

To
Principal Secretary
Directorate of Energy
Shimla

6th December 2015

Subject: Failure of Safety Control and Monitoring of Impacts in Hydropower Projects

Sir,

It is with great concern that we are writing this memorandum to you for your urgent perusal and action. As you are aware, in the last two weeks a half a dozen lives have been lost in the Kinnaur region alone in three separate incidents that have one thing in common – accidents at hydropower project sites. The first event took place in Burang village on the 18th of November 2015 where a penstock pipe burst of the 100 MW Sorang Hydro-electric project led to the death of three people. On 29th November, two labourers died in blasting operations in the 450 MW Shongthong Karchham project, some others were seriously injured. And on the same day in the Bhabha Valley, a young teacher lost her life in a landslide that occurred in the area. Even now more lives are at stake – Four days after the Sorang project disaster on 22nd November, a massive landslide occurred in Chagaon Village, located on the alignment of the Karchham Wangtoo project's tunnel. While houses and property was damaged fortunately there were no fatalities. More of the area is likely to slide soon. Residents of Panvi Panchayat from Kinnaur carried out a demonstration last week at Shimla protesting the cracks in their houses due to the underground construction by the 9 MW Ralla-Taranda project.

In the above context we would like to raise the following questions and issues:

1. Lack of adequate assessment of the geological, ecological and hydrological impact of Hydropower development

Himachal Pradesh is the largest producer of Hydropower in India. The state has already installed 9433 MW worth of projects (a total of 53 large, medium and small projects and several micro-hydels). A series of projects are still under construction. In the wake of these projects a series of occurrences of slope destabilisation have been seen over the past few years in areas where construction work especially involving Drill and Blast method for underground tunneling or for roads. Now the geological, ecological and hydrological impacts of these projects, especially in fragile zones like Kinnaur are emerging clearly. The most evident impacts of these have been:

- Land Slides
- Damages to Houses
- Drying up of Water aquifers and sources
- Seepages and leakages in tunnels

It was therefore imperative that such activity go through a serious environment impact assessment and monitoring mechanism. The failure or negligence is at the level of planning and impact assessment. The Environment Impact Assessment reports prepared for Hydropower projects by paid consultants have failed to do a genuine assessment of the impacts often ignoring landslide

proneness, seismicity issues or disaster proneness of the areas. These impacts are underplayed in EIA reports or often non-serious mitigation measures are suggested as means of redressal which is a complete eye-wash as these measures are never implemented seriously or are simply inadequate to address the extent of damage done.

Further, these projects need to be assessed at the cumulative level even before construction. This fact, though late, was recognised by the Ministry of Environment and Forests and the Himachal Government and the process of carrying out Cumulative Impact Assessment studies has been initiated but in case of the Satluj CEIA we are concerned that the construction activity continues while the CEIA is still not completed and submitted to the MoEF. Further, the CEIA report had many inadequacies which have been pointed out. In the context of assessing the impact of the DBM the CEIA has completely fallen short. Similarly in the matter of safety issues it is silent.

The MoEF has failed to include the impacts of tunnels as an essential component of the TOR and the EIA reports of projects do not even include communities located along the alignment of the tunnel as 'Project Affected'. Issues of landslides and house damages are treated as something to be addressed "if they arise" in an adhoc manner.

2. Negligence by Project Proponents: Non-compliance to environmental and safety norms and regulations by project authorities

We hope that you understand that the above incidents of mishaps at power projects are not freak accidents. These events and many others that have occurred in the last 5 years (please refer to table below) are the result of sheer negligence in the construction of hydropower projects in the state. If we examine any of the incidences listed above we will see that there is a gross negligence in following environmental norms, rules, compliance to clearance conditions by Project Proponents. More often than not this is due to absence of trained staff, use of low quality raw material, inability to deal with the terrain or to save or cut costs.

The government has not just overlooked these impacts but justified each and every project making excuses and even trying to cover these impacts. For instance, the issue of slope destabilisation and landslides in Kinnaur has been blamed on rainfall fluctuations, floods or other natural factors without conducting any independent studies. The project authorities have gone to the stupid extent of saying that these landslides are occurring naturally in the area. If that is the case, is it not all the more reason that the construction in these regions has to be controlled and regulated rather than allowing disastrous projects like Karchham Wangtoo to come up here? (Annexure– Site investigations of the Urni and Mebar landslides).

In both cases, local people have been agitating from the beginning about the threat to their lands as a result of the tunnelling but these issues have not been paid heed to on any occasion.

INCIDENCES OF NEGLIGENCE IN HYDRO PROJECTS IN LAST FIVE YEARS

S. No	Date	Location	Project	Event
1	17 April 2012	Mokhar village, Chamba	231 MW Chamera III HEP	Massive leakage in the 16km HRT of the Chamera III project just above the Mokhar village leading to severe threat to the village downhill so much so that the 40 families residing there had to be evacuated. The leakage occurred during testing of the generating units.
2	December 2013	Power house site Wangtoo, Kinnaur	1200 MW Karcham Wangtoo HEP	During an inspection of the 1200 MW Karchham Wangtoo project by the officials of the Central Water Commission, Department of Energy and Central Electricity Authority profuse leakages were found in the surge shaft of the 17 km long tunnel possibly due to cracks and fissures that may have developed over the course of time.
3	29 December 2013	Village Dhalanjan, Chamba	36 MW Chanju HEP	In the aftermath of construction work of the 36-MW Chanju Hydroelectric Project three villages Dhalanjan, Kuha and Makalawani, which belongs to Scheduled Caste families, will be ruined as visible big cracks have developed on the walls and floors of 51 houses.
4	12 January 2014	Betwwen Aleo and Prini , Kullu	4.8 MW Aleo HEP	Reservoir of the newly built Aleo II hydro project on the Aleo nallah, a tributary of the Beas river, collapsed during its very first trial run on January 12 2014. Quite shockingly, neither the local authorities nor the villagers were intimidated by the project authorities about its testing.
5	8 June 2014	Thalout area (Shalanala Village), Mandi	126 MW Larji HEP	25 people were washed away in a flash flood caused by the sudden opening of the flood gates at the Larji hydel project dam, 2.7 kms upstream of accident site at Thalout on the Beas river.
6	10 June 2014	Urni Village, Kinnaur	1200 MW Karcham Wangtoo HEP	In July 2014 the Urnidhank collapsed blocking the national highway which continues to be blocked. Urni is sitting precariously above the junction of the flushing tunnel, Head Race Tunnel and Adit tunnel of the newly operational 1200 MW Karchham Wangtoo project.
7	14 June 2015	Kaza, Lahaul-Spiti	2 MW Rongtong HEP	Three engineers were killed at the Himachal Pradesh State Electricity Board (HPSEB) run Rongtong power project (2MW) in Spiti valley of Lahaul-Spiti district when main inlet valve at the plant burst.
8	18 November 2015	Burang Village, Kinnaur	100 MW Sorang HEP	Penstock pipe burst of the 100 MW Sorang Hydro-electric project led to the death of three people.
9	22 November 2015	Chagaon Village, Kinnaur	1200 MW Karcham Wangtoo HEP	A massive landslide occurred in Chagaon Village, located on the alignment of the Karchham Wangtoo project's tunnel. While houses and property was damaged .
10	29 November 2015	Power house site, Shongthong, Kinnaur	450 MW Shongthong Karchham HEP	Two laborers died in blasting operations and some others were seriously injured.

3. Absence and Inadequacy of Safety Monitoring Mechanisms at the State Level:

Despite it being mandatory as per the Hydropower Policy 2006 that there will be a safety monitoring authority in the state that will look into the safety quality monitoring for hydropower projects, no such authority existed till recently. As late as August 2013, the Department of Power and MPP issued a notification about the creation of such an authority.

The following incidents took place before the safety authority was set up - The seepage in the Chamera III project that washed off Mokhar village's habitations, the reservoir of the Aleo-II project in Kullu in its first testing, burst washing off the labour camps (with no fatalities); the seepages in the Karchham Wangtoo tunnel which were noticed in 2011.

In each of these the issues emerged either during testing or just after commissioning, which means that this is the most critical time in the project which requires utmost attention and precautionary measures. In the absence of a monitoring authority, who is carrying out the inspection to unsure that such measures were being followed by project authorities? Now the government should immediately make public all the work that has been done by this authority in the last two years, how often this committee convened its meetings, which are the projects it has monitored and what action has been taken in the cases of negligence and accidents. Has any punitive action been taken against power companies for negligence?

It needs to be put on record, in the context of the 100 Mw Sorang Hydro-Electric Project that the villagers had brought to the company's notice that there were leakages in the penstock pipe at an earlier date on 8th May 2015. This indicates that there was some technical fault in the project despite which the testing was carried out. Further, it needs to be raised that on the night of the testing (when the accident occurred) no warning was issued by the project authorities while carrying out the testing of the penstock pipe.

Today, the Burang village is nothing less than a danger zone with rock and debris just hanging above heads of the residents. We wonder how the company even had the audacity to carry out construction in an area where there was habitation – even if temporary/ for part of the year. In event of heavy rains or tremors of any sort there will be additional damage and fatality which should be avoided at any cost. All families who are residing in Burang need to be protected so that they do not become victims of yet another accident which will be caused due to sheer negligence of the company as well as the administration, who is now responsible for the safety of the people.

We demand:

- That the DOE and the Safety Monitoring Authority immediately make public the action taken reports in the cases that we have listed in the table above. Until and unless this is done no activity should be carried out in these projects.
- That the DOE make public the status of the Cumulative Environment Impact Assessment in case of the Satluj River Basin. The process for Chenab, Beas, Ravi and Yamuna too should be made public and no further clearances to hydro projects must be granted until the completion of these reports
- That a system and safety monitoring mechanism be put in place for commissioning of projects and this should be made public. No projects should be allowed to be commissioned without following this procedure.

- There should be a Grievance Redressal Authority for people who are continuing to be affected after or during the commissioning of the project to place their concerns and issues. Proper rehabilitation and compensation for affected community at the cost of project should be ensured for all affected (even once construction is complete) and a policy for the same needs to be instituted because the current R&R Policy does not cover these people
- Drill and blast method is a very crude technology and causing great damages in geographically fragile areas like Kinnaur. There should be blanket ban on this technology

Sincerely

Manshi Asher, Himdhara, Environment Research and Action Collective

R.S Negi, Himlok Jagriti Manch, Kinnaur

Dharpal, Burang Vikas Kalyan Samiti

Rukmini Devi, on behalf of the affected people of Chagaon Panchayat

Copy to :
MoEF,
State Power Ministry,
Power Secretary,
Chief Minister

To
The Sub Divisional Magistrate

26th Novemeber 2015

**Subdivision Nichar
Kinnaur District**

Subject: With regard to the recent accidents at Burang and Chagaon Village

Dear Madam,

We are writing on behalf of Himdhara, Environment Research and Action Collective, a group of concerned environmentalists and citizens based in Himachal Pradesh. We would like to express our concern with regard to the recent events that have taken place in your sub-division in Burang village on the 18th of November 2015 and in Chagaon Village on 22nd November 2015. We have visited both the areas and would like to raise the following issues with the administration in this matter.

BURANG VILLAGE – PENSTOCK PIPE BURST

As you are aware on 18th November, there was a penstock pipe burst of the 100 MW Sorang Hydro-electric project as a result of which there were severe fatalities and damages to houses and property in the Burang Village.

- It needs to be put on record that the villagers had brought to your notice as well as that of the project proponents of the leakages in the penstock pipe at an earlier date on 8th May 2015. We would like to know what action was taken by your department on the same when the matter had been brought to your notice before?
- We understand that there has been severe negligence on part of the project authorities vis a vis the quality check as well as keeping in mind of safety issues of the project. We would like to once again draw your attention to the fact that no warning was issued by the project authorities while carrying out the testing of the penstock pipe on the said date. We would like to know what action has been taken towards the project authorities for the negligence that has occurred?
- We demand that these matters be put on record by your office and brought to the light of the Directorate of Energy and other government authorities who are looking into the matter.
- We demand that action be taken at the earliest to document the details of the damages and a thorough assessment of the same be carried out in consultation with the local affected people.
- We also urge that immediate relief – in the form of alternate shelters be provided. As you may be aware the area is now extremely fragile and filled with rock and debris. In event of heavy rains or tremors of any sort there will be additional damage and fatality which should be avoided at any cost. All families who are residing in Burang need to be protected so that they do not become victims of yet another accident which will be caused due to sheer negligence of the company as well as the administration, who is now responsible for the safety of the people.
- We demand that the State authority for Safety Quality Monitoring of Hydropower Projects put in public all documents related to its monitoring vis a vis the Sorang Hydro Project. We demand that the authority file an action taken report in this matter at the earliest

Chagaon Village, Landslide

In the same context, we would like to put on record that on 22nd November 2015, as you are aware, there was a massive landslide at Chagaon Village (Risikesh) as a result of which close 5-6 houses were damaged and along with the orchards and other land. Additionally the link road from NH 5 to Chagaon and other villages has been completely destroyed as a result. The affected families have right now shifted to alternative shelters. However, there are another 10-15 houses that may collapse

as the landslides further and there is a great likelihood of more damage.

- We demand that there should be an immediate assessment of the damages that have occurred to house, property and other infrastructure. The extent of damages in terms of the area involved and the cost should be made public as soon as possible.
- People should be entitled to immediate relief and rehabilitation done in consultation with the affected families
- We demand that there be an immediate inquiry into the matter to understand the cause of the landslide. We believe that the slope destabilisation that has occurred in this region is directly linked with the tunnelling activity for the 1200 MW Karccham Wangtoo project that has affected the geo-hydrological regimes of the entire region where the drill and blast method was used for tunnelling for the project. It is inadequate that these inquiries are carried out by the State Geologists. There needs to be a detailed independent study commissioned by the Himachal Government on the geological and hydrological impacts of the use of the drilling and blasting method being used for construction of tunnels and roads in an ecologically and geologically fragile region of the Himalayas like Kinnaur.

We are extremely concerned about the unregulated construction in the Kinnaur region especially the establishment of hydro electric projects because of the magnitude of construction involved and the violation of environment regulations, norms and safety guidelines by project authorities. It is a clear failure of the state monitoring and regulatory authorities who have ignored the several incidents of landslides, massive erosion, drying up of water sources, sudden reappearance of water sources, deforestation leading to soil erosion, illegal muck dumping etc. Despite the impact of these on the horticulture, local vegetable cultivation, day to day life and safety of the people the government has not taken any action whatsoever on project proponents and have been blind to the issues raised by the affected people time and again. **We demand immediate redressal of these issues and immediate action against the violators of safety norms and environmental regulations in the above cases.**

Sincerely
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CC: Department of Energy, Himachal Pradesh