IN THE NAME OF CLEAN ENERGY

A Report on
Asian Development Bank
Financed
Hydropower Projects in Himachal Pradesh

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List of Abbreviations:

ADB- Asian Development Bank

APs- Affected Persons

ATREE- Ashoka Trust for Reserach in Ecology and the Environment

BNHS- Bombay Natural History Society

CAT- Catchment Area Treatment

EC- Environment Clerance

EAC- Expert appraisal Committe

EIA- Environment Impact Assessment

EMP- Environment Management Plan

FAC- Forest Advisory Committe

FC- Forest Clerance

HCC- Hindustan Construction Company

HEP- Hydro Electric Project

HFL- High Flood Level

HPPCL- Himachal Pradesh Power Corporation Limited

HPSEB- Himachal Pradesh State Electricity Board

LAA- Land Acquisition Act

MFF- Multi Financing Facility

MoEF- Ministry of Environment and Forests

NRRP- National Rehabilitation and Resettlement Policy, 2007

PAA- Project Affected Area

PAF- Project Affected Family

PAP- Project Affected Person

PAZ- Project Affected Zone

PH- Public Hearing

RTI- Right to Information

SANDRP- South Asia Network on Dams, Rivers & People

SC- Schedule Caste

ST- Schedule Tribe

WLS- Wild Life Sanctuary

I. From 'temples of modern India' to 'green technology': Hydropower in India and Himachal Pradesh

Of the physical features that characterise the Himalayan landscape, its rivers are perhaps the most significant – ecologically, culturally and economically. The Himalayan state of Himachal Pradesh has been endowed with myriad rivers and streams defining its magnificent and yet fragile topography. The most critical, in terms of size and length, are of course the big glacial rivers – Sutlej, Beas, Chenab and Ravi. But feeding these and many other perennial rivers of the state are smaller streams, rain and snow fed, the lifelines of the mountain valleys. They sustain the everyday needs of the communities inhabiting these valleys, ranging from that of drinking water, irrigation to providing the spawning grounds for fish fauna, not to mention the ecological, and often invisible, services they offer. These miracles of nature, which have been flowing unhindered for over centuries, taking their course through the mountain valleys, to the plains and finally meeting the sea, are today in the midst of a deep identity crisis. Their obstruction and disappearance caused mostly by human interference to harness energy and make 'judicious' use of the water to cater to our needs to begin with, and unlimited wants as we have gone along the path of 'development', has been solely responsible for this crisis.

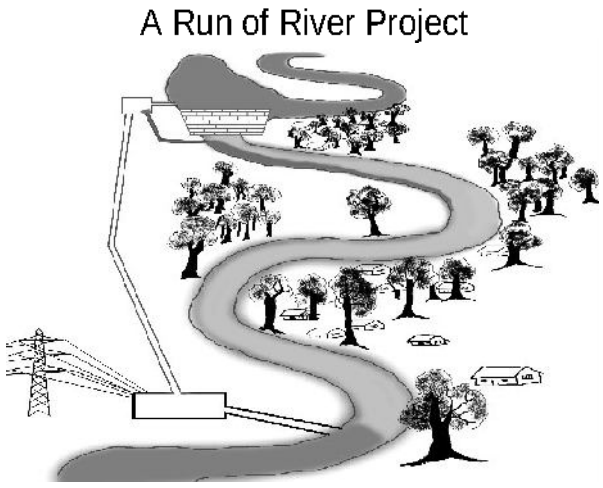


Figure-1: A run of River Project

Mega dams like the Bhakhra and Sardar Sarovar and a whole gamut of others in the Narmada valley commissioned in countries like India in the post independence period were meant to fulfil both the drinking water and irrigation needs and also generate hydro power. However, it soon became apparent that these projects were a bane for rivers and rural communities because of the large scale reservoirs leading to submergence of lands and eventually displacement of human habitations. Over the decades more than 5100 dams (as per CWC register) in India have displaced between 25-60 million people, many still awaiting rehabilitation and submerged 44262 sq km from 4528 dams alone[iii]. And yet it has taken long, arduous people's struggles and movements, to bring to the mainstream discourse the environmental and social impacts of large dams.

The waning of the 'temples of modern India' syndrome did not necessarily mean a shift in the development paradigm which by the 1990s was clearly structured towards increasing economic growth through liberalisation and globalisation, which also meant a rise in resource consumption. As infrastructure and industrial growth became the key drivers of the economy – the supply of power became the central agenda for technocrats, policy makers and planners. While it is important to note that the share of hydropower in the total energy generation capacity has seen a decline from 34% in the sixth plan to 23% by the end of the 11th plan[iv] (The main reasons sited for this have been difficulties in obtaining environment and forest clearances as well as rehabilitation related issues apart from geological uncertainties) the long-term goal of the government is to increase the share of hydropower capacity within the country's overall power mix to 40%[v]. With this objective, in 2003 a 50000 MW hydro initiative for accelerated development of hydro in the country was developed.

Within the hydro sector the attention has turned to the Indian Himalayan region which is estimated to have 79% of the total hydropower potential of the country[vi]. A technology called

'run-of-the-river' (ROR) used to tap "the flow of rivers" in high gradient zones to generate power has given impetus to setting up of hydro-projects in the Himalayan States. These projects involve building of a dam at the point where the river is diverted into a tunnel (drilled or blasted in the mountain) to be dropped back into the source river (or in some cases a different river/stream) several km downstream, upto 30 to or more km. The power house is built at the point where the river is dropped back (refer to figure 1) into its source. This meant that the need for massive reservoirs and the resultant large scale displacement, as in the case of hydro-projects in the plains, (and the 'headache' of ensuring rehabilitation) could be substantially reduced Though this has proved to be a fallacy, it is one of the arguments made in favour of ROR projects that seem attractive for the government as well as private developers.

In India the mountainous region of the Himalayas offered the "perfect setting" for such projects, with the availability of several flowing water sources which could be tapped even before they reached the plains. For the Himalayan States of Jammu & Kashmir, Himachal Pradesh, Uttarakhand and the North Eastern region, which were seen as having a restricted base for mainstream economic development, compared to the plains region, these projects would be a revenue generating as well as investment attracting source, a reason why the governments of these states have gone all out to promote Hydropower development in the last two decades.

Of the Himalayan states, after Arunachal Pradesh, Himachal is second in line with a hydro-power potential of about 21000 MW. In order to understand the trend in the growth of the Hydro-sector in the state we can look at the installed capacity which increased from 48.919 MW in 1971 to 326.200 MW in 2000-2001[vii]. (This does not include the Bhakra Beas Management Board large reservoir based projects). However, in the last ten years this has gone upto almost 6370 MW – a twenty times rise – indicating the frenzied pace of hydro development in the state. The table below provides a break up of the total project capacity under operation, execution and planning. The few major characteristics in this period of growth in the sector were - a shift to run of the river from major reservoir based projects (described above); entry of private companies as developers and producers of hydropower owing to the opening up of the energy sector to private players in the country as a whole; and the coming up of a range of micro, small and medium (ranging from 5 MW upto 100 MW) hydro-projects as against large and mega hydro-projects.

Table-1: Hydropower Projects in Himachal Pradesh

S.No	Description	Capacity (MWs)	Capacity (in %)
1	Projects Under Operation	6370.12	31.20%
2	Projects Under Execution	5744.1	28.14%
3	Projects which have been allotted or planned	5615.5	27.51%
4	Projects which have to be re-advertised (for commissioning)	1481	7.25%
5	Projects which have been abandoned due to environmental reasons	435	2.13%
6	Projects under investigation for Preparation of DPR	46.5	0.23%
7	HimUrja projects under execution or planned	723.5	3.54%
	Total Capacity	**20415**	

(Source: www.hpseb.nic.in*)*

II. How Green is your power? : Impacts of Hydropower and Issues of Concern

i. The carbon credit impetus

By the first few years of this decade, the 'climate change' crisis registered in the mainstream psyche and the catch phrase of 'green technology' gave additional impetus to renewable energy sources like hydropower over coal or nuclear power. The Himachal Pradesh government and its main power developing corporations have gone all out to sell Hydropower as "clean, efficient and environmentally friendly"[viii]. In its pursuit of a "cleaner environment" (read investment and funding), the Himachal Pradesh government prepared a draft Climate Change Policy in 2008 to facilitate the implementation of the Clean Development Mechanism[ix] for companies building hydro-power projects in the state.

Almost in tandem with the frenzied implementation of Hydropower in Himachal, came to light the ugly side of this development. Land slides, soil erosion and flooding as a result of blasting, cutting through the mountainside and dumping of solid debris and a dry river bed emerged as the most common visuals at a hydel project site.

ii. The real crisis

The oral evidences from communities residing along the mountain side and the valleys upstream and downstream of the project indicate some of the impacts. The diversion of rivers and streams and tunnelling began affecting the water flows and aquifers crucial not just to the river fauna but to the local inhabitants dependent on the streams and springs for irrigation, drinking, running watermills, fishing, etc. Local communities around project sites, who were given promises of jobs and handsome compensations, have more stories to tell about losses to their agriculture, destruction of forests and pastures along hill slides rather than of what they gained. The need for transmission of this power to the consumption centres outside the state means that the mountains are criss-crossed by a web of transmission lines. These lines, along with the towers to support them, require additional land as well as diversion of forests, which is rarely calculated in the social and environmental costs of the hydro-project itself[x].

Photo-1: A watermill running on Raanvi khad in Sawra Kuddu Project Area

As per a recent report of the Himachal Pradesh Forest Department of the 9147 hectares of Forest land diverted towards non- forest uses in the last twenty years, almost 67% i.e about 6154 hectares has been for hydro power projects and transmission lines[xi]. It is important to remember that in a state where a large part of the landscape comes under forests and pastures, and where agricultural land is less than 10% the dependence of local people on the forests for their day to day survival – fuel, fodder, non-timber forest produce, medicinal plants etc – is extremely high. A diversion of these forests means alienation of the locals from their resource base and an emerging livelihood crisis.

iii. Local protests

As a result of this, in the last five years, Himachal and other Himalayan states have seen a spate of spontaneous grassroots agitations as well as campaigns emerging against hydropower development. In Himachal projects like Khab Shaso, Baspa I, Karchham Wangtoo, Hull Hydro, Allain Duhangan, Malana II, Parbati, Binwa, Haripur, Teerthan valley, have met with resistance or have seen local protests in one form or another. Some of these like Khab Shaso, Hull and Baspa-I have not seen the light of day, either due to localised impacts or environmental reasons.

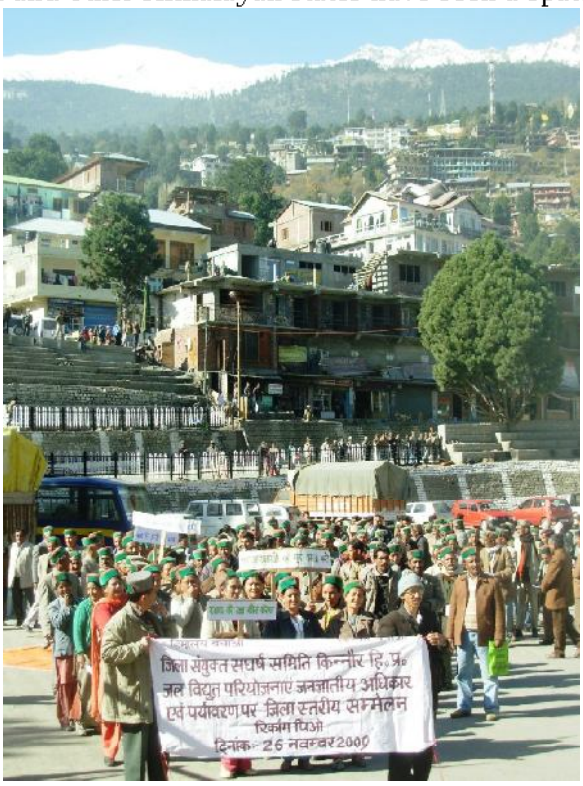


Photo-2: Protest rally against hydro-power projects in Kinnaur – November 2009

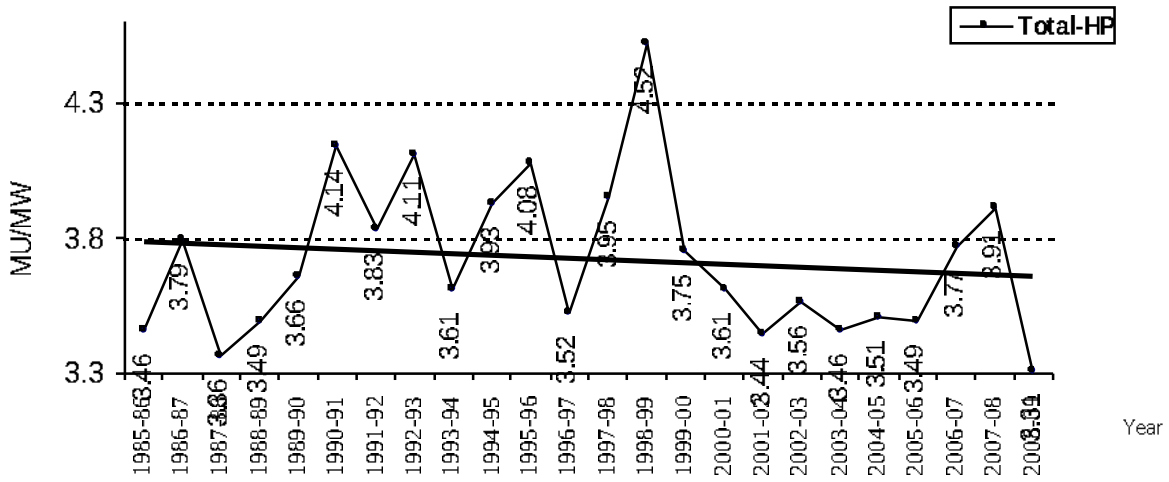
iv. Exacerbating Climate Change

It is also fairly well understood that the Himalayan region, like coastal areas and other ecologically fragile landscapes, are at the centre of the climate change crisis. These are areas where the impacts of global warming are manifesting themselves starkly, be it in the receding glaciers, the erratic rainfall patters, the changing weather patters, the rising temperatures and phenomena like floods and cloud bursts. Each of these is in turn affecting agriculture, horticulture and livestock based livelihoods. Impacts are visible on forest habitats and more importantly on the geology and river flows. In this context the feasibility and long term viability of Hydro-projects, which are based on the also faces a question mark and the fact that the performance of large hydro projects in the state has not lived upto the design capacity could be one such indicator of the same.

v. Diminishing returns[xii]

While the installed capacity of large hydropower in India increased at a compound growth rate of 4.35% per annum during 1991-2005, higher than all other power sub-sectors, the performance of the sector vis-a-vis this, has hardly come under scrutiny. As per the South Asia Network on Dams, Rivers and People, the million units energy generated from large hydro projects has been almost continuously falling over the last sixteen years. The major factors that have been observed as responsible for this trend include: over development in the river basin making the capacity unviable; the operational projects not getting enough repair and maintenance; increasing silt load, erosion, muck dumping affecting downstream projects; and climatic changes leading to flash floods, erractic rainfall patterns causing more damage.

Chart-1: Generation Performance of Himachal HEPs



vi. The Shukla Committee Report

The recent decision of the Ministry of Environment and Forests to allow parts of the tributaries of the Ganga to flow freely, by stalling NHPC's ambitious Loharinagpala project, in the state of Uttarakhand makes it clear that there is finally some official recognition of the adverse environmental impacts of Hydropower projects, which have been hyped up as producing 'clean energy'. But while the Uttarakhand and North East Dams have been the centre of concern and controversy both within the state and at the Union, till recently there was little attention being paid to the leading producer of Hydropower – Himachal Pradesh. In a scenario where there has been a complete denial of the grave ecological implications of tunnelling any flowing water body, a recent report presented to the High Court of Himachal by the Additional Secretary of Forests, Himachal Forest Department, Shri Avay Shukla has nailed some of the key issues of concern in the inadequacies of the environmental governance regime in dealing with the impacts of these projects. The report goes on to make a few critical recommendations including asking for a moratorium on hydro project construction till a revised policy is evolved, also a long standing demand of civil society groups and environmental activists in the state[xiii].

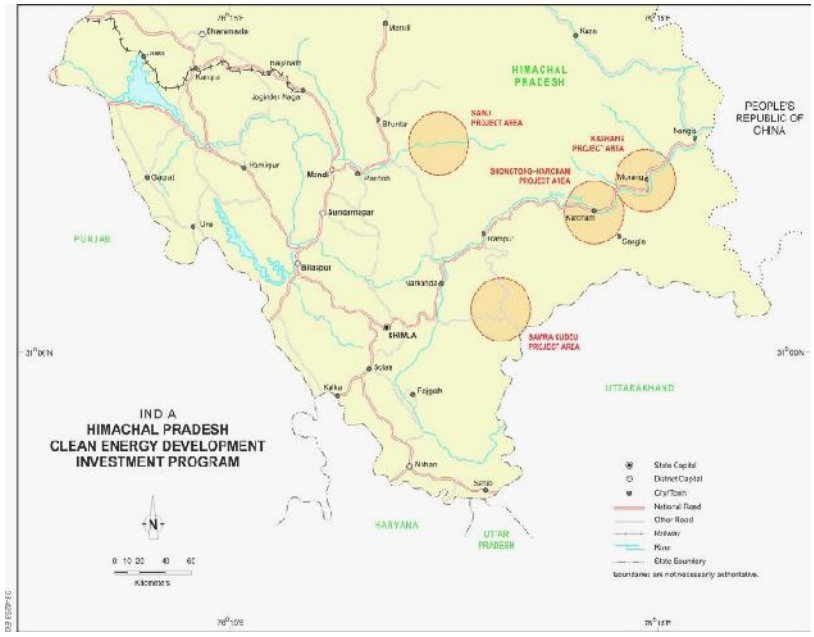
III. Putting money where the mouth is: ADB loans to Hydropower in Himachal Pradesh

i. 'Himachal Pradesh Clean Energy Development Investment Program'

Ironically, or perhaps not, it is in this context that the Asian Development Bank's fourth tranche of a multimillion dollar ($800 million) loan to the Himachal government has come through for development of four hydro-electric projects under the 'Himachal Pradesh Clean Energy Development Investment Program'. In 2007 ADB initiated the process of funding five projects in Himachal. These loans are being availed by Himachal Pradesh Power Corporation Limited, a state owned enterprise with 60% stakes of the State government and 40% of the Himachal Pradesh State Electricity Board. The MFF or Multi Financing Facility envisages five tranches covering physical investments in hydropower generation and non-physical investments in the form of a capacity development component. The ADB loan is 53% of the total project cost of about 1.5 billion dollars.

The hydropower project beings funded by ADB and developed by HPPCL include:

1) The 195 MW Integrated Kashang Stage I, II and III hydropower project in Kinnaur- Rs 1074.02 crores
2) The 402 MW Shongtong-Karccham in Kinnaur - Rs 2749.60 crores
3) The 111 MW Sawara-Kuddu hydropower project in Shimla district- Rs 727.71 crores
4) The 100 MW Sainj hydropower project in Kullu District - Rs 764 crores



Map-1: ADB Hydro projects in HP (Source: www.adb.org)

Besides these hydropower projects, ADB is also funding a Rs 36 crore (900,000 US dollars) capacity development project in the state for transmission of energy which involved developing of the management capacities of the HPSEB and development of a draft master plan for it. Another $350 million loan for energy transmission titled 'Himachal Pradesh Clean Energy Evacuation' is in the pipeline and awaits approval. Apart from this the state has recently bagged a Rs. 454 crore (approximately $ 93 million) loan for tourism development[xiv].

ii. ADB interest in the Energy Sector

The ADB funding in Himachal Hydro projects is perhaps more intensive than its over-all funding in the energy sector in India in the last many years. It must be noted that ADB's top most funding about, 33% of the total loans to India, as of December 2009, were in the energy sector. In August 2007, the Asian Development Bank (ADB) released its evaluation of energy sector lending in India which concluded that its aid has generally been successful as a result of targeting state electricity sectors that were *"thoroughly committed to change"*. This sector is

obviously being seen as lucrative by the bank considering that the bank itself has played a major role in providing the impetus to implementing the reform process in the electricity sector since the late 1980s[xv]. Key elements of the reform program include full cost recovery measures, an increase in tariffs, the elimination or phasing down of direct and cross subsidies and the development of an electricity market with open access and merchant sale to make it commercially viable and competitive.

Questions have been raised on ADB's involvement, similar to that of World Bank's, in its interest in restructuring of the power sector which would ultimately mean an increase in private participation and higher tariffs. “In the case of the Himalayan projects, distance from load centres, difficult terrain and other factors will add to the high capital costs of hydropower projects. There is a real danger that these projects will then end up generating high-cost power supplied only to consumers with a high paying capacity” states Shripad Dharmadhikary in his report published by International Rivers Network titled 'Mountains of Concrete – Dam Building in the Himalayas (2008).

iii. ADB interest in the Public Sector in Himachal Pradesh

In the case of Himachal Pradesh, however, the focus is on financing hydropower projects being developed by an entirely state owned enterprise, HPPCL. While this may seem contrary to the policy of promoting privatisation, the ADB rationale of the bilateral arrangement with Himachal Pradesh is based on the state's commitment to develop itself as the “hydropower state of country”. Successive governments in Himachal Pradesh over the last 15 years have drawn a road map for the same with clear investments in meeting planned targets for hydropower generation and distribution; carried out power sector reforms; opened up the hydro sector to private players – all of which seems to have played an important role in attracting the ADB loans. Further, one of the objectives of capacity building for an organisation like HPPCL is to make way for or rather attract private interests by dealing with the constraints of initial problems of establishing these projects. As the project proposal of the ADB states “Another constraint to private sector participation is the very long gestation period when developing a hydropower project. .... it can be more practical for an entity such as HPPCL to commence the planning process; identify viable sites; conduct the relevant studies; and obtain the various engineering, social, and environmental clearances—and, at this later stage, leverage private capital and expertise through joint ventures or other public–private partnership (PPP) arrangements”. The 'corporatisation of HPPCL' is repeatedly mentioned in ADB's project proposal and its characteristic feature seems to be“ unbundling generation from HPSEB’s predominantly transmission and distribution operations, and an eventual transfer of HPSEB’s few generating assets to HPPCL

iv. Promoting Hydro as 'green' energy: tapping the carbon market

But perhaps, as the title of the project suggests, ADB's interest, similar to that of the Himachal Government, also lies in promoting 'hydropower' as clean and sustainable energy, especially in the carbon markets. “The proposed intervention in Himachal Pradesh is consistent with ADB’s strategy of promoting higher efficiency, low-carbon energy sources through run-of-river hydropower investments, as well as institutional strengthening to implement reforms as required by the Electricity Act, 2003”. The capacity development component of the ADB loan apart from looking at financial management systems is focussing on “support for carbon market initiatives”, particularly given the substantial hydropower capacity additions planned for the state and their ability to offset carbon emissions. Under the project preparatory technical assistance, ADB funded a study to develop a carbon market development strategy for Himachal Pradesh, with further assistance to be part of the MFF – Project Document, September 2008.

v. Why a study of ADB funded Hydro Projects?

Given the scenario in which the discourse on the social and environmental impacts of Hydropower projects, especially in the Himalayan region, is already well known and documented, it becomes critical to highlight the fact that ADB, in financing these projects as 'clean energy' projects seems to have made light of the facts in the public domain. There is a need to look at each of the ADB funded projects in Himachal to see through the 'green' smoke screen. Further, ADB in its project documents and policies has consistently insisted on safeguard mitigation measures on three fronts – social, environmental and public or 'stakeholder consultation'. Hence there is also a need to study the implications as well as application of these policies in the 'Himachal Clean Energy Development Programme'. It is with the above objectives and framework that this report, attempts to present a critical analysis of ADB's investment in the Hydropower sector in the state, putting together field observations, based on discussions with project affected communities along with a study of the 'safeguard' policies adopted by HPPCL in implementation of these projects. The report looks at the environmental and socio-economic impacts of each of the projects, cumulatively as well as separately along with compliance or violations of norms and legislations that protect the livelihood interests and environmental rights of project affected communities.

Field visits were made to each of the four project sites over the last year and information was also extracted using the RTI Act 2005. The ADB Public Disclosure unit and the Project Officer (in charge) were also approached for providing relevant documents on monitoring and evaluation. In the next few sections the report puts forth the following:

- **Locating the Projects:** Provides a broad picture of where the projects are coming up, their status and over all impact areas as stated by the Project Proponents
- **Locating the impacts on ground zero:** Is a compilation of the impacts as observed and understood by local people, activists and from first hand observations. These include the social and environmental impacts
- **The Safeguard Smokescreen:** This looks at the environmental and social safeguard measures claimed to have been taken by ADB and the project developers vis a vis the actual ground situation as far as their implementation is concerned. In three sub sections the document looks at the Environment Impact Assessments, Environment Mitigation measures and compliance; The Rehabilitation measures and Public Consultation initiatives taken up by HPPCL in the four projects
- **In Conclusion:** The last section attempts to draw some broad observations and also makes specific recommendations related to the projects and policies to the Himachal Government

IV. Locating the Projects

Of the four projects being supported by ADB, two, Sawra Kuddu and Kashang-1 are in a more advanced stage compared to Sainj and Shongtong Karchham HEP. Both the projects have generated local protests on issues of lack of public participation as well as poor compensation and rehabilitation apart from their environmental impacts. Before we look at the issues with implementation and execution it is imperative to look at the description and location of these projects to understand the nature of impacts.

i. 243 MW Integrated Kashang Project

The Integrated Kashang HEP is coming up in Morang tehsil of Kinnaur, a tribal district of the state and a cold desert area. There are a total of 9 villages inhabiting the mountain slopes where the project is planned. The 66 MW Kashang-I project was planned and conceptualized to be constructed under Himachal Pradesh State Electricity Board (HPSEB) on the Kashang stream in the Sutlej Valley of Kinnaur District. In stage II & III the Kerang Khad, another tributary of the Sutlej (on the right bank) flowing adjacent to Kashang, will be diverted from Lappo (upper mohal of Lippa Village) through 6.3 kms. long tunnel cutting across Skeyari dhar inhabited by 8 villages and will be linked to upstream end of Stage-I on top of Pangi village and a combined power house of 195 MW will be constructed on the right bank of Sutlej opposite Purbani village. In Stage-IV of 48 MW which is not being funded by ADB as of now, Kerang Khad will be diverted at Tokhtu village and power house will be constructed just before from where the Kerang stream will be diverted for the KK link tunnel.

Photo 1 & 2: Kerang stream to be diverted and linked to Kashang streams to generate 243 MW of electricity

ii. 402 MW Shongtong Karccham Project

Photo-5: Sutlej river in Kinnaur

Planned upstream of the controversial Karccham Wangtoo Hydro-electric Project is the Shongtong Karccham HEP on the Sutlej River. The proposed barrage site is near village Powari and the power house is proposed to be located adjacent to village Ralli on left bank of the Sutlej next to the confluence of river Baspa with Sutlej and upstream of Karccham-Wangtoo HEP. The Sutlej river has a cascade of hydro projects coming up on it starting from districts Kinnaur to Shimla to Mandi to Bilaspur.

iii. 111 MW Sawra Kuddu Project

Photo-6: Pabbar valley

The Pabbar River is a perennial river that originates from the Chandranahaan glacier and falls in the Jubbal and Rohru tehsils of the Shimla district. Part of the Yamuna catchment, the Pabbar meets the Tons river in Uttarakhand, which then goes on to meet the Yamuna. The planning and conception of the project was initiated in 2003 and by 2006 the acquisition of land for the project had started. A 9 metre barrage that was planned is now going to be 14 m high. A total of 8 Panchayats (of about 50 in the Pabbar Valley) are being and will be directly and indirectly affected by the project. This includes impact due to land acquisition, transfer of forest land and impacts due to tunnelling.

iv. 100 MW Sainj Project

Photo-7: Sainj River at Neuli village

Sainj 100 MW hydroelectric project is coming up in Banjar tehsil of Kullu district on Sainj River, which originates from Rakte Sar glacier in Great Himalayan National Park (GHNP) and is a tributary of Beas River. Near village Niharini a 24.5 m. high barrage is proposed to construct on the right bank of the river. An underground powerhouse with 2 units (2 x 50 MW) is proposed on the right bank of river Sainj near confluence of Jiwa Nallah, which is 300 mtrs upstream of Parvati –II 800 MW HEP. These two structures will be connected by a 6.3 kms. headrace tunnel passing through a mountain range inhabited by 5 Panchyats.

V. HIMACHAL PRADESH CLEAN ENERGY DEVELOPMENT PROGRAMME: About the Projects

	Kashang Stage-1st (65 MW)	**Kashang - 2nd, 3rd, 4th (177 MW)**	**Sainj (100 MW)**	**Sawra Kuddu (111 MW)**	**Shontong Karccham (402 MW)**
Status of the project	For Stage-1 construction work has been contracted to HCC and construction work on weir site and power house site is going on	No head start has been made in Construction work has been awarded to HCC for stage II and III in February 2009	Pre project activities like road construction for pressure shaft and dam site are going on and HPPCL has awarded construction to HCC in June '10.	4.5 kms. of the tunnel built, barrage construction to start (about 40-50% work completed) and construction expected to finish by 2012	Project is in initial stage. No construction work has been carried out.
About the Area	Morang tehsil of Kinnaur district (Schedule V area) – Alpine Zone Stage I on Kashang stream and stage II and III on Kerang stream both are tributary of Sutlej Kashang stream is only 18 km in length and Kerang is 44 kms. Kashang will be diverted at around 8 kms before it's confluence with Sutlej and Kerang stream will be at 15.3 kms before its confluence with Sutlej.		Banjar tehsil of Kullu district on Sainj River, which originates from Rakte Sar glacier in Great Himalayan National Park (GHNP) and a tributary of Beas River.	Jubbal and Rohru tehsils of the Shimla district. On Pabbar - perennial river that originates from the Chandranahaan glacier and part of Yamuna catchment	Project is coming up in Thesil Kalpa of district Kinnaur On Sutlej- barrage site is in Powari and power house site I village Ralli on NH-22.
Total Land required for the project and Status of Land Acquisition	15.48 ha private land and 18.71 ha forest land – Acquisition of private land started in year 2005 and still not completed	43.1 ha forest land and 8.35 ha of private land not initiated the process of Acquisition of land	Private Land 8.77 hectares and 47.993 hectares of forest land Completed the process of acquisition of private land but still has to acquire permanent structure for the project	97.62 hectares- 53.21 hectares Forest Land ; 45 ha. - Private land Acquisition. Process of compensation and R&R still ongoing as per Nov 2010 ADB compliance report	Total land required 77.326 hectares – 63.05 forest land and 13.831 ha. Private land
Public Hearings	• For stage I the Public hearing was conducted on 5-05-01 • For integrated project- 1st public hearing on 28-05-2009 in Lippa village and 2nd Public hearing on on 29-05-2009 in Pangi village		Conducted on 19-06-2008 in village Neuli	• Environment Clearance Public Hearing conducted on 15-06-10 • ADB Public Consultation 12-03-08	Two Public hearing were conducted, 1st on 28-07-2009 in village Powari 2nd on 29-07-2009 in village Ralli
Necessary clearances	• For Kashang- I EC on 15-11-02 • Extension for this clearance on 15-11-08 • For Integrated Kashang project (including stage 1) EC was granted on 16.4.10 (where as work started on		• EC on 4-5-2009. • Forest Clearance for diversion of 47.993 ha on 14th September 2009	• EC was granted on 17th May 2007 • FC granted in June 2006 • No NOCs taken from affected Panchayats/Gram	EC reccomended by EAC in feb 2010 but yet to be granted by MoEF FC for 63.05 hectares was recommended by FAC on

	the stage-1 started in 2008) • FC for stage for I only and FAC has recommended FC for stage 2nd and 3rd on 11.2.2011 • Gram Sabhas of affected panchyats have not given NoC to the project which is necessary for diversion of forest land • Local community has challenged the environment clearance in National Environment Appellate Authority. NEAA conducted field investigation in October and final decision is still pending.		• No NoC taken from affected Panchayats/Gramsabhas	Sabhas	11-2-2011. Final FC letter pending with MoEF.
Project Affected Area (As per project documents)	221 families in Pangi Panchayat	1 family Lippa panchayat	3 Panchyats Garaparli; Deorodhar; Shensher; The list of projected families is not finalised till 10th October 2010. According to EC letter 206 persons (71 PAPs loose homestead and 135 PAPs loose land). 296 houses which are being acquired for the project have original/alternate houses.	587 families in 5+3 Panchayats - Sari; Kuddu, Saraswati Nagar, Jhalta, Thana+ Mandal, Ranvi and Seema	706 families in 4 panchyats- Khawangi, Powari, Barang and Mebar
PA Zone	Yet to be declared	Not included any village	2 Panchayats Succhain, Shanghar	3 Panchayats in PAZ	1 panchyat- Shudharang
Compensation	For Stage 1st, started acquiring land in 2005 with compensation Rs. 300-400/ centare and in 2008 from 390–730 per centere. According to RTI information *"Initially the land was acquired under the provision of LAA 1894. Latterly the Management of HPPCL has enhanced these rates for all type of land in District Kinnaur @ Rs. 1,04,000.00/biswa (approximately 20,00,000.00 per bigha) as per demand of local people and further negotiation with them"*. For other stages of project land is still not acquired.		Two rates for two kinds of 1. Rs. 3,50,000.00 (Ropa Doyam) 2. Rs. 2,00,000.00 (Gair Mumkin Bhumi Abadi) In PH project proponents out rightly rejected the idea of fixing compensation rates with negotiation with community.	In 2008 3 rates for 3 types of land – Kiar Abal – Rs. 821 per centare; Bakhal Abal %s 509/ centare and Banjar – Rs 161/centare later in 2009 revised to Rs 903, Rs 560 and Rs 177 respectively Taken under protest and challenged in High Court	In Public hearing agreed to fix the compensation rate of private land according to negotiation with communities

VI. Locating the Impacts on Ground Zero

i. Eco-fragility of the locations.

From the description above it is fairly clear that all four project locations are eco-fragile in nature. All four are in seismic zone IV. They are being built on catchments of glacial rivers. The integrated Kashang project area falls in an alpine zone (altitude varying from 2000 to 3150 meters above msl.) where the ecological foot print of any activity is going to be huge since the area, with several glaciers, is covered with snow for six months and the vegetation found on this altitude is slow growing and very sensitive to any interference.

Photo-8: Eco-fragile alpine area- Lippa Asrang sanctuary will be adversely impacted by integrated Kashang project

The Sainj project is in close vicinity to two important sites from the conservation point of view.The Great Himalayan National park, which is one of the few places that still has some pristine untouched sub alpine, alpine and trans Himalayan biodiversity and is a UNESCO world heritage site; and second, Sainj wildlife sanctuary which is also 2 kms. from the proposed project site. Similarly, adjacent to the Kashang Project area is the Lippa Asrang Wild Life sanctuary which was notified in 1974 in a total area of 30.89 hectares, an abode of some of the rare and endangered animal found in alpine zones. There is no doubt that with heavy construction activity and the influx of labour force in thousands from outside it is going to negatively impact these conservation sites.

Photo-9: Geologically fragile Lippa village

All four projects also involve diversion of forest land, the total area of forests to be diverted coming up to 221.54 hectares, a fairly large area for mountain regions. The nature of these forests is also diverse ranging from alpine pastures to temperate forests of *deodar* and *chilgoza* and from pine monocultures to mixed forests. For instance, Morang tehsil (Kashang Project) is the abode of Chilgoza pine *(Pinus gerardiana)* which is one of the rare tree species and found in India only in Kinnaur district. In the entire Kinnaur too the best Chilgoza forests exist in this belt. The forest area of 63 hectares which is going to be diverted for the Shongtong-Karcham project has also Chilgoza pine as dominant species. Medicinal and aromatic plant species like *Angelica glauca, Picrorhiza kurroa ; Aconitumspp., Dactylorhiza hatagirea, Ephedra gerardiana, Aconnitum spps, Ferula jaeschkeana, Heracleum candicans, Betula utilis, Juniperus macropoda, Dactylorhiza hatagirea, Rheum webbianum, Dioscorea deltoidea, Rheum austral*, which have attained a threatened status due to their commercial exploitation from all across himalayas are found in

the Kashang and Sainj area. Any construction activity in the vicinity, any change of water aquifer regimes and increasing pressures on the forest would directly alter the landscape and mean a threat to this biodiversity.

The Pabbar catchment area (Sawra Kuddu HEP) has experienced flash floods in 1992 and 1997 due to cloud bursts which resulted in formation of temporary lakes. Similarly, on 22nd July, 2001 the cloud burst in the upper reaches of Sainj valley resulted in flash flood and caused extensive damage to the habitation settled on the either side of main Sainj Nallah affecting nearly 40 families. The flood also washed way 2 bridges on Sainj and Jeeba Nallah and a lot of fertile land was also lost. The road connecting Siund and Sainj was also washed away at many places. Flash floods have been also experienced in the Sutlej in 2000 and 2005 causing extensive damage due to which the water level rose to 25 meters. Clearly this indicates that any construction activity on these rivers will only cause further damage and also be a threat for downstream areas.

Similarly, all four projects involve tunnelling which means a direct impact on the water sources. For instance in the Kashang Project area alone 150 water springs are available on which the people of 9 villages are dependent on for irrigation and drinking water supply and without them it will be not possible for local community to survive in a cold desert area.

Photo-10: Natural spring near Rarang – to be adversely impacted due to KK link tunnel

The other major impact of tunnelling and construction activity is soil erosion and loosening of the earth. While the Pabbar valley falls under extremely severe erosion risk area and has been declared as 'landslide prone' by the Geological department of Himachal Pradesh, while the Kashang project is located on a steep slopes mountain with rock formations that are inherently loose and prone to landslides.

ii. Socio-economic impacts and livelihood issues

Across mountain regions, communities are closely linked to the ecological fabric and landscapes for their day to day livelihood needs. While privately owned agricultural lands serve the direct need for food, forest lands sustain agriculture and household running by providing fuel, fodder and water. Clearly, there is no doubt that the above projects which have the range of ecologically adverse impacts are bound to affect the local communities in a variety of ways. The total number of 'Project Affected Families' (as identified by the project proponents) in the four projects is 1752. However, it is important to note that these are families who are losing all or part of their lands to the projects. Families affected by tunneling, blasting and construction activities or those losing access to forests are not included in these.

For instance, in the integrated Kashang project, a total 223 families will lose 23.83 hectares of private land but the indirect impacts of construction activity and diversion of forests will

extend to more than a 1000 families in the area. Almost 50% of households have less than 10 bighas of agriculture land in the form of small terraced filed on treacherously steep slopes. Despite this they are able to earn a decent livelihood as people have developed apple, apricot and walnut orchards and are dependent on nearby forests for fuel wood, fodder, leaf litter. For cash income they essentially depend on collection of Chilgoza seed, Kala jeera and morel mushroom which fetch a good market value. In addition the micro climate provides an opportunity to grow off season vegetables like Peas, French beans and Potatoes, which fetch a good price to locals.

According to the residents of Pangi and Purbani villages, the dust arising from initial construction activity on stage-I of Kashang is hampering the apple crop very badly. The fruit setting is not happening properly and the apple is not developing the appropriate colour for which Kinnauri apple is famous for and production is also declining.

Photo-11 &12: Rich apple economy under threat (Sawra Kuddu and Kashang HEPs areas)

The whole stretch of the Kerang-Kashang(KK) link tunnel which will be 6.3 kms long is going to adversely impact Lappo, Jungi, Aram, Akpa, Lippa, Asrang, Tokhtu, Pangi and Khadra villages which will be affected due to the soil erosion and land slides. Already, the villages of Khadra and Aren are on the verge of dislocation due to this. Almost, all the spaces suitable for human settlement have been occupied and in case of any disturbance people will be forced to move out from this area. Further, Purbani village on the opposite side of the Power house site is already facing the problem of dust, sliding of land and cracks in houses due to construction activity.

The area affected by the Sawra Kuddu Project is known for its apple cultivation. With the construction of the tunnel being initiated the local people are now worried about the disappearance of water springs and streams and the impact of the construction work on local climatic conditions which enriches their apple production.

Similarly in the Sainj Valley the project will have adverse impacts not only traditional crops like maize and wheat but also on cash generating activities like off-season vegetable cultivation and apple orchards, which are the backbone of their economy. At present HPPCL is in process of construction of two roads, one for the pressure shaft and other from Sambha village to dam site. In both cases it is dumping the muck on downhill in a reckless manner due to which people residing their facing problems of water sources drying up, destruction of pedestal path and losing access to forest and grass plots.

iii. Cumulative Impacts on river basins and valleys

Looking at the environmental or social impacts of these projects will be a futile and incomplete exercise if each project is viewed in isolation, ignoring the status of the entire river basin and the number of projects planned along the river and the potential of power that is planned to be harnessed.

A total of 5 Hydro Electric Projects (HEP) have been planned on the Pabbar River of which Sawra Kuddu is the first one. The others include:

- 50 MW Tangu-Romai with a tunnel of 14 kms.
- 70 MW Dhamwari-Sunda with a 16kms long tunnel
- 46 MW Chirgaon Majhgaon – 15kms (shifted from Right bank to Left Bank)
- 36 MW Paudital- Lassa with a 11 kms. long tunnel
- 111 MW Sawra- Kuddu with a 14km long tunnel

Therefore a total of 313 MW of electricity is planned to be generated from this river which is 72 kms long. Since, about 68 kms. of this will be tunnelled, the river would virtually disappear once all the projects come up.

Part of the Beas river basin, which has an operational capacity of 1829 MW (16 projects) and an additional 16 projects of more than 2700 MW under various stages of execution, planning and commissioning, the Sainj valley, which is about 25 kms. long is completely choked with large Hydro electric projects like Larji, Parbati II and III.

But perhaps it is the Sutlej valley where both the Kashang integrated project and Shongtong Karccham HEP are planned which is in dire straits at the moment. On the Sutlej river which is estimated to have the potential to generate 10,000 MW of power, there are currently three operational 'run of the river' projects in Kinnaur itself and about 23 others are under various stages of construction, planning and commissioning. Yet again the threat of the river disappearing in several long stretches looms large here as well. Climatic changes are leading to erratic weather patterns in the valley and need to be studied in detail to understand the implications on agriculture and water resources. In 2010 the Kinnaur region has received 200% more rainfall (than its average) which is a serious threat to an area comprised of fractured rocks embedded in sand. Due to excess rainfall the district head quarter Reckong Peo, which is within 10 kms. from both the project sites of Kashang and Shongtong project, has got cracks and many important structures have been declared unsafe for human habitations[xvi]. Now, as per news paper reports, the Geological Survey of India, in a recent report to the Himachal Government has recommended that now new construction activity should be allowed in the region[xvii].

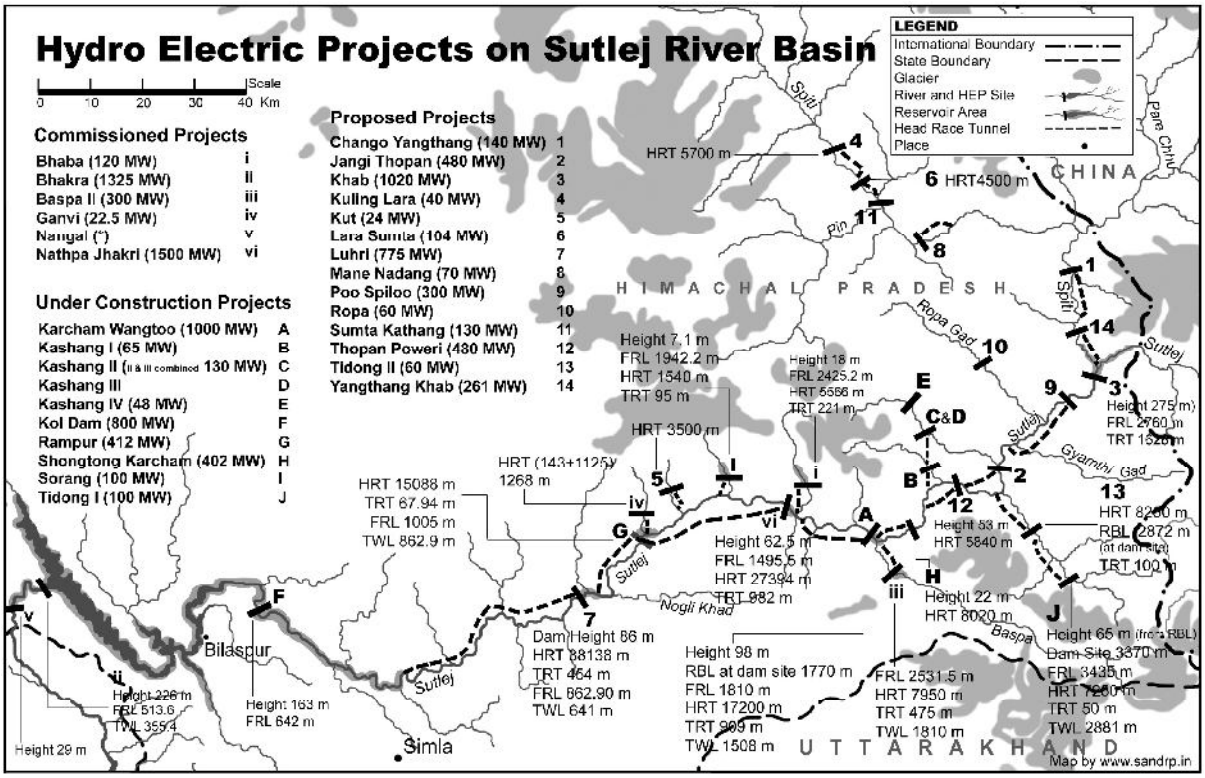


Photo-13: HEPs on Sutlej basin; Source: SANDRP

Put together in the cascade of projects the situation appears grim, as the impacts of the construction activity, the tunnelling and the deforestation will be spread far and wide. Three of the observations of the Shukla Committee report (mentioned in Section II of this report) clearly acknowledge this. These include

- that valleys like Ravi, Beas and Sutlej have been saturated with Hydel Projects and that there should be a complete moratorium on hydel projects till river basin studies are conducted and an appropriate policy evolved
- that most of the projects studied do not follow the criteria for minimum discharge of 15% and that this failure is not of compliance but of the design of the projects itself
- that there should be free flowing river for a minimum distance of 5 km (ad hoc suggestion pending detailed studies) between the place where the Tail Race Channel of the upstream project and the Full Reservoir level (including back water impact) of the downstream project.
- No project should come up above 7,500 feet msl

If these observations and recommendations are taken into account none of the four projects that ADB is supporting in Himachal Pradesh should be allowed to come up. It is then rather surprising that the ADB's environmental safegaurd policies failed to identify the threats and cumulative and basin wide impacts of the Hydro-projects it is financing.

The projects also do not assess the downstream impacts in any credible or comprehensive way. Without assessing the impacts one cannot even start considering making compensations for the impacts. All these projects would actually accelerate and accentuate the climate change impacts and reduce the people's capacity to adapt to the climate change impacts. The destruction of forests, hills and rivers by the project is just one of the factors. The

construction of such projects at higher elevations would also accelerate the melting of glaciers, will lead to decrease in snowfall, increase in rainfall and high intensity rainfall events, flash floods, reduce ground water recharge and also reducing the access to natural resources that people have, thus reducing their coping mechanisms. The impacts assessment of the projects has not taken any of these into account in any credible way. The changing water flow regime due to all these impacts due to climate change and accentuated by the projects would also affect the claimed generation from the projects themselves. The decreasing generation from hydropower projects mentioned above is thus bound for further southward journey due to such projects like the ones ADB is funding.

VII. The Safeguard Smokescreen

i. Inadequate EIA Reports

The Environment Impact Assessment reports for all the four projects that have been prepared for HPPCL, despite the detailed "Terms of Reference" from the Ministry of Environment Expert Appraisal Committee as well as the ADB's own guidelines, severely fall short in highlighting and dealing with the issues raised above. While detailed critiques of all the EIA reports have been provided by environmental groups and local residents during the public consultations, some of the common issues emerging across the projects are:

- ***Defining affected areas without considering all impacts; Impacts of tunnelling severely underplayed; Natural resource-livelihood linkages underplayed***

During the Public Consultation held by ADB in the Sawra Kuddu Project area in 2008, Dr. Jogta (Raawin Vikas Sabha, Shimla) one of the local representatives raised the question that since a lot of resources and affected communities were not even mentioned in the EIA, how do the project developers propose to mitigate the possible threats to them. "Chauri and Jaarla streams in the affected area have not been mentioned in the EIA; there is wrong information about the fishermen in the downstream area; there is no mention of the landslide affected Thana and Bharot villages, there is no mention of the use of irrigated land as dumping sites, there is no mention of the pending land acquisition for the high tension lines for distribution", he said during the hearing pointing out the problems with the EIA report.

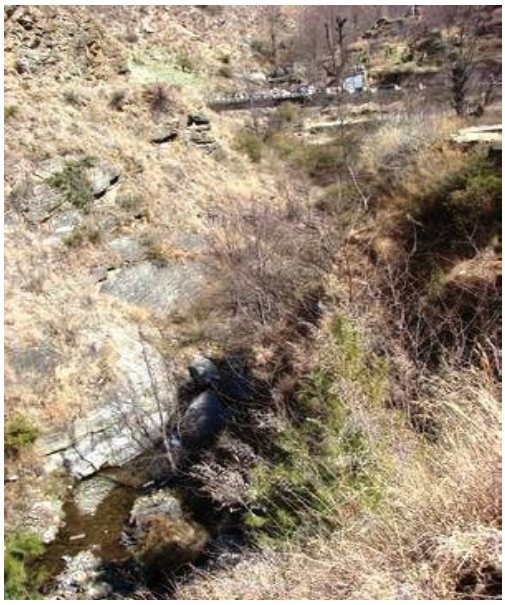


Photo-14: Raanvi khad-non existant in the EIA, will go dry.

Section 6.5 of the Executive Summary of the Integrated Kashang EIA report has identified only four affected villages namely Pangi, Lippa, Toktu and Asrang with the affected households being 253. However, this identification is seriously inadequate because it takes into account only those villages whose private land will be acquired for the project. As per the local people more than a 1000 families in the area will get affected as a result of all the construction activity and diversion of forests. The whole stretch of the Kerang-

Photo-15: Khadra landslide – 3 separate tunnels are proposed on this already fragile mountain

Kashang(KK) link tunnel which will be 6.3 kms. long is going to adversely impact Lappo, Jungi, Aram, Akpa, Lippa, Asrang, Tokhtu, Pangi and Khadra villages which will be affected due to the soil erosion and land slides.

Again interestingly EIAs like that for Kashang HEP downplays the impacts of the project (Page 33 of ES, Point 6.8.1.1) by saying that since there is no reservoir construction involved and the entire construction will be underground, the impacts will not be as massive. This is seriously objectionable as there is ample evidence to show that run of the river projects are causing enough damage due to the construction activity, both above and below the surface of the mountains. This is mostly in the process of tunnel construction. Downplaying the impacts of the tunnelling and blasting, especially in an area like Morang, which is known for the notorious Khadra landslide (because of which National highway-22 had to be shifted from the right bank Sutlej to the left bank), is problematic. Today, most of the villages located on steep ridges are surrounded by loose rock structures/boulders and even a small disturbance can slide the earth and/or loose boulders can fall.

Instead the EIA report tries to make light of the impacts of the tunnel by stating that the villages are located away from the axis of the tunnel. While it mentions that 83% of the strata is fractured rocks embedded in sand there is no mention of how the tunnel will impact this and affect the villages located here. In case of Kashang Stage-I, due to indiscriminate use of explosives, cracks have been appeared in agriculture fields and houses in Ragehra area of Pangi Panchayat. Same is the case with Purbani village, despite located on opposite bank to power house construction site cracks have appeared in houses and agricultural fields due to indiscriminate use of explosives. According to latest news due to heavy snowfall big rocks boulders are falling down on power house site due to which crores of rupees worth of machinery got destroyed and a construction labour was also died.

The area between Asrang and Lippa village has two intake structures to be constructed in Stage-III and Satge-IV of the project about which the report on Lippa Asrang Wild Life Sanctuary says, "*Between Asrang and Lippa to the North of Taiti Khad, the strata mainly consist of granite and gneisses, which are very altered with the consequent formation of China clay. The rapid weathering of granite in the sanctuary appears due to high frequency of frost action and extreme temperature.*" There is no clarity as to whether the two diversion structures with water storage capacities will be safe in an area where weathering process is very active and the impact of the reservoir on weathering process has not been studied in the EIA report. Interestingly, in the EIA report there is a contradiction about the location of the Lippa Asrang Wild life

Photo-16: Loose rock outcrops below which Tokhtu village is located and tunnel of Kashang Stage-IV is going to pass

Sanctuary. While the report says that the WLS exists 0.5 kms. from diversion structure of Stage-IV, according to the EMP on page 115 "Lippa, Asrang and Tokhtu, having population of 1600, are situated within the sanctuary." This could mean that the whole of 48 MW of the HEP and diversion weir of another 130 MW falls within Lippa Asrang WLS. Concerns regarding indiscriminate use of explosives and fear of landslides were raised by many members of local communities during the Environmental Public Hearings for the Kashang project and Shongtong Karccham project. The Public Hearing minutes mention that people suggested use of Tunnel Boring Machines for construction of tunnels but still this has not been ensured and no satisfactory reply came from project proponent on this issue.

Apart from completely missing the mention of the 150 water sources that exist in the affected area, the Kashang EIA report does not talk about the presence of two lakes, Urank Sorangwa and Radden Sorad. on the ridge at an altitude of 3500 mars above the area where the tunnel is going to come up. These lakes apart from being sacred for the local communities are also considered and sources of many of the natural springs. This issue was also raised by people during the public hearing but without any satisfactory answers from the project proponents.

The EIA report of the Shongtong project while refers to the fact that 63.5 hectares of Forest land will be diverted to the project it makes virtually no assessment of the use of this forest land by local communities and the fact that claims of forest dwellers and tribal communities on forest lands have to be settled under the provisions of the Forest Rights Act 2006. The dependence on this forest for fuel, fodder, grazing - apple and pine nuts has not been assessed. There is mention of livestock dependence and population but no mention of the grazing lands (on which the cattle depend) and how they will be affected by the project.

The Forest Clearance for this diversion has now been stalled as the Ministry of Forest's Advisory Committee, in November 2010, "recognizing the importance of cumulative ecological impact of such projects on aquatic fauna & flora, biodiversity of the riverine ecosystem of the river & surrounding areas, and ecological integrity of river system has desired a study by involving experts from ATREE / BNHS / GBP Institute of Himalayan Environment & Development by the State Government / Power Producers Forum"[xviii]

When talking about Siesmic Activities in Point 4.4 the Shongtong and other ADB funded projects, EIA goes into the details of the number of earthquakes in the entire region and state. It goes on to say that the project area has the highest Seismic activity in the Western Himalayas and belongs to Zone IV. But in the section on 'impacts' there is no detailed description of how the blasting, tunnelling and other construction activity will affect seismicity or exacerbate the losses during earth quakes etc.

- ***River basin carrying capacities not studied and cumulative impacts not assessed; Feasibility study and options assessment weak***

As mentioned above these projects are not coming up in isolation but are part of a cascade of projects within a river basin and any EIA study that does not take the impacts of other projects put together is incomplete in all respects. For instance the EIA report for Kashang while mentions the eco-fragile nature of the Project Area, completely fails to bring out the gravity of the cumulative impacts that the Integrated Kashang project is likely to have on the landscape and biodiversity of the region – where as the report is supposed to include the impacts of all four integrated components (And yet the environment clearance granted is for all four stages of the project).

The EIA report fails to mention the fact that on the same mountain side, at different altitudes,

two more tunnels are planned, one for construction of Jungi-Thopan 960 MW project and the other for NH-22. In toto, there would be three tunnels if we include the Kashang-Kerang link tunnel in a mountain which is severely under threat of sliding down – an issue that should have been addressed by the EIA report.

The 'terms of reference' for the Shongtong project's EIA report issued by the MoEF's EAC to the project proponent in point ask for a description of the Sutlej river basin's potential, the existing and under construction projects and the extent of disturbance in the river basin as a result of the projects and yet there is no mention of this in the entire EIA report. The EIA report also makes no mention of artificial lakes exists in upper catchment area of Sutlej river basin like Parchu lake which, has caused floods in Sutlej basin in 2000 and 2005 which not only forced hundreds of people to evacuate from their houses but also became threat to existing power projects. In year 2000 when there were flash floods in Sutlej the water level rose to 25 meters. It seems from EIA that this factor has been not considered, to understand the downstream impact of the project and selecting dumping sites for the project. And when Shri R S Negi raised concerned in this regard in public hearing no satisfactory answer came from project administration except that disaster management plan will be prepared.

Whole Sainj valley which is going to abode of four huge massive hydro electric projects is in verge of collapsing, many mountains which are falling apart due to project construction activity have been sealed with iron and concretised. The worst is of the road from Aut to Siyund, which is going to be common for Sainj HEP with other projects which are also in construction phase like Parvati II & III due to which travel from Aut to Sainj is a nightmare. The condition of road is very bad and the dust arising out of vehicular traffic is causing severe air pollution in the area. The EIA report fails to asses the over all impact of additional traffic and dust measure in the air pollution of these projects and the impact of Sainj HEP on this. Similarly the EIA report has not included the pressure on water sources from the labour force already existing in area which is involved in construction of the other projects.

Photo-16: Concretisation of mountain in Parvati-II HEP in Sainj valley

A recent research paper on the Sainj and Tirthan watershed states "*Soil loss at the rate of 7.2 and 4.5 t ha–1 yr–1 respectively from the Sainj and the Tirthan watersheds is quite disturbing in the light of the permissible limit of 1.8 t ha–1 yr–1 for sustained productivity of lands. Thus, higher-than-assumed sedimentation rates from the Sainj watershed will hamper the operational efficiency of hydropower projects to be built or already constructed in the region. This will also lead to shortening of the designed life span of the Pandoh reservoir downstream of both watersheds*"[xix]. While EIA report has given data on average silt load from 1990 to 2004 out of which data from 2000 to 2003 is missing and the report is silent about the impacts on live storage capacity and life span of the project and impacts of the project on downstream projects like Parvati, III, Larji and Pandoh dam.

Since the projects are coming up on glacial rivers, they should have taken into account the issue of climatic changes, the decreasing glacial flows and their impacts on the project targets, outcomes and feasibility. But none of the EIA reports touch upon this and neither do they carry out options assessment analyses.

Further, a detailed study of the EIA reports reveals that each of the impacts – whether on topography or biodiversity – has been seen in isolation from another – which is severely problematic considering the interlinkages which exist within the natural environment of an area.

- ***Downplaying impacts on socio-cultural fabric in project affected areas***

People in the Kashang project area follow a mix of both Buddhist tradition and old tribal culture. The EIA report, however, repeatedly insists that majority of the population is Hindu. The local culture is tightly interwoven with all the natural resources found in the area as a result of which they consider their water sources and old trees as sacred deities. According to them 1000 years old trees exist in this area. People consider natural springs as "Nagsamani deity", worship mountain tops as "Jumling" deity and revere forests as "Bennewala" deity. They use plant species like Brahamkamal, Bhojpatra, Ratanjot (Himalayan sandalwood), Samlata (dye to colour deity), bark of Akaru (as soap to bathe deities) in their religious ceremonies and rituals. The EIA report makes no mention of these cultural aspects.

Similarly, in Shongtong Project's EIA there is no mention and studied places of religious sites and cremation place etc on the land acquired for the project. In the EIAs of both Kashang (Guru Padam Sambhav temple) and Sainj (Manu temple) there is no mention of possible impacts on religious sites due to tunneling.

Photo-17, 18 & 19: Archaeological sites under threat of extinction due to reservoir in Sawra Kudduu and impacts on Manu temple in Sainj and Buddhist temple in Rarang not included in EIA

ii. The Superficiality of EMPs and Mitigation Measures

Though the Environment Management Plans have been portrayed to have the 'solutions' to all the environmental and social implications of these projects, the fact remains that apart from suggesting superficial mitigation measures, they overlook the gravity and extent of the problems involved. Some of the issues pointed out during public hearings by local people as well as observed by us in our study of the EMPs include:

- Lack of comprehensive planning and failure to draw interlinkages between biotic and abiotic components adopting a piecemeal approach to mitigate the impacts of projects.

- Impacts on water sources (spring and seepages) and its catchement area not studied adequately and no measures suggested to improve the condition of catchment area in

EMP.

- Carrying out plantation in double the area of forest land diverted for the project seems to be superficial arrangement. It should be done on the basis of previous survival rate of plantation carried out by the state Forest department which is also the agency responsible to carry out plantation. For instance, under "Desert Development Project" in Pooh and Kaza subdivision crores of rupees were spent without much result. Chilgoza which is a rare tree specie to be affected due to both integrated Kashang and Shongtong project, has had little success in artificial regeneration. And this has not been studied while putting this in the EMP as a mitigation measure.

- No consultation with local community in EMP drawing up has been done where as under the Forest Rights Act 2006 local community's involvement and rights in management, conservation and usage over forest resources has been recognised. Without consent of Gram Sabha no work on forest land can be proposed in EMPs or be carried out even by the Sate forest department.

- Poor management of dumping sites: According to MoEF guidelines and despite repeated assurances from HPPCL management during public hearings, that muck dumping sites should be selected above high flood zone level. As evident from photograph, in case of Integrated Kashang HEP, this principle has been flouted while selecting dumping site at power house. Similar is the case with Sawra Kuddu.

Photo-20: Construction work at power house site of Kashang stage-1- muck dumping sites are clearly not above HFL of Sutluj

iii. Compliance to environmental and forest clearance conditions

The fact that the mitigation measures and environment management plans itself are contentious for their ability to actually mitigate scale, depth and the extent of impacts caused as a result of these projects, conditions for compliance to these measures hardly act as deterrent or corrective mechanisms. The superficiality of the mitigation measures thus extends to the compliance conditions laid out by the Ministry of Environment and Forests in the grant of Forest and Environment Clearances. For instance, the stress on the Catchment Area Treatment Plans and their implementation does not make much sense, when the CAT plans are made without local participation, their implementation to be done by the Forest Department with the project proponents only accountable to provide the funds for the same. In the Sawra Kuddu project for instance, till 2008 Rs. 2,39,45,000 had been allotted from the CAT funds for zero and 1st year out of which more than Rs. 17 lakh have been receieved in

the form of purchase of vehicles and equipment[xx].

Dumping of muck and debris from the tunnel and other construction along riversides, in agricultural fields and other lands is a common problem in most hydel projects. The same has been found, for instance, in the Sawra Kuddu project as well. A Show cause notice in the matter dated 8th July 2009 was issued to the project proponents stating that "no protection measures had been provided at some dumping sites".

Muck dumping related conditions laid down in the Environment Clearance letters are almost always flouted. But the real problem is with the lack of monitoring of Environment and Forest Clearance conditions. For instance the Pollution Control Board which is responsible for compliance monitoring of the Environment Clearance conditions is too short of staff to carry out regular monitoring.

Photo-21& 22: Muck Dumping at Sawra Kuddu project site- violation of clearance conditions

As per the EIA notification of September 2006, projects are supposed to submit six monthly compliance reports and MoEF is supposed to put them up on their website. But a look at MoEF website (www.moef.nic.in) shows that for none of the hydro projects complaince reports for the northern region are there on the website.

Certain important conditions that should have been part of the environment and forest clearances are not even included in the clearance letters and as a result the importance of several important norms and legislations is belittled. Here are some examples of the missing compliance conditions as well as irregularities and violations found:

- HPPCL awarded the construction work to HCC for Kashang stage I, II and IIIrd and started construction work of power house with installed capacity of 195 MW out of which 130 MW to be generated in stage-II and III. For both of these stages HPPCL have not received the forest clearance for diversion of forest land. This is a violation of the Forest Conservation Act 1980. While there was a cumulative assessment for the EC of the Integrated Kashand project the forest clearance is being sought and granted in parts and no conditions have been laid out to not start construction before all the clearances are received
- NOC of the Gram Sabha is not a condition for clearance.

- Compliance to provisions of the Forest Rights Act 2006 or PESA are not part of the Forest Clearance. For instance Pangi Gram sabha and Lippa Gramsabha have passed resolutions against diversion of Kerang stream for Stage II and III of the project but these hold novalue
- In case of Kashang- I all the construction activity in stage-I has been carried without taking necessary permissions and NOCs from Pangi gramsabha under HP Transfer of land and regulation act 1968, HP Panchyatiraj Adhiniyam 1994 and PESA Act 1996 and Forest Right Act 2006.
- Incidences of dumping on people's private land without acquisition has been reported in Kashang I. Excavated material from road construction to pressure shaft has been thrown down hill slopes which has destroyed water sources, grazing lands and paths.
- Vague conditions on 'fulfilment of commitments made during public hearings': For all the clearances if we look at the minutes of the Public Hearings and the responses by HPPCL it becomes clear that virtually no commitments have been made – On issue of tunnelling and their impacts for instance they have said that damages will be assessed at the time and compensation will be paid as per the situation. In case of the Kashang 1 project when such a situation arose the project authorities hired consultants (NIRM) to prove that the landslides in the Ragera area were not due to blasting activities of the project, thus washing their hands off.

iv. Problems of Compensation and R&R

While, compared to reservoir projects in relatively plain regions, the socio-economic impacts of displacement in run of the river projects in the mountain side are said to be minimal. This may be partially true especially if one looks at the figures of physically displaced communities (owing to the lower density of population in the mountains) vis a vis the size of the projects. But then going by this understanding or belief the task of compensation, rehabilitation and resettlement of affected people should invariably become simpler and easy to plan and achieve. The Resettlement Planning documents as well as the EIA reports of the four projects being studied reveal that even the project proponents believe the same. It is then surprising that the three projects Sawra Kuddu, Kashang and Sainj, where the land acquisition process has been initiated have been mired in several problems related to the R&R. Our field investigations of these projects and experience with displacement in other development projects directs us to conclude that the onus of these problems can be squarely placed on

- the nature of the projects and a complete lack of a comprehensive understanding of the nature of impacts on local people in framing of the policy and its principles
- and the biased and callous attitude of the project proponents and government authorities

The policy framework adopted by HPPCL for dealing with displacement in these projects, the Resettlement Documents say, is basically a combination of: The Land Acquisition Act, 1894 (LAA, amended in 1984), The National Rehabilitation and Resettlement Policy, 2007 (NRRP); and ADB's Policy on Involuntary Resettlement, 1995. Based on this combination HPPCL drew out a set of principles for its Resettlement Plans:

i. land acquisition, and other involuntary resettlement impacts will be avoided or minimized exploring all viable alternative sub-project designs;
ii. where unavoidable, time-bound resettlement plans (RPs) will be prepared and APs will be assisted in improving or at least regaining their pre-program standard of living;

iii. consultation with APs on compensation, disclosure of resettlement information to APs, and participation of APs in planning and implementing sub-projects will be ensured;
iv. vulnerable groups will be provided special assistance and payment of compensation to APs including non- titled persons (e.g., informal dwellers/squatters, and encroachers) for acquired assets at replacement rates;
v. payment of compensation and resettlement assistance prior to the contractor taking physical acquisition of the land and prior to the commencement of any construction activities
vi. provision of income restoration and rehabilitation; and
vii. Establishment of appropriate grievance redress mechanisms.

While the logic of arriving at these principles is based on terming the National Rehabilitation and Resettlement Policy 2007 as sound and in compliance with the ADB Policy on resettlement it must be noted that in all four project areas the land was acquired using the colonial Land Acquisition Act 1894. This is perhaps the crux of the problem, for though the principles outlined in the NRRP, 2007, which itself has met with a lot of civil society criticism, seem progressive compared to the LAA, the former has no legal standing as it is a policy. When the land for the projects is acquired via the LAA, it inadvertently implies that the provisions of this act would be over-riding in the court of law if the acquisition stands challenged by the land owners. Some of the most problematic elements of the LAA which invariably seem to have found their way into the manner in which the Resettlement Plans for these ADB projects have been implemented include:

- No compulsory NOC from Gram Sabhas or informed consent from affected communities
- No legally binding provisions for land for land
- No legally binding provisions for R&R for landless or persons affected by loss of common property losses
- Inadequate grievance redressal mechanisms
- Compulsory Acquisition of land using the *'urgency clause'*

The last point is perhaps the most draconian provision of the Land Acquisition Act 1894. Under section 17(4) of the Act, the right of land losers to file objections against acquisition of land under Section 5 of the same Act is revoked. This is also referred to as the 'urgency clause' and it is important to note that the Supreme Court of India and recently the High Court of Allahabad has directed that the use of 17/4 should be avoided in all cases. Despite this HPPCL has used this clause in many of its projects. While in a project like Renuka Dam (being built in Sirmaur District) it justifies the use of the clause in the name of 'national interest' considering that it is a 'drinking water' dam, it is a shocking revelation that the same clause has been used in all four of the ADB funded projects discussed here.[xxi] It is also important to mention here that this information about the use of the 'urgency clause' to curb the people's right to object, did not come out during our field interviews, which indicates that people are not aware of the use of this clause or its implications.

Further, the fact that the acquisition process in both Kashang and Sawra Kuddu has been challenged legally and the compensation awards under the LAA have been received by the land losers 'under protest' indicates that HPPCL's commitment to consultation with communities, provision of proper grievance redressal or ensuring pre-acquisition standards of livelihoods is mere lip service. The case study of Sainj HEP presented here clearly reveals

some of the problematic components of HPPCL's resettlement plans.

v. The Case Study of R&R in Sainj HEP

The total land requirement for the Sainj HEP is about 56.73 hectare of land out of which 8.77 hectare is private land; 42.94 ha. is forest land & 6.053 hectare is for under ground components. Around 17 villages from 5 panchyats will be affected by this project. Almost all the basic 'principles' stated in the Resettlement Plan for Sainj have been flouted if we look at the implementation.

- ***Resettlement impacts will be avoided or minimized exploring all viable alternatives:*** Most of the private land HPPCL has acquired is for dumping purposes on the right bank of Sainj River. These are flat lands inhabited and cultivated by locals. An activity like dumping could have been easily shifted to some other location to save these farms, a scarce resource in mountains. However, local sources point out that HPPCL has not done any survey to find out other viable places for dumping. Moreover, while there is a provision of compensating for and returning back of the forest land earmarked for dumping and temporary construction of labour colony, to the forest department there is no similar policy to return private land which are marked for dumping to their original owners once the construction is over.

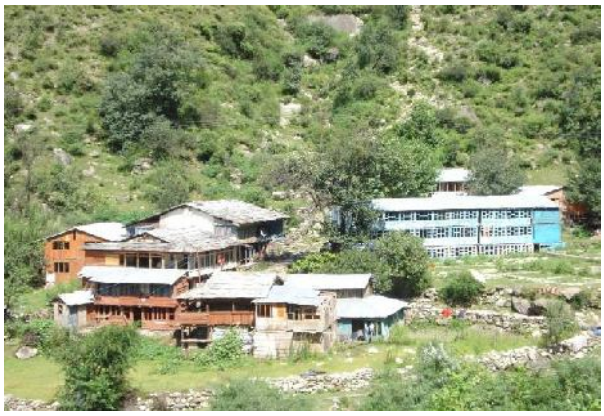


Photo-23: Flat lands and houses to be acquired for dumping purposes

- ***Payment for acquired assets at replacement rates:*** The affected population has been agitating and had even stopped the project work for more than a month in 2010 due to irregularities in fixing the compensation for around 250 houses to be acquired for the project. All these houses have been constructed before the notification of section-4 of the Land Acquisition Act, 1864. The compensation rates have been rejected by the majority of local people on the grounds that while fixing compensation rate no transparency has been maintained and there is a huge difference in rates for similar kind of structures in the project affected area itself. Clearly, HPPCL's commitment to pay replacement values stands challenged. It is also a indication the community was not involved in formulating the R &R plan.

Photo-24: Shesh Ram from Kartah village- Refused to accept compensation amount from HPPCL

- ***Consultation with APs on compensation, disclosure of resettlement information to*** *APs:* HPPCL has not maintained transparency while distribution of compensation to land owners. According to Shesh Ram from Bihali/ Smara Nala, "HPPCL paid around Rs.

5.5lakhs of compensation per bigha of land but did not provide the break-up of the amount paid for land and for trees standing on that land."

- ***APs will be assisted in improving or at least regaining their pre-program standard of living:*** For such a principle to come into play in the context of the affected people, it would be essential that they are rehabilitated with land for land in order to restore their sustainable livelihood pattern and economy. Of the 250 families losing their homestead lands and 135 families losing agricultural lands, not a single project affected family has been compensated with land for land or provided resettlement or relocation. This is clearly against principle of ADB's R&R policy to provide land for land.

- ***Vulnerable groups will be provided special assistance and Payment of compensation to APs including non-titled persons:*** According to the socio-economic survey in the EIA report (section 6.4.2) the percentage of Scheduled Caste households, which is one of the most deprived sections of society, is 43.32% in project affected villages; where as this figure is drastically reduced to 3.4 % when considering the total project affected families (who are losing land and houses) (section 6.5.1 (B)). This can be attributed to the fact that the SC community, while residing in the area, are landless and earn their livelihood mostly as daily agricultural labourers apart from depending on the forest land being diverted. While this community will suffer much more as a result of the project, only a handful of Scheduled caste families will be eligible for compensation. Almost 90% of compensation amount will go to 56.66% upper caste population and 3.5% of total compensation amount will go to a handful from the 43.32% population of scheduled caste from project affected villages. In the Rehabilitation and Resettlement Plan (Table 8.1 page 56), more than Rs. 3000000 (30 lakhs) has been allotted to be paid as compensation for families with landholdings where as only Rs. 32000.00 for agricultural labourers who pick, pack and carry these apples to market. Infact, what is alarming is that the RP tries to make light of the condition of the SC community by saying that they are in a relatively better off condition due to the reservation policy of the Central government.

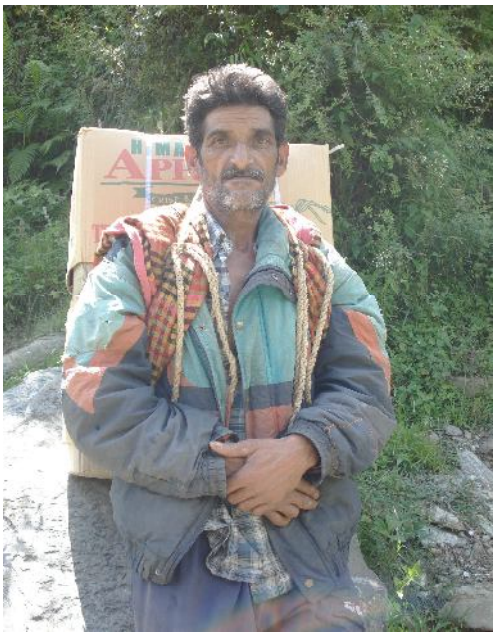


Photo-25: Carriage of apple to Sainj market – An important livelihood for agricultural labourers finds no mention in R&R plan

vi. Other Issues of Concern in the Compensation and Resettlement Process

- ***Differential policies based on local protest rather than Public Consultation***

It is important to note that in all four projects the private land acquired have similar kinds of land use – horticulture is the backbone of the economy with apple cultivation as the mainstay. But the compensation rates clearly vary from project to project. For instance the rates paid for agricultural land in Sainj and Sawra Kuddu projects are lower than that in Kashang. While HPPCL claim that this is so because of the Scheduled Tribe Status of the local community, the fact remains that significant local agitation and protests contributed to the revision of rates in Kashang. For instance, in Pangi village after the court case (and settlement) and one month

of consistent protest HPPCL agreed to pay a compensation of Rs. 1,04,000.00 per biswa (Rs. 21,00,000 per bigha) for private land acquired for the project, for which it had earlier paid Rs. 18,000.00 per biswa. The fact that HPPCL after the local protest agreed to pay 6 times the earlier compensation rates goes to show that there is no specific criteria for determining compensation and that HPPCL has taken an adhoc approach for the same. This also indicates that to get the compensation they deserve for their land project affected communities have to spend resources, time and energy and even face police action.

- ***No Compensation for Common Property Resource losses:***

In all four projects the major area which are being diverted for the project are forest areas. Again while this fact is used to in turn claim that the impact on private property and hence on local people are minimal, the fact remains that in mountain communities it is the forest areas which sustain any for of agriculture. And though the number of people actually losing private land maybe small, the number impacted by loss of forests is often larger and it is these communities which stand invisibilised. The ADB Resettlement policy provides for compensation for loss of common property resource rights, however, except for the case of Kashang, in the other project areas community usage forest rights recorded in revenue records like Wazib-ul-arz and now recognised under the Forest Rights Act 2006 have not be compensated for the forest land diverted for the project. Yet again the residents of Pangi after they stopped the project work for one month in May 2010 were assured of a sum of RS. 75,000.00 against loss of customary rights and access over the forest diverted for project. But here to the callous attitude of the project authorities is reflected in the fact that the locals were asked to give a written undertaking that after getting this compensation amount, they would not protest against the project for any of their demands. Again it was only after people complained to District Collector that this condition was withdrawn. Similarly, no compensation has been given for impacts due to tunnelling – like disappearance of water springs or cracks in houses and fields.

Photo-26: Forest to be diverted for the project but no compensation to dependent local population

- ***Non Existent Grievance Redressal Mechanism***

From local sources and project documents it seems that HPPCL has not bothered to put in place a 'grievance committee'. It has instead given the primary responsibility of redressal to the Project Implementation Unit, which obviously has no local persons. In case of further grievances it places the responsibility on the Local Area Development Authority. Formed through a notification no. MPP-F-(10)15/2008 dated 16th September, 2009 issued by the state government to administer the funds in accordance with the provisions of Hydro Power Policy 2006, a provision of the 1.5% of the cost of the project above 5 MW and !% for the project upto 5 MW is required to be made for Local Area Development Activities by the Developers, which is actually a district level committee responsible for management of LADA funds. Not only are most members of the LADA committee inaccessible since they are located at the

District level but also the committee has been reduced to a politically inclined entity since the members are selected along party lines.

- ***Gender Concerns not incorporated***

Since the Social impact assessment components do not make any mention of the impacts of the acqusition of land or diversion of forests on women, it is perhaps expecting too much that the Resettlement Plans take gender concerns into consideration. Clearly cash compensation is paid to the male members of the families, who in a patriacrchal set up do not share ownership of property with their female counterparts and nor do they share the benefits derived from sale of this property. Besides, women who are the primary care givers in the household by losing their access to resources are further burdened to arrange for alternative means to support their family lives and livelihoods.

Photo-27: Mahila mandal representative in Sawra Kuddu area

- ***Empty Promises of Employment as a measure of rehabilitation***

In the Sawra Kuddu Project area the company has 512 employees of which, only 94 are locals from the affected area. About 173 are other Himachalis and the rest from outside. Further, of the 138 tenders for contractual jobs none have been allotted to the affected families, local sources claim. It must be said here that the other common experience has been that the project proponents allot contracts and employment based on pull/influence rather than doing so fairly giving priority to affected families.

vii. Governance and Public Participation/Involvement and Local Protests

The dimension of public participation and consultation should ideally cut across social and environmental issues, and also across various phases of the project, starting from planning to implementation and operation. Unfortunately, if there is any part of the 'safeguard' policy that is seen as most farcical by the local people and is most flouted in action is the conduct of fair and honest public consultation and involvement. Once again the fact that people have had to resort to approaching the judiciary, stalling work and taking to the streets to demand information as well as rightful compensation or to highlight the impacts on their natural resources is perhaps the most critical indicator of the level of public consultations that may have taken place.

- ***Availability of Information and consultation prior to the Environment Clearance stage and Participation in Public Hearings***

Environment Clearance Public Hearings, conducted under the EIA notification (1996 amended in 2006) are perhaps the only legally recognised mechanisms for public participation in a project's decision making process and yet they are known to be rarely held fairly. It is common to find that local populations either have little or no information about the project before the hearing, that a majority may not even know about the hearing and even if they do, its criticality in the environmental decision making process is virtually played

down by the project proponents and the local administration. Most of the times the project proponents treat the public consultation as a formality, where the local people are expected to seek clarifications about the project, that is if they have managed to get copies of the EIA reports in the local language and understand the technical and often incomprehensible content.

In the case of these four projects, the public hearing process has been characterised by similar issues. For instance, local people from the Kashang project affected area informed that they did not have a copy of the full EIA in the local language before the Public Hearings were conducted at two places first on 28-5-2009 in Lippa village and second on 29-5-2009 in Gram panchayat complex Pangi. (The Executive Summaries which are translated in local language rarely provide a full and complete picture of the project's adverse implications). The hearings saw poor attendance and most people opposed the project on grounds of adverse impacts on their water sources, land and habitations. Since villages like Rarang, Jangi, Khadra, which are on lower elevation from where tunnel is passing were not included in the affected villages many of the residents from here could not participate. Many people from Asrang and Tokhtu village which are going to suffer the most from project activities were not even aware of any such public hearings being conducted.

Further, the content of the EIA when examined by some of the local people was criticised for being inaccurate. “The assessment of the local response in the EIA is totally misleading. Page 9 of the executive Summary states that 'there are several reasons why people are for and against the project, but then does not provide any description of the same. Instead the EIA puts forth some blanket figures for the number of people “supporting” the project. “These are totally unreliable percentages because the fact is that there has been staunch opposition, especially for the stages 2, 3 and 4 of the project because of the extent of impacts involved” states D.K Negi, a resident of the area.

Similarly in the Sawra Kuddu Project the first public hearing conducted in 2006 came in for a lot of criticism because of non availability of adequate information about the project impacts and the poor quality of the EIA and EMP. Despite these objections when the second public consultation took place in 2008, it was ridden with the same set of issues. Yet the 'redressal' of these is restricted to the process of project proponents providing written responses after the public hearing, which cannot really be termed as a 'participatory or consultative' one.

It is strange that ADB safeguards and the project documents mention consultation at every stage including in the preparation of the EIA and EMP. The objections raised by the local populace in each of the Public Hearings make it clear that no such process took place. Infact in response to an objection raised by the Ranvi Vikas Sabha Shimla in the second public consultation held by ADB that 'Area-wise consensus and consent was not taken' for the project the HPPCL responds “As clarified in the proceedings of second public consultation, area-wise consensus and consent is not mandatory if public hearing is held'. Despite the doubts and questions raised by local people instead of the working on building trust or going through a consultative process the project proponents' responses are mostly in defense of their actions, almost mocking fun at the concerns of the local people.

Again in case of the Sawra Kuddu Project in response to an objection that states “Public opinion not generated to start the project”, the HPPCL says “In the first public hearing of the project all the participants have spoken in favour of construction of the project. Hence, enough public support has been there for the project; even now people generally want early commissioning of the project. However, it is clarified that it is a project construction effort and not sort of an election campaign”. This kind of sarcasm is common place in HPPCL's

responses and is indicative of their callous attitude. There are two problems with this response – it assumes that 'public support' generated the first time around was genuine, it assumes that such support was based on full knowledge of the project impacts and it also presumes that local people do not have the right to 'change their mind' and lastly it plays down the importance of generating 'public opinion'. This attitude of HPPCL is surprising considering that all the project documents submitted to ADB pay lip service to 'public participation'.

For two of the projects, namely Kashang and Sawra Kuddu, where construction work was initiated after ADB funding, two additional Public consultations took place in 2008. Apart from these two, no public consultations took place under the ADB guidelines in 2009. We attempted to seek information about the objections filed directly with ADB by project affected people or civil society groups from the ADB project officer in-charge, however we received the response

- ***No prior informed consent of the Gram Sabha***

Given below is HPPCL's response to the lack of consent or NOC from the Gram Panchayat for the Sawra Kuddu Project, "Project has held formal and informal consultations from time to time and all people were afforded opportunity to air their views. The first environment public hearing held on 15.06.2006 was well attended. Thus, the Project did make sincere efforts to ascertain views of all concerned. In such a scenario, the NOC (No Objection Certificate) remains a mere formality. Moreover, in cases where Environment Public Hearing is mandatory, even this formality (of seeking NOC from Panchayat) has been relaxed under the relevant environmental rules as Panchayats are political bodies and framers of rules were well aware that there would be cases where some Panchayats may be ruled by political parties sitting in opposition at the State Assembly and they may oppose all projects (by withholding NOC) initiated by the ruling party at the state level".

Interestingly, in Kinnaur District, which is a Schedule V area, where this NOC is required to be taken from the Gram Sabha (village general body), the project proponents are yet to undertake this process in case of the Integrated Kashang Project. This is a clear violation PESA (the Panchayat Extension to Scehduled Areas) Act in 5th scheduled areas. Further, for diversion of forest land the project proponents also need to comply with the provisions of the Forest Right Act, 2006 – which required that the community and individual rights on forests be recognised. As per the MoEF circular of July 2009, consent of the Gram Sabha is mandatory and so is compliance with the provisions of the FRA 2006 for any diversion of forests to take place. So far no consent has been taken for the area diverted though construction activity of Kashang stage-I has already been initiated. It is important to note that this circular is valid not just for Scheduled areas but also in areas where there is any form diversion of Forest Land where any community is dependent on these lands. In case of the Sawra Kuddu project where 53 hectares of forest land was diverted with dependence of more than 600 families – the provisions of the Forest Rights Act 2006 have not been complied with. Infact the mention of FRA 2006 is missing in most of HPPCL's documents.

- ***No Participation or representation of affected communities in Grievance Committees***

Considering HPPCL's position on Panchayats and their 'political' nature, it is rather surprising that they seem to consider the presence of Gram Pradhans in the LADA committee as adequate representation of affected communities (Refer to their response that the LADA committee will function as the Grievance Redressal Committee). As mentioned before no separate Grevience Redressal Committees have been formed by the project proponents who

have consistently harped on the LADA committees carrying out the function of GRCs. Affected people have in their response to this repeatedly pointed out that the LADA committee functions without taking into account concerns of affected persons and that the Gram Pradhans who are mostly members of the ruling party cannot be expected to represent the concerns of the entire affected population.

- ***People's Protests***

Photo-28 : People protest against Kashang stage-1

(Source: Kashang hydel project Labourers on strike, HPPCL seeks govt help - Express India.htm)

So far three of the four project sites have witnessed public protests and agitations. The agitations in Kashang Integrated Project area are also a part of the larger movement building up in Kinnaur against Hydropower projects in general (Annexure – List of demands of Him Lok Jagriti Manch District level org – Rekong Peo Declaration). But the local organisations like Kashang Prabhavit Sabha, also has its own set of specific issues and demands which it has brought forth through regular protest actions that have taken place since the last year, and since the construction activity was initiated. Apart from challenging the Environment Clearance in the NEAA, community representatives have also filed cases on the issue of compensation and rehabilitation promises not being fulfilled. The latter has been done by the people of Pangi, while the Environment Clearance has been challenged by residents of Rarang and Lippa village

Some Main demands of the Kashang Prabhavit Sabha:

i. Payments according to the negotiated compensation rates,
ii. Proper listing of Project Affected families
iii. Land for land as a Rehabilitation measure
iv. To provide employment to one family member in the project
v. To open a hospital in Pangi village (special focus on treating ailments due to dust and pollution arsing out of project activities)
vi. To open up a information centre in village Pangi to record people's grievances and to provide information
vii. To compensate those families who are facing crop losses as a result of dumping adjacent to their lands.
viii. To prevent incidences of landslides and cracks due to indiscriminate use of explosives. To urgently compensate people affected by these.
ix. To open up a police station in Pangi village
x. To take necessary steps to check the negative of project activities on flora, fauna, air, water, human beings and environment.
xi. To scrap stage 2, 3 and 4 of the Kashang Integrated Project

In Sainj people stopped pre construction project activities for one month in 2010. The main demand was to involve affected communities while fixing compensation amount for acquisition of structures to ensure transparency. Similarly Sawra Kuddu Project saw protest actions and agitations on two three separate occasions. A public meeting held in April 2010 put forth the main issues of concern. Currently, the people of Thana Panchayat are opposing the passing of the tunnel from under their village. Apart from this the key demand is for employment and award of contracts to affected families as well as full compensation to those affected by tunnelling.

VIII. Emerging Issues

The adverse socio-economic and environmental impacts identified in case of the four projects studied here and the failure of the safeguard measures in addressing these lead us to one very important but forgone conclusion - that Hydro-energy is far from 'clean, green, cheap or renewable'. While there are some impacts that cannot be mitigated, many have been overlooked and those which have been identified are far from being dealt with.

Compliance to existing legislations is poor but even poorer and inadequate are the conditions that are to be complied with. This brings us to the other important conclusion – that there is little difference between projects funded by ADB and those where a comprehensive safeguard framework like ADB's does not exist. The issues are perhaps similar and as grave and just and genuine public consultation or prior informed consent are fundamental principles that are absent across the board.

The executing agency, in this case HPPCL, has a high handed and casual attitude, and instead of following basic norms of transparency, participation, social and environmental accountability, has adopted an adhoc approach to dealing with local impacts. Its responses to the issues raised in the public hearing are one indicator. But perhaps the most stark indicators of its reliance on state power against people's interest is the use of forced acquisition through section 17/4 of the Land Acquisition Act 1894. A complete non recognition of the impacts on common property resources and the non compliance to the Forest Rights Act 2006 is another severe blow to HPPCL's and ADB's claims on its commitment to social justice.

The inadequacy of the state government's policy regime, in terms of its Hydropower Policy,

has been overlooked by the ADB. Instruments like CAT and LADA have not been studied or critically analysed for their effectivity or ineffectivity as mitigation mechanisms before being accepted, adopted and hailed as the be all and end all solutions in the Environment Management and Rehabilitation Plans. No proper mechanisms have been put in place for compliance or grievance redressal and that is obvious from the fact that local communities have turned to the judiciary or taken resort to public actions or protest to make their voice heard. This to a large extent has determined the compensation amounts, as HPPCL has found increasing cash compensation as the only means to quieten protest to allow project work to continue.

Most of the issues mentioned here do not find space in the ADB compliance and mid term evaluation reports which attempt to maintain the image that progress on the projects has been smooth.

ADB would have steered clear of projects in ecologically sensitive areas and sites that are important from the conservation point of view, like Kinnaur and Sainj, if its commitment towards a cleaner environment and climate justice was real. The current scheme of things, in terms of ADB's support to Hydropower in Himachal, is reflective of its economic interest and giving it any other colour amounts to a serious lack of ethics.

And while our focus in this study has been on the ADB funded projects, our concern is centred around the State's lack of response to the very serious concerns that have been raised by its own people. That the state government is relying on loans from an international bank as a means of generating 'employment' and revenue and in the process selling out its precious natural resources is highly questionable. We believe that it is high time that the state government review's its position and policy on Hydropower development. The steps that need to be immediately taken in this direction, some of them in line with the Shukla Committee recommendations include:

1) A complete moratorium on all hydro-projects that are under planning and under construction until an independent review is carried out on the impacts as well performance of existing hydro-projects in the state

2) Any such review should be done by a credible multi disciplinary independent committee which apart from experts from the social, environmental and technical fields should include activists, representatives of NGOs and representatives of local communities

3) All projects in eco-sensitive zones and alpine areas like Kinnaur, Ladakh, Chamba, Kullu should be immediately scrapped

4) All projects in river valleys where a large number of projects are already under construction or operation should be immediately reviewed

5) All sites where local communities are resisting the setting up of projects should be reviewed with free and fair public consultations.

6) Free prior informed consent from local affected people and gram sabhas must be mandatory in any state policy for the commissioning of any hydro project

7) In the existing and operational projects, committees for grevience redressal and implementation of mitigation should have full participations and representation of local affected people.

8) Compliance to the Forest Rights Act 2006, PESA 1996, and HP Land Transfer rules needs to be ensured

9) In projects under construction, regular and strict compliance monitoring needs to be carried out of the forest and environment clearance conditions and these reports should be shared with the local people

Specifically related to the ADB funded projects we would make the following recommendations:

5) That the Sainj, Shongtong Karchham, Kashang II, III and IV HEPs should be immediately put on hold. While the Kashang project's II and III stage are clearly being locally opposed, the Shongtong Karchham project on the Sutlej will only add to the severe ecological destruction and disappearance of the Sutlej river that is on-going. The same is the case of the very fragile Sainj valley that needs a serious carrying capacity review.

6) As far as the Sawra Kuddu HEP is concerned, since a large part of the construction is already under way, there needs to be a series of public consultations and grievance Redressal Committees with genuine local representation needs to be set up to take on board local concerns which currently include

7) Compensation for the loss of common property resources should be immediately paid.

8) Tunnel affected villages and those affected as a result of construction activity, pollution, muck disposal should all be considered as affected and compensated

9) LADA committee is not a grievance redressal committee – separate committees to be set up for Grievance Redressal

10) Employment opportunities to be provided to affected family members on priority

11) Compensation should be disbursed in a timely manner and the rates be revised as per local demands and keeping in mind their concerns

12) Section 17/4 of the Land Acquisition Act being used for acquisition should be immediately revoked

13) Since the integrated Kashang project's environment clearance stands challenged all the work should be stopped till the matter is sub-judice. Similarly, the construction work should not be allowed till the Integrated Project gets a forest clearance, since the current one is only for stage-I

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ix A mechanism under the UNFCC where by emission-reduction projects in developing countries earn certified emission reduction (CER) credits, each equivalent to one tonne of CO2. These CERs can be traded and sold, and used by industrialized countries to a meet a part of their emission reduction targets under the Kyoto Protocol. Such projects might include growing crops to producing biofuels that can be used instead of oil; burning methane seeping out of a coal mine or waste dump so that it doesn't escape to the atmosphere; or building a windpower or hydel power generator. The situation is a win-win for both the the countries involved — as one gets cheaper carbon offsets and the other gets an investor.

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