM would make a recommendation to the Centre, seeking addition of new features to the dams to allay fears and concerns downstream.

The experts were told that the State Government is examining ways to implement the third recommendation of the expert group which suggested **redesigning the LSHEP by sufficiently reducing its dam height and production capacity**. The expert group established its point on the site of the LSHEP. In its recommendation, the experts have said, **"The selected site for the mega dam of the present dimension was not appropriate in such a geologically and seismologically sensitive location. The seismic design parameter is not properly chosen for the project. According to the investigation, the recommended seismic design parameter is at 0.5 or more. Therefore, it is recommended not to construct the mega dam in the present site."** (Assam Tribune 140112)

Assam power minister Pradyut Bordoloi, who heads the GoM, appeared happy over the outcome of the back-to-back meetings lasting over five hours — first with the group of experts followed by members of the civil society. Jatin Kalita of the experts' group said they stuck to their report and stressed the need to take corrective measures. Another member, S.P. Biswas, said the authorities would be responsible for the “social quake” if it did not take corrective measures. ([The Telegraph](#), 150112)

HYDRO PROJECTS IN UTTARAKHAND

Citizens have right to contest projects: NGT In a major decision, the National Green Tribunal (NGT) has observed that any person, even if not affected by the project, can file a petition against the project on the ground that it was a duty of every citizen to protect the environment. A bench of justice C V Ramulu and Devendra Kumar Aggrawal overruled government's objection that a person who is not directly affected by a project cannot file a petition seeking cancellation of the environment or forest clearance. "The person living in the area or vicinity of the proposed project may not know about many intrinsic scientific details and effects of the ultimate project and any disaster, it may cause... Therefore, it may not be proper for this Tribunal to reject an application on the ground that the applicant/ appellants as the case may be, is not the resident of the area or not directly injured or aggrieved," the bench said.

Three residents of Uttarakhand, Vimal Bhai, Bharat Jhunjunwala and Briharshraj Singh Tariyal had filed a petition seeking rejection of environment and forest clearance to 65 m high hydro project on river Alakananda. But, the government objected the petition saying they were not living in vicinity of the project. The bench observed that the nature cannot be allowed to be done away with one stroke of pen, in the guise of development, without properly examining the environmental and ecological impact of the project proposed.

Quoting the Constitution, the bench said the protection and improving the natural environment is the fundamental duty of a citizen. "The statutory provisions are subservient to the Constitutional mandates," the bench said. ([Hindustan Times](#) 291211) However, bench refused to reject the clearance given to hydro project.

Vindicating SANDRP's analysis of the pathetic and shoddy Cumulative Impact Assessment of Upper Ganga Projects, including the Vishnugad Pipalkoti, the judgement has asked for a new, integrated CIA study. The judgement states: "It is surprising that integration of the physical, biological and social aspects of the environment for arriving at the crucial decision making stage, has somehow not been attempted at all and Respondent No. 1 has overlooked/ ignored its own set of awarded TOR for the CIA. To illustrate this point while attempting CIA, impacts such as quantum loss of agricultural land, barren land, river bed land, number of project affected families, villages, infrastructure, geological setting etc. have not been considered. In view of the stated figures and facts, it is difficult to surmise that what would be the outcome of the CIA study, if integration of physical, biological and social aspects in the present case is undertaken... Given the situation, where a large volume of database is available through project specific EIAs apart from these two CIA reports from IITR & WII, **it would be appropriate if a single integrated CIA report is finalized and a final decision is taken.** By and large, though it appears that every study was made but it does not appear to have made an integrated and comprehensive study for the purpose of a flawless approach in making the CIA report which is required to satisfy the principles of sustainable development and precautionary principles, subject to suggestions indicated infra."

Unfortunately, the bench has accepted the unacceptably low e-flow releases prescribed in the IITR Report. However, it should be noted that the bench was not in possession of WII report on impact of these projects on the aquatic ecology of the region, which can throw significant additional light on the issue of e-flows. The NGT has also asked the ministry to stipulate a procedure **for cost benefit analysis for diversion of forestland land for each proposal.**

Haggling for environment flow in EAC meetings

While discussing the need for environment flows for the 300 MW Alaknanda Badrinath hydro project in the 54th meeting of the MoEF's Expert Appraisal committee for river valley projects, the EAC minutes noted that the AHEC report had required that project release 3.7 Cumecs. The 20% of average lean season flow that EAC has been using gives 1.3 cumecs. And yet, after seemingly unseemly haggling with the Project Proponent, the EAC agreed to 1.0 cumecs flow. This is very very strange sight indeed. The EAC should have insisted that the PP follows the report commissioned by the MOEF, specifically the report that was commissioned for ascertaining the env flows. If there were to be any deficiency in the AHEC report, the EAC should have referred them to the AHEC and awaited their response before considering the contention of the PP. In any case, EAC should not have accepted flow less than the 20% that has been accepted as norm as of now. By agreeing to an environment flow less than even EAC norm, the decision has done a great disservice and opened floodgates for future violations. We urge the EAC to reconsider this decision, SANDRP letter to EAC on Feb 13, 2012 says.

Similarly, the EAC has agreed to minimum monsoon discharge of 5 cumecs. There is no basis given for arriving at this figure. It is notable that this suggested flow is LESS THAN THE AVERAGE LEAN SEASON FLOW OF 6.5 cumecs noted in the same minutes. How can the stipulated minimum flow for monsoon be less than the average lean season flow? It must be much more than the average lean season flow. EAC needs to correct this too. The EAC has also not stipulated any flood flow releases, and we urge the EAC to ensure at least one flood flow release during monsoon, at least equal to average monsoon peak should be stipulated for all projects by the EAC.

It is also strange to note that EAC minutes include gross misrepresentation of facts regarding FAC rejection of the project. The EAC minutes note, "These were reconsidered by FAC and the project was then given forest clearance." However, FAC had rejected the project on reconsideration in its meeting on Oct 12, 2011. SANDRP has sent minutes of the FAC meeting of May 30-31, 2011 and Oct 12, 2012 to all EAC members, highlighting that the EAC seems to have been misguided. (SANDRP letter to EAC, Feb 13, 2012)

HYDRO PROJECTS IN HIMACHAL PRADESH

Diversion of forest for hydro threatens wildlife

Facing resistance from environmentalists and conservationists; the Himachal government has done a u-turn in recommending diversion of forest lands for a private sector medium sized hydropower project in the Bara Bangal wildlife reserve area of Kangra district after first having opposed it.

When contacted additional chief secretary forest Sudipto Roy said, "subject to clearances by the executive council set up by the Supreme Court about diverting land from wildlife reserve areas, the state wildlife board has recommended diversion of forest land for the 200 MW Bara Bangal project." Sources claimed that the wildlife board at its meeting on 17th Dec, 2011 recommended diversion of 21.46 ha of forest lands in the wildlife

reserve for project. Earlier the government had rejected such a proposal. In 2007 the state government without obtaining any forest clearance had allotted the 200 MW project to Malana Power Corporation, a private power producer. The projects diversion dam is proposed just below Bara Bangal village on River Ravi, from where a 7 Km long head race tunnel is to be constructed to a power house near Nayagram in Chamba. "This would cut right through the heart of this untouched forest area and would involve blasting, dumping debris, road construction and entry of thousands of labourers with all the attendant poaching and deforestation," said a retired government official.

The promoters approached both the Ministry of Environment and Forest (MOEF) and the Supreme Court, but the Himachal government in its reply is said to have placed documents before the apex court reiterating that such a project cannot be allowed in a wildlife sanctuary. "What has come as a surprise is that with the matter still being sub-judice, the government has chosen to recommend the diversion of forest land in a wildlife reserve," said Billy Malhans, an environmentalist. "Bara Bangal area is the source of River Ravi and MOEF earlier also in another valley had cancelled Parbati stage I hydropower project because it infringed upon a wildlife reserve," said Malhans. ([Times of India](#) 100112)

Buying silence, manufacturing consent On Oct 5, 2011, the Himachal Pradesh government's Multi-Purpose Projects and Power Department issued a notification stating that the 1% free power to be made available for "local area development" by hydropower producers would be distributed annually as cash transfers to project-affected families. This notification, a revision of the earlier Local Area Development Fund guidelines under the state's hydropower policy 2006, comes at a time when several spontaneous grassroots agitations have emerged at sites of hydroelectric projects. This seems to be clear move to buy people's silence in the face of increasing community opposition to hydroelectric projects, which in its turn will destroy the very ecosystems on which these communities depend.

The installed capacity of hydropower projects in HP has seen a 20-fold rise, going up to 6,370 MW in the last 10 years. More than 4,000 MW-capacity projects are under construction, and implementation agreements for many more have been signed.

In the last five years, as the numerous impacts of these projects became more real and visible, project-affected

communities have been putting their foot down. Be it a small project like the 4.5 MW Hul hydro in the Saal valley of Chamba or the 265 MW integrated Kashang project and Jaypee's 1,000 MW project in Kinnaur -- all have met with serious local protests, even the stalling of work on grounds of livelihood losses, environmental violations or poor compensation packages. At such a time, the government's move towards direct cash transfers is a calculated strategy to get people to fall in line. This is clear from the notification which states: **"The developer will be entitled to claim compensation for the delays and financial losses (in commissioning of the project) due to work stoppage on account of agitation by local people during construction of the project. The financial loss to the developer will be deducted from the revenue which shall accrue from 1% free power and will be paid to the developer."**

Getting the entire equation drastically wrong, Deepak Sannan, Principal Secretary, Multi-Purpose Projects and Power Department, Himachal Pradesh, said that "The protests are not because people are adversely affected. People see that they are not getting any direct benefits, and stalling of work is used as a method to extract money. Our new policy will reassure them that they do not need to use tactics for extraction by giving them consistent benefits and making them the stakeholders."

Apart from the basic ecosystem issues that this move seems to evade, it raises some contentious issues wrt to Upstream vs downstream, big vs small. Some densely populated communities, like in the case of 66 MW Dhaula Sidh project, to be located in the relatively gentler hill areas of Hamirpur, about 3,250 families spread over 14 affected panchayats will get the benefit, with each household getting a meagre Rs 3,000 annually. In a sparsely populated district like Lahaul and Spiti, a 3,400 MW project will fetch each household a whopping Rs 1.6 lakh annually, even though only a few families from the panchayat may be affected.

Even smaller projects, though apparently harmless and portrayed as generating clean energy, appear to have a more direct impact on the day-to-day lives of people because they are built on smaller streams which are used for irrigation, drinking water, running watermills, and fishing by local communities. Ultimately the size of the project will decide the size of benefit (rather than the nature of the impact).

Further, if we look closely at upstream or large hydro projects in major river basins we find another serious dichotomy. For instance, a massive project like Jaypee's 1,000 MW Karchham Wangtoo project in Kinnaur required about 1,650 bighas of land from 31 families in two villages. While these numbers may seem insignificant compared to those displaced by projects downstream, they are misleading inasmuch as they do not count those affected by a key activity -- **the construction of a tunnel.** In the Karchham Wangtoo project, the tunnel is 17 km long and passes under six

villages. A simple drill-and-blast method is used to dig into the fragile mountain at separate points (referred to as 'adits'), until a large long quarry, a hollow space where the river will flow, is created. Commonsense and experience suggests that this activity has its own set of adverse environmental implications, which is probably why more than 800 petitioners from the six villages are now fighting a legal battle for compensation, claiming that the tunnel has affected water aquifers in the mountains and caused natural springs to dry up -- the only source of drinking water and irrigation for apple orchards. Their claim is now being backed by the state's irrigation and public health department.

Rahul Saxena, an activist based in Himachal Pradesh, explains: "In response to a series of RTI applications filed by us the department has revealed that in villages located in the area affected by the Karchham Wangtoo project, by 2009 almost 43 out of 167, i.e. almost 26%, of water sources had dried up and in 67 additional sources, i.e. almost 40%, the discharge had reduced. Similar data has been provided for four other project sites in different parts of the state -- all revealing that villages located above the tunnel are indeed being impacted by the construction of these hydropower projects."

While the govt may claim that it will come up with other arrangements and schemes for water supply to these villages, it may not be in a position to relocate the villagers who encounter frequent landslides, erosion and cracks that have begun to appear in their houses as a result of the underground blasting activities. This is a common feature in areas where tunnelling work is being carried out. Yet these villages are excluded from the definition 'project-affected' in project reports, EIA studies and rehabilitation plans.

Ecological impacts According to a recent report by the HP Forest Dept, of the 9,147 ha of forestland diverted towards non-forest use in the last 20 years, almost 67%, i.e. about 6,154 ha, has been for hydropower projects & transmission lines. Perhaps the most critical impact of drilling holes into the mountainside is borne by the mountain ecosystem, the forests and the river that will leave its original course and flow in tunnels instead of the riverbed. The cash transfer of 1% free power may amount to lakhs of rupees, but will it compensate for the irreversible damage to the riverine ecosystem and the loss of a river? This is the question the HP govt should be pondering when it calls itself a 'green' state.

Lack of cumulative impact assessments for projects, absence of river basin planning, poor EIA reports, violations of environment and forest clearance laws, especially the maintenance of minimum river flow -- these are all issues that plague hydropower development in HP. The govt has chosen to maintain a deafening silence on these issues. Instead, with the new policy, it is attempting to buy the silence of its people. (Manshi Asher, [Infochange News & Features](#), Dec 2011)

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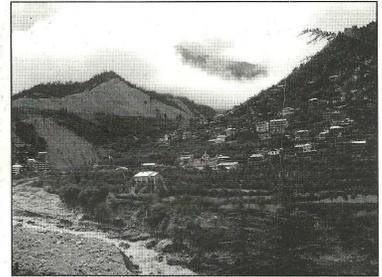
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