

**MANAGEMENT RESPONSE TO  
REQUEST FOR INSPECTION PANEL REVIEW OF THE  
INDIA: VISHNUGAD PIPALKOTI HYDRO ELECTRIC PROJECT  
(IBRD LOAN NO. 8078-IN)**

Management has reviewed the Request for Inspection of the India: Vishnugad Pipalkoti Hydro Electric Project (IBRD Loan No. 8078-IN), received by the Inspection Panel on July 23, 2012 and registered on August 3, 2012 (RQ12/04). Management has prepared the following response.

October 24, 2012



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## ABBREVIATIONS AND ACRONYMS

CAT	Catchment Area Treatment
CEA	Central Electricity Authority
CSO	Civil society organization
cumecs	Cubic meters per second
EA	Environmental Assessment
EMP	Environmental Management Plan
EPC	Engineering, Procurement and Construction
GHG	Greenhouse gas
GOI	Government of India
GRC	Grievance Redress Committee
GW	Gigawatt
ha	hectare
IBRD	International Bank for Reconstruction and Development
IIT	Indian Institute of Technology
IITR	Indian Institute of Technology Roorkee
IUCN	International Union for the Conservation of Nature
LA	Land Acquisition
MOEF	Ministry of Environment and Forests
NGO	Nongovernmental Organization
NGRBA	National Ganga River Basin Authority
NGT	National Green Tribunal
OP	Operational Policy
PAD	Project Appraisal Document
PIC	Project Information Center
POE	Panel of Experts
R&R	Resettlement and Rehabilitation
RAP	Resettlement Action Plan
SHG	Self-help Group
SIA	Social Impact Assessment
VPHEP	Vishnugad Pipalkoti Hydro Electric Project
WII	Wildlife Institute of India

**Currency Unit – Indian Rupee (INR)**  
**(as of October 24, 2012)**  
INR 1 = USD 0.019  
USD 1 = INR 52.62



## EXECUTIVE SUMMARY

### The Project

1. ***The Vishnugad Pipalkoti Hydro Electric Project (VPHEP) was approved by the Board of Executive Directors on June 30, 2011 and is currently under implementation.*** No major disbursements and construction activities have started to date. The current closing date is December 31, 2017.

2. ***VPHEP has been designed as a 444 MW run-of-river hydropower generation project on the Alaknanda River in Uttarakhand, India.*** The Bank-funded components of the project are: (i) construction of the Vishnugad Pipalkoti Hydro Electric Project (US\$638 million); and (ii) technical assistance for capacity building and institutional strengthening of the implementing agency THDC (US\$10 million).

3. ***The objectives of the VPHEP*** are to: (i) increase the supply of electricity to India's national grid through the addition of renewable, low-carbon energy; and (ii) strengthen the institutional capacity of THDC with respect to the preparation and implementation of economically, environmentally and socially sustainable hydropower projects.

4. ***The major features of the project infrastructure as designed are:*** (i) a 65-meter-high diversion dam; (ii) a 13.4 km headrace tunnel; (iii) an underground power house; and (iv) a 3 km tailrace tunnel that will return the diverted water to the Alaknanda River. The major project infrastructure will be located on the sparsely populated right bank of the river. VPHEP is expected to reduce greenhouse gas (GHG) emissions by approximately 1.6 million tons carbon dioxide equivalent per year over the plant operation period. This reduction lessens the need to further expand thermal generation in the Northern Grid of India and, in turn, also reduces the growing energy deficit.

5. ***In comparison to other projects of its type and size, VPHEP is a relatively moderate risk project from an environmental and social perspective,*** with a very small footprint. The dam will be placed in a deep gorge with limited access or forest cover. In total, the project involves a relatively low level of resettlement.

### Request for Inspection

6. On August 3, 2012, the Inspection Panel registered a Request for Inspection of the India: Vishnugad Pipalkoti Hydro Electric Project. The Request for Inspection was submitted by residents of Chamoli district in the State of Uttarakhand, who have requested that their identity remain confidential, and by Dr. Bharat Jhunjunwala (the "Requesters").

7. The Requesters claim that the VPHEP supported by the Bank: (i) does not sufficiently consider alleged adverse impacts due to the loss of the free flow; (ii) as a consequence of the special qualities of the Ganga river, does not adequately take into

account the environmental costs for the people living around the project area; (iii) and does not address the issue of potential loss of biodiversity and other impacts associated with dams. Additionally, localized potential impacts due to project activities allegedly affecting *Hatsari Tok* hamlet have been raised.

### Management Response

8. ***Management has carefully reviewed the issues raised by the Requesters and does not agree with the allegation of non-compliance and harm.*** In Management's view, the Bank has followed the guidelines, policies and procedures applicable to the matters raised by the Request. As a result, Management believes that the Requesters have no basis to claim and are also not able to demonstrate that their rights or interests have been or will be, directly and adversely affected by a failure of the Bank to implement its policies and procedures.

9. ***In Management's view the Request for Inspection is based on assumed harmful outcomes of project implementation and a misplaced assertion that no actions are being taken to address relevant issues raised by the Requesters.*** The project-related impacts referred to in the Request have been taken into account in the course of project preparation and are being addressed through the appropriate mitigation measures. This includes the efforts made by THDC to address concerns raised by local residents of Hatsari Tok hamlet arising from alleged potential adverse impacts of the project on the hamlet. Management also notes that there is insufficient evidence to support many of the Requesters' concerns regarding potential adverse impacts. Moreover, Management notes that many of the construction-related grievances raised in the Request cannot be related to the project, since project construction has not yet begun.

10. ***Management considers that the preparation and mitigation measures for the VPHEP have exceeded normal practices in India and are consistent with Bank policies and procedures and international best practices.*** Management understands the concerns of the Requesters regarding potential environmental, health and safety impacts that might arise from the VPHEP. Management is committed to ensuring that the project complies with relevant environmental, health and safety regulations of India, and the Bank's operational policies and procedures.

11. ***In Management's view the Request for Inspection is largely about the Requesters' views on what they consider to be the real impact and value of large hydropower plant development in India.*** While this is part of the important and legitimate national debate in India, it goes well beyond the underlying project and its compliance with Bank policies and procedures. Management wishes to highlight in this context the ongoing legislative and Government policy reviews of hydropower in India.

12. ***Management notes that two parallel reviews that appear to address many of the same issues raised by the Requesters are currently underway in India, namely a legislative review by the Rajya Sabha and a Government policy review by the Chaturvedi Committee appointed by the Prime Minister. In addition, the Requesters***

*have the option to appeal the decision of the National Green Tribunal, which has ruled on some of the complaints raised by the Requesters. Management is concerned that the result of a Panel investigation could inadvertently prejudice one or more parties' positions within these reviews, particularly given the apparent overlap on issues related to alleged harm and on environmental impact assessment.*



## I. INTRODUCTION

1. On August 3, 2012, the Inspection Panel registered a Request for Inspection, IPN Request RQ 12/04 (hereafter referred to as “the Request”), concerning the India: Vishnugad Pipalkoti Hydro Electric Project (IBRD Loan No. 8078-IN) financed by the International Bank for Reconstruction and Development (the Bank).

2. **Structure of the Text.** Following this introduction, section II presents the Request, section III provides information on the project; section IV discusses special considerations and section V contains Management’s response. Annex 1 presents the Requesters’ claims, together with Management’s detailed responses, in table format. Additional annexes include: Annex 2, chronology of interactions between the Bank and Mr. Jhunjhunwala; Annex 3, chronology of interactions between the Bank Team and Hatsari Residents; Annex 4, chronology of interactions between the THDC and Hatsari Residents; Annex 5, photographs of the project site.

## II. THE REQUEST

3. The Request for Inspection was submitted by residents of Chamoli district in the State of Uttarakhand, who have requested that their identity remain confidential, and by Dr. Bharat Jhunjhunwala of Tehri district, also in the State of Uttarakhand (hereafter referred to as the “Requesters”).

4. Attached to the Request are:

- (i) A letter entitled, “Representation to Ms. Isabel Guerrero, Vice President, South Asia Department, World Bank on the violation of Operational Policies in grant of loan to THDC India for Vishnugad-Pipalkoti Hydro Electric Project,” which is signed by one of the Requesters and several other individuals; and
- (ii) Nine annexes to the letter:
  - (1) Impact of Dams on Quality of Waters of River Ganga as Assessed by Pilgrims at Devprayag, Rishikesh and Haridwar: Results from a Field Survey by Bharat Jhunjhunwala;
  - (2) Critique of World Bank’s Project Appraisal Document for Vishnugad Pipalkoti Hydro Electric Project dated June 10, 2011, August 30, 2011 by Bharat Jhunjhunwala;
  - (3) Rejoinder to “Responses to recent emails from Mr. Bharat Jhunjhunwala” dated November 23, 2011;

- (4) Critique of Study of Cumulative Impacts of Hydropower projects on Ganga River by AHEC, IIT, Roorkee and WII, Dehradun, by Bharat Jhunjunwala, August 31, 2011;
- (5) Paper on “Comprehensive assessment of environmental and economic costs of electricity generation is necessary” by Bharat Jhunjunwala;
- (6) Supreme Court judgment on Tehri hydroelectric project;
- (7) Notice by local people cancelling agreement with THDC;
- (8) Press release by Clinton Foundation; and
- (9) Purchase of electricity by Uttarakhand Power Corporation, 2010.

5. No further materials were received by Management from the Panel in support of the Request.

6. The Requesters claim that the hydropower project supported by the Bank: (i) does not sufficiently consider alleged adverse impacts due to the loss of the free flow; (ii) as a consequence of the special qualities of the Ganga river, does not adequately take into account the environmental costs for the people living around the project area; (iii) and does not address the issue of potential loss of biodiversity and other impacts associated with dams. Additionally, localized potential impacts due to project activities allegedly affecting *Hatsari Tok*<sup>1</sup> hamlet have been raised.

7. The Request contains claims that the Panel has indicated may constitute violations by the Bank of various provisions of its policies and procedures, including the following:

OMS 2.20, Project Appraisal

OP/BP 4.01, Environmental Assessment

OP/BP 4.04, Natural Habitats

OP/BP 4.11, Physical Cultural Resources

OP/BP 4.36, Forests

OP/BP 4.37, Safety of Dams

OP/BP 10.04, Economic Evaluation of Investment Operations.

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<sup>1</sup> Alternative spellings: *Harsari* or *Harsari Tok*.

### III. PROJECT BACKGROUND

8. **Project Objectives.** The Government of India (GOI) requested World Bank financing for the Vishnugad Pipalkoti Hydro Electric Project (VPHEP) in July 2006. The objectives of the project are to: (i) increase the supply of electricity to India's national grid through the addition of renewable, low-carbon energy; and (ii) strengthen the institutional capacity of THDC with respect to the preparation and implementation of economically, environmentally and socially sustainable hydropower projects.

9. **VPHEP has been designed as a 444 MW run-of-river hydropower generation project on the Alaknanda River in Uttarakhand, India.** The major features of the project infrastructure as designed are: (i) a 65-meter-high diversion dam to create a small daily pondage in a V-shaped gorge; (ii) a 13.4 km headrace tunnel; (iii) an underground power house; and (iv) a 3 km tailrace tunnel that will return the diverted water to the Alaknanda River. The major project infrastructure will be located on the sparsely populated right bank of the river (which is on the side opposite to National Highway 58) in Chamoli District of Uttarakhand. VPHEP is expected to reduce greenhouse gas (GHG) emissions by approximately 1.6 million tons carbon dioxide equivalent per year over the plant operation period. This reduction lessens the need to further expand thermal generation in the Northern Grid of India and, in turn, also reduces the growing energy deficit.

10. **Project Components.** The Bank-funded components of the project are: (i) construction of the Vishnugad Pipalkoti Hydro Electric Project (US\$638 million); and (ii) technical assistance for capacity building and institutional strengthening of THDC (US\$10 million). The project is being implemented by a public sector company (THDC), majority-owned by the GOI, that was set up in 1988 to develop baseload hydropower potential in Northern India, and which is now expanding its operations by developing primarily run-of-river projects, such as VPHEP, designed to generate 1,636 GWh in a 90 percent dependable year.

11. **In comparison to other projects of its type and size in terms of power generation, VPHEP is a relatively moderate risk project from an environmental and social perspective,** with a very small footprint. The dam will be placed in a deep gorge with limited access or forest cover. In total, the project involves a relatively low level of resettlement (265 families as noted on page 102 of the Project Appraisal Document (PAD); of these, 92% are families who requested relocation from the village Haat to the other side of the river, as detailed in the PAD). No houses or other structures, agricultural land or common infrastructure will be submerged, and therefore no displacement will take place due to submergence. In total, 21 ha will be submerged, 109.93 ha of forest land (including government and van panchayat lands) and 31.64 ha of private land will be required by the project for road access, project and office space, switchyard, as well as for the quarry area, variously affecting 773 families (as noted in Annex 10 of the Project Appraisal Document (PAD)).

12. **Status of Project.** The Vishnugad Pipalkoti Hydro Electric Project (VPHEP) was approved by the Board of Executive Directors on June 30, 2011 and is currently under implementation. The current closing date is December 31, 2017. No major disbursements

and construction activities have taken place, as the contract for the main civil works has not been awarded since the project has yet to receive its second stage forest clearance. The first stage forest clearance was awarded by the Ministry of Environment and Forests (MOEF) in June 2011. In March 2012, the Government of Uttarakhand forwarded its recommendation to the MOEF to grant the second stage forest clearance for VPHEP. Access roads leading to the diversion dam and powerhouse sites have been completed. Payments for land acquisition also have largely been completed. In addition, disbursements to households eligible for assistance arising from the loss of community amenities have largely been completed, as have disbursements for compensation for fuel and fodder. As well, the voluntary resettlement of one village that requested relocation is well underway. Finally, consultants have submitted six quarterly reports on monitoring and evaluation of the operation.

### Development Context

13. ***India's energy deficit of 9 percent<sup>2</sup> and peak deficit of 6<sup>3</sup> percent represent a significant constraint on growth and are increasing in severity.*** Although the current installed capacity of 205 GW<sup>4</sup> represents a 46 percent increase since 2007, power supply is still not able to keep pace with the rise in electricity demand. More than 350 million people still lack access to electricity and 60 percent of Indian firms rely on back-up diesel generation (compared to 20 percent in China). In response, the GOI has set aggressive targets for all sources of energy, but coal-fired generation still represents more than 56 percent of installed capacity.<sup>5</sup> According to the Central Electricity Authority (CEA), in the next five years, 60-64 GW of new coal-fired capacity is expected to be added to the electricity mix, bringing the overall coal-fired generation capacity to 176 GW by 2017. Hence, coal will continue to dominate the energy mix into the foreseeable future, which poses significant risks to the global environment. India has faced growing problems with its supply of coal from domestic sources and is increasingly relying on imported coal to supply installed capacity; consequently, its economy is more vulnerable to international coal price fluctuations.

14. ***The harnessing of India's significant hydropower potential represents one of the opportunities to promote clean energy at scale,*** and, in the government's estimation, is a critical way to address both baseload and peaking electricity demand. India has not been able to make optimal use of its hydropower potential; in fact, growth of hydropower capacity has decelerated. From 44 percent in 1970, the share of hydropower in India's overall electricity generation capacity decreased to less than 19 percent by August 2012. This is suboptimal to meet peak load requirements as well as system and frequency stability needs. Hydropower's share of energy generated (as opposed to installed capacity) is even smaller, at 15.5 percent (2012). This reflects a lower availability of the existing installed hydropower capacity relative to the thermal plants that predominate in India's electricity mix. If India can successfully harness its hydropower potential with

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<sup>2</sup> Central Electricity Authority June 2012.

<sup>3</sup> Ibid.

<sup>4</sup> Ibid.

<sup>5</sup> Ibid.

due regard to social and environmental impacts, the planned hydropower expansion could alter the baseline trajectory for power sector GHG emissions, which currently contributes half of India's emissions. If not, India would most likely be compelled to accelerate the expansion of its coal-based generation capacity.

#### IV. SPECIAL CONSIDERATIONS

##### **Management's Engagement with the Identified Requester and Other Stakeholders**

15. *Management has had the opportunity to listen to and discuss thoroughly all the issues raised by the identified Requester, Mr. Bharat Jhunjunwala.* The Bank has had several interactions with the identified Requester over the last year, including through correspondence and meetings, both at the task team level and at the level of Bank Management. Two of these meetings in Delhi were led by the Country Director for India and one in Washington, DC by the Acting Regional Vice President (a detailed list of interactions is attached in Annex 2).

16. Management is also aware that some of the potential impacts alleged by the Requesters are identical to those raised by some residents of Hatsari Tok, and that both THDC and the Bank team have been making efforts to address these concerns with the residents of Hatsari Tok, as is discussed in more detail later in this response.

17. *Management does not share the Requesters' broad reservations on hydropower.* Management believes that hydropower is a sufficiently mature technology and that it has a good understanding of the evolving science of how to assess impacts and how to mitigate them.

18. *In addition, Management has participated in visits to the project site, has met with many people in the project area, and has been responsive to all correspondence and submitted inquiries, including from residents of Hatsari Tok.* The project developer has also conducted wide-ranging and detailed consultations with project-affected communities from 2007 onwards, as part of its project preparation process. As of March 2012, some 148 formal consultation sessions; five project-wide public meetings; 11 meetings focused on environment issues; and innumerable informal meetings with project-affected persons have been held during project preparation. Regular consultations have continued to date.

##### **National Green Tribunal Case**

19. *In July 2011, one of the Requesters filed a petition with India's National Green Tribunal (NGT), which is legally mandated to hear and determine cases relating to environmental protection and conservation of forests and other natural resources.*<sup>6</sup> The

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<sup>6</sup> The National Green Tribunal was established in 2012 under the National Green Tribunal Act 2010 for the effective and expeditious disposal of cases relating to environmental protection, conservation of forests and other natural resources, including enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property. It is a specialized body equipped with the

petition requested the Tribunal to revoke the first stage forest clearance which had been granted to VPHEP by the MOEF. It claimed that the cumulative impact assessment commissioned by the MOEF for the series of hydropower projects along the Bhagirathi and Alaknanda Rivers was not properly conducted and its recommendations could not, therefore, serve as the basis for the forest clearance.

20. ***The judgment handed down on December 14, 2011 by the Tribunal upheld the first stage forest clearance (and its various conditions) for VPHEP, taking into consideration the nature of the project and its likely benefits and the comparatively minimal loss of forest cover.***<sup>7</sup> The Tribunal commended project preparation and appreciated the Bank's stringent project preparation norms.

21. ***Further, the Tribunal indicated that based on the evidence provided by the project developer, the sustainable development and precautionary principles had been adequately incorporated into the environmental and forest clearances and applied in the mitigation measures implemented by the project.*** In the words of the NGT:

“The appellants have raised grounds pertaining to negative impact of tunneling on water springs and its subsequent impact on forests and agriculture; methane emissions from reservoirs; deterioration in water quality due to less absorption of beneficial chemicals; loss of aesthetic and ‘non-use’ values; value of free-flowing rivers; breeding of mosquitoes in reservoirs and the negative impact on health; deprivation of sand and fish to local people; negative cultural impacts; and negative impact of blasting/tunneling, etc. Whereas the respondents have filed detailed replies countering the allegations and relied on various documents/reports starting from Environment Impact Assessment/Environment Management Plan report, Geological Reports, Appraisal Documents for the World Bank loan, etc. At the face of facts placed, it appears that a majority of the issues have been addressed in one or the other document and accordingly, general and specific conditions have been imposed in the EC & FC [Environmental Clearance and Forest Clearance] granted to the project.”<sup>8</sup>

22. ***The Tribunal went ahead to characterize the main question that arises from the arguments as being whether the project had complied with the sustainable development and precautionary principles.*** In that regard, the Tribunal's conclusion was:

“No substantial evidence has been placed before the Tribunal to come to a different conclusion than what was recorded by the Forest Advisory Committee that though the population status of Cheer pheasant, which is very poor has been taken note of, no damage is caused to the wildlife available in the area.

“The project is a national project undertaken by the Government of India and all the precautionary principles were incorporated in the Environmental Clearance

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necessary expertise to handle environmental disputes involving multi-disciplinary issues. <http://envfor.nic.in/modules/recent-initiatives/NGT/>

<sup>7</sup> National Green Tribunal Decision December 14, 2012, p.34.

<sup>8</sup> Id. pages 15-16.

and Forest Clearance to meet the mitigative measures in handling the project; may be in the form of stipulations to implement all the measures as suggested by the respective institutions/authorities. It is also noted that considering the proximity to the Kedarnath Wildlife Sanctuary, it has been mandated in the Forest Clearance that the proposal requires clearance from National Board of Wildlife. In view of the said facts, we are of the considered opinion that all precautionary measures and principles of sustainable development have been followed in these matters.”

**23. *Finally, the Tribunal recognized good practice and innovations championed in the course of project preparation of VPHEP, and noted the following:***

“In addition to these studies [the supplemental studies identified by the Bank], in the course of time, the project pioneered numerous other good practices in order to minimize the disruption to people living in the project area and to the natural environment. These included:

- Engagement of a reputed nongovernmental organization (NGO), Shri Bhubaneshwari Mahila Ashram, to act as THDC’s interface with Project-affected communities, including in the local language;
- Mandatory use of a Tunnel Boring Machine instead of the traditional drill-and-blast method of driving tunnels to minimize the disruption on people in the project area (blasting will be reduced to the absolute minimum), which also brings environmental benefits;
- Translation of the entire Environmental Impact Assessment into Hindi;
- Insurance for all houses within a defined corridor of impact along the Tunnel to ensure that in the unlikely event of any damage accruing to these structures as a result of project excavation, the local people would not have to bear the damage;
- Compensation for loss of fuel and fodder at the rate of 100 days of minimum agriculture wages to each entitled house hold for a period of 5 years;
- Extending benefits to the project affected people beyond the requirement of the National Policy on Resettlement and Rehabilitation (2007). Besides, the project has also taken action for upliftment of the area which includes: (a) imparting training to the local youth for gainful employment; (b) Promoting education by providing scholarships; (c) Providing employment contracts to local people by way of providing small contracts, engaging their vehicles, etc.; (d) Making available free medical services to project-affected families from THDC hospital; (e) Adoption of Industrial Training Institute at Gopeshwar for imparting skills to local youth; and (f) Development of infrastructures in the project affected villages.

Based on the detailed studies, the project scheme was prepared in an optimized manner giving due attention to all aspects, be it social, environmental or technical.”

### **Petition before the Rajya Sabha (the Upper House of Parliament)**

24. *The identified Requester, Mr. Jhunjhunwala and others have submitted a petition to the Rajya Sabha (Upper House of Parliament) requesting “to re-examine the policy of making tunnel-based hydropower projects”* which raises many of the issues of a broad nature (not specific to VPHEP) that are put forward in the Request for Inspection. A sub-committee of the Rajya Sabha is meeting stakeholder representatives, and there is no specific timetable for its deliberations.

### **National Debate on Hydropower and Development of the Ganga**

25. *The broad context of the issues raised in the Request for Inspection is the ongoing national debate in India over the development of rivers, in particular the Ganga and its tributaries, for hydropower and other economic activities.* The issue assumed national proportions in 2008 when environmental and religious civil society organizations (CSOs) joined forces to demand that Government cancel three projects, none of which involved the Bank, on the Bhagirathi River, which is another tributary of the Ganga. Since then, there have been several developments of significance in this ongoing debate.

26. *In November 2008, Prime Minister Manmohan Singh declared the Ganga to be a “national river,”* which asserted the right of the central Government to take the lead in the debate on the development of large hydropower plants in the upper reaches of the river. In February 2009, the GOI established the National Ganga River Basin Authority (NGRBA), which is headed by the Prime Minister and includes as its members the Chief Ministers of the states through which the Ganga flows as well as several non-official expert members (representatives of civil society). The NGRBA has a broad mandate over the development and management of the Ganga from its upper reaches across the length of the river’s course in northern India.

27. *In the public debate over hydropower development in Uttarakhand and, more generally on the national level in India, the question of ensuring adequate environmental flows has emerged as a particular concern.* In July 2010, the MOEF commissioned the “Study on Cumulative Impact of Hydro Power Projects in Bhagirathi and Alaknanda Basins (Uttarakhand)” from two well-known national institutes, the Indian Institute of Technology at Roorkee (IITR) and the Wildlife Institute of India (WII). The terms of reference for the IITR called for a broad review of the cumulative impacts of the proposed hydropower development whereas the terms of reference for the WII were more narrowly focused on aquatic and terrestrial biodiversity..

28. *The MOEF accepted the recommendations of the IITR report that was submitted in April 2011 to reconsider the environmental flow requirements of different hydropower projects that were at an advanced stage of development, including VPHEP.* In May 2011, MOEF issued a revised environmental clearance for VPHEP



which increased the environmental flow requirement from 3 cubic meters per second (cumecs) to 15.65 cumecs, with the provision that the environmental flow requirement could again be revised once MOEF accepted the final version of the cumulative impact assessment.

29. *In April 2012, the WII submitted its final report, “Assessment of Cumulative Impacts of Hydroelectric Projects on Aquatic and Terrestrial Biodiversity in Alaknanda and Bhagirathi Basins, Uttarakhand”.*

30. *Also in April 2012, the Prime Minister constituted a high-level, multi-disciplinary group led by a Member of the Planning Commission (the Chaturvedi Committee), to examine the key development issues in the use of the Ganga for large hydropower plant development, including societal trade-offs, and to put forward recommendations for consideration by the GOI.* The work of the Chaturvedi Committee is ongoing. The Chaturvedi Committee is consulting widely with parties to this debate, including one of the Requesters, and is reviewing various studies of relevance to the subject. In this connection the Chaturvedi Committee has been tasked with reconciling any possible discrepancies in the recommendations of the IITR and WII reports that formed the cumulative impact assessment of the development of the Bhagirathi and Alaknanda.

31. *In conclusion, Management notes that two parallel reviews that appear to address many of the same issues raised by the requesters are currently underway in India, namely a legislative review by the Rajya Sabha and a Government policy review by the Chaturvedi Committee appointed by the Prime Minister. In addition, the Requesters have the option to appeal the decision of the NGT. Management is concerned that the result of a Panel investigation could inadvertently prejudice one or more Parties’ positions within these reviews, particularly given the apparent overlap on issues related to alleged harm and on environmental impact assessment.*

## V. MANAGEMENT’S RESPONSE

32. The Requesters’ claims, accompanied by Management’s detailed responses, are provided in Annex 1.

33. *Management has carefully reviewed the issues raised by the Requesters and does not agree with the allegations of non-compliance and harm.* In Management’s view, the Bank has followed the guidelines, policies and procedures applicable to the matters raised by the Request. As a result, Management believes that the Requesters have no basis to claim and are also not able to demonstrate that their rights or interests have been or will be, directly and adversely affected by a failure of the Bank to implement its policies and procedures.

34. *In Management’s view the Request for Inspection is based on assumed harmful outcomes of project implementation and a misplaced assertion that no actions are being taken to address relevant issues raised by the Requesters.* All relevant project-related impacts referred to in the Request have been taken into account in the course of

project preparation and are being addressed through the appropriate mitigation measures. Management considers that some of the issues raised are typical for a project of this scope and complexity and recognizes that such issues need to be identified and addressed continually during the course of project preparation and implementation, as is being done by THDC with support of the Bank. Other issues that have been raised by the Requesters do not apply to this project or projects of this type (run-of-river schemes with limited daily pondage). Management also notes that there is insufficient scientific evidence to support many of the Requesters' concerns regarding potential adverse impacts.

35. ***Management considers that the preparation and mitigation measures for this project have exceeded normal practices in India and are consistent with Bank policies and procedures and international best practices.*** Management understands the concerns of the Requesters regarding potential environmental, health and safety impacts that might arise from the VHPEP. Management is committed to ensuring that the project complies with relevant environmental, health and safety regulations of India, and the Bank's operational policies and procedures.

36. ***Management notes that many of the grievances raised by the Requesters cannot be related to the project, since project construction has not yet begun.*** This pertains in particular to construction-related impacts that are cited in the Request, given that there has been no contract awarded and that no construction of tunnels or other major project infrastructure has taken place.

37. ***Management is of the view that THDC has made all reasonable efforts to address concerns raised by residents of Hatsari Tok hamlet arising from alleged potential impacts during geological exploration, and that THDC has taken adequate steps to minimize the negative impact of the project on the hamlet.*** Responding to complaints of widespread cracks and water sources drying up in Hatsari Tok hamlet (that villagers claimed resulted from geological exploratory works), THDC commissioned a third party technical assessment to assess whether the cracks were caused by an earlier earthquake<sup>9</sup> or the exploratory works. This assessment failed to establish any link between the negative impacts claimed and the geological explorations. However, the project developer in agreement with the District Magistrate has offered as a measure of goodwill to repair the cracks and provide water supply to the hamlet. The Hatsari residents have not responded to either of these offers to date. In addition, THDC changed the alignment of the access tunnel to the powerhouse in March 2012 to mitigate the alleged potential impacts of the project in the hamlet. (See Box 1 on *Addressing Concerns Raised by Residents of Hatsari Tok Hamlet* for further details.) As a result, the total land acquisition requirements from Hatsari have dropped to 0.6 ha (from the original plan of 8 ha), which is owned by two households that have already accepted compensation. The Hatsari residents also complained of loss of crops due to explorative activities. The local state authorities finalized the quantum of compensation after assessing the loss of crops. The residents of Hatsari were requested to submit an

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<sup>9</sup> This refers to an earthquake of magnitude 6.8 with epicenter less than 20 km from the village, which occurred on March 29, 1999, and five years before THDC started exploratory works in the area.

application and bank details for transfer of compensation, which they have not done so far.

38. ***Management is confident of the robustness of the Bank's responses to issues raised by the Requesters, and wishes to highlight the ongoing legislative and Government policy reviews of hydropower in India.*** In Management's view the Request for Inspection is largely about the Requesters' views on what they consider to be the real impact and value of large hydropower plant development in India. While this is an important and legitimate debate it goes well beyond the underlying project and its compliance with Bank policies and procedures.

39. Management wishes to address a few core issues in more detail as set out below:

### **Project Preparation Consistent with Bank Policies and International Best Practice**

40. ***By design, the Bank's engagement in VPHEP was to assist the GoI in accessing best international practice in hydropower development, based on the Bank's portfolio and engagement in the sector.*** In that regard, THDC completed a number of quality technical, environmental and social assessments for VPHEP to apply best practice in the Indian context. The environmental assessment included detailed environmental studies, such as a downstream ecological flow study, riverine fish and other aquatic studies, and terrestrial biodiversity assessment. Technical assessments included a geo-technical baseline report, sediment management, hydrology and seismology; a cultural property assessment; and health and safety management, including a safety assurance plan for the construction period, a road construction management plan and a landslide management plan. THDC also completed a Social Impact Assessment (SIA), and constituted two panels of experts (POE), for Dam Safety and Environmental Assessment, as required by Bank operational policies. The Bank also assisted THDC in the formulation of its Corporate Social Responsibility Policy, which resulted in the project earmarking funds for implementation of social welfare activities covering project-affected areas during the planning and construction phase of the project.

#### **Box 1. Addressing Concerns Raised by Residents of Hatsari Tok Hamlet**

Hatsari Tok is a small hamlet of eight households in the revenue village of Haat. It is the only village where no agreement on resettlement could be reached thus far. While the residents of the main village requested THDC to acquire their lands and houses in Haat and relocate them across the river where the majority owned additional land, the residents of Hatsari, who do not own land on the other side of the river, opted not to relocate in a meeting held on June 26, 2009.<sup>10</sup>

Although THDC required only a portion of the Hatsari land for project infrastructure (an access road and the switchyard), it offered to relocate the residents of the Hatsari hamlet and acquire their land (totaling around 8 ha) to mitigate any temporary inconvenience during construction work in the neighboring areas. Accordingly, it offered the Hatsari residents the package agreed with the residents of Haat. This included, besides the statutory compensation

<sup>10</sup> Minutes of meeting held at THDCIL office, Pipalkoti, District Chamoli.

and Resettlement and Rehabilitation (R&R) payment for land and structures, an additional payment of INR 1 million to each household for the loss of community infrastructure.<sup>11</sup>

The residents of Hatsari instead requested compensatory land either in the city of Rishikesh (a large town about 220 km away) or in the state capital of Dehradun (approximately 260 km away). The single largest holding of land in the hamlet (around 3 ha) is owned by an individual who is living in Dehradun and is an absentee landlord. The other residents of Hatsari are either part of his extended family or work as laborers on his land. Though initially residents demanded land equivalent to the land loss, subsequently the demand came down to half of the land loss.

Although the project-specific R&R Policy (Clause 1.5.1) includes provision for land-for-land, this is subject to availability of government land in the area. For privately owned land of similar quality, the project proponent is expected to extend support to the affected community to identify land that is suitable to them. THDC offered resources to the Hatsari residents to search for land in the vicinity.<sup>12</sup> However, they refused to participate in the land-search exercise along with THDC and persisted in the demand for land in the urban areas of the plains.

THDC has instead offered the residents a range of options at different points of the negotiations, that include:<sup>13</sup>

- Take the entire hamlet land on lease for the construction period and once the project is built, return the land to the landowners. Temporarily relocate the residents of Hatsari in rented accommodation away from the village for the duration of construction; and
- Jointly identify land for them in the vicinity and bear the registration cost and other applicable government fee as per the project-specific R&R policy.

After several rounds of consultations and unsuccessful negotiations, THDC re-designed the project infrastructure plans and shifted the location of the switchyard from land in the hamlet to government-owned forest land. THDC also realigned the access road to limit land acquisition in Hatsari to just 0.6 ha. This 0.6 ha belongs to two households who have already accepted compensation for it. However, THDC has yet to take physical possession of the land and houses. No additional land in Hatsari is required for the project.

Notwithstanding the failure to reach a negotiated settlement with the residents of Hatsari, THDC remains committed to finding a solution satisfactory to all parties and has offered to relocate the entire hamlet keeping in mind temporary inconvenience during construction. However, the community remains steadfast in its demands for land in either Rishikesh or Dehradun, which is beyond the regulatory norms in India, and communicated this to Bank Management.

In addition, the residents of Hatsari complained of cracks appearing in their houses, loss of crops and water sources drying up due to geological exploratory works. Although geological tests and studies undertaken by a reputed third-party technical institution failed to establish a link between these events and the geological exploratory works, THDC offered to carry out repair of existing cracks in the houses. The villagers have not yet let the workers enter the village to undertake these repairs.

<sup>11</sup> THDC sent a letter dated August 7, 2010.

<sup>12</sup> THDC sent a letter dated August 7, 2010.

<sup>13</sup> In response to the Letter sent by the residents of Hatsari on November 7, 2011, THDCIL sent a letter dated November 17, 2011.

The local state authorities, represented by the office of the District Magistrate, were requested to assess and finalize the quantum of this compensation for the loss of crops. The residents of Hatsari were requested to submit an application and bank details for transfer of compensation, which they have not done so far.

THDC has also offered to supplement the villagers' water supply and issued a contract to a cooperative of residents to augment the existing water supply scheme; the cooperative is yet to start the work.

Continuous consultations with Hatsari residents to arrive at a mutually acceptable resolution have not yielded the desired results. In March 2012, the District Magistrate requested THDC to explore alternate routes for project infrastructure. Accordingly, THDC changed the alignment of the access tunnel to the powerhouse to ensure that it bypasses Hatsari.

41. ***Management believes the measures taken by the Borrower and the Bank in preparing the project are sufficient, consistent with Bank policy and represent international best practice for hydropower development.*** VPHEP has been subjected to various reviews by regulatory and judicial authorities in India and has been found to be consistent with sound hydropower development in the country. Its preparation has incorporated broadly accepted best international practices in hydropower, beyond what is required by the Bank's safeguard policies, and has, in addition, demonstrated a number of innovations in the technical, environmental and social aspects of hydropower development.

### **Environmental Assessment**

42. ***The project developer prepared a consolidated Environmental Assessment and Environmental Management Plan (EA/EMP) that, consistent with international best practice, incorporates corrective measures on environmental flow, as well as aquatic and terrestrial biodiversity conservation.*** The consolidated EA/EMP also commits the project developer to an adaptive management approach, whereby any additional regulatory and corrective actions arising from the ongoing review of hydropower development in the country would be incorporated into project design. Following the completion of the detailed environmental studies and their incorporation into the EA/EMP, THDC disclosed the integrated EA/EMP in the local language, and held a number of consultations, including a project-wide Stakeholder Meeting at which the findings of all the relevant studies and the associated mitigation measures were shared with project affected people and the community at large.

### **Assessment of Alternatives**

43. ***The assessment of alternatives as required under OP 4.01, Environmental Assessment was undertaken, supported by numerous technical and siting alternatives, including the "no project" scenario.*** These are detailed in the PAD and in the consolidated EA/EMP which were disclosed and discussed throughout the public consultation process. The two POEs also provided advice on the analysis of alternatives.

44. ***Whether the development of large hydropower projects is appropriate requires a specific analysis of not only alternative uses of the river, but also of alternative options for the generation of large amounts of electricity,*** which is a development priority for India, as for many developing countries. In this respect, the GOI has two long-standing policy objectives of providing reliable access to electricity to all Indians and generally improving electricity supply for economic development. A technical objective that supports these policy objectives is to increase the share of hydropower in the country's electricity generation mix, primarily in order to provide peaking power, as well as contribute to low-carbon development. As noted earlier, the Bank's view is that there exists a sufficient understanding of the potential impacts of large hydropower plants and of how to mitigate them to justify supporting hydropower development, provided individual projects meet World Bank project preparation and implementation requirements.

45. ***The preferred alternative proposed by the Requesters – namely the partial obstruction of the river – is not technically feasible for several reasons (see Annex 1 for details – Item3), in particular since it would not allow VPHEP to contribute to peak generating capacity available in the Northern Grid.***

#### **Valuating Externalities in the Economic Analysis**

46. ***In response to the Requesters' concerns regarding the treatment of externalities in the economic analysis, Management confirms that where possible an attempt is made in Bank projects to "internalize the externalities."*** This is done through the inclusion in the analysis of values for the posited externalities, or, in the absence of directly relevant data, through the use of proxy data. The Bank's standard for valuating externalities is consistent with international professional standards followed by economists. Generally, proxy values for externalities are included in an economic analysis only if there is a high degree of confidence in the robustness of the data. Otherwise, the risk of subjectivity is unacceptably high, as Management believes to be the case with the alternative calculations and data suggested by the Requesters.

47. ***The Bank did consider potentially adverse externalities in its economic analysis of VPHEP.*** The environmental flow requirement of 15.65 cumecs mandated for this project will assure continuous water flow in the river, even at the driest time of year, at a level equivalent to 45 percent of the average low flows in this stretch of the river, and is one of the highest levels mandated for any hydropower project in India known to Management. The environmental flow requirement that is mandated by GOI can be viewed as a composite measure of the value that Indian society accords to preserving the river in its natural state as opposed to exploiting the river for other purposes (irrigation, power generation, flood control, etc.) and this value functionally captures the anticipated negative impacts in the analysis. Management notes in this context the observation of the NGT that "the environmental flow requirement critically depends upon the development stage of the region and what the society expects from the river."<sup>14</sup> From this perspective,

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<sup>14</sup> Judgment of the National Green Tribunal (Principal Bench), appeal No. 5 of 2011, December 14, 2011, p. 28 (NGT Judgment).

the environmental flow criterion did take into account the cumulative impact of a series of projects along the same river.

### **Transparency and Consultations**

48. ***From 2007 onwards, consultations with relevant stakeholder groups have been continuous and robust, and many suggestions from stakeholders were incorporated into project design, consistent with Bank policy.*** The project has incorporated several good practices in its commitment to take into account the concerns of all stakeholder groups. Following a suggestion from the Bank team, THDC engaged social workers as well as a reputed regional NGO to carry out ongoing outreach to project-affected communities, and, in particular, to act as an interface with the local communities during the preparation as well as implementation of the Resettlement Action Plan (RAP). The first public hearing was held in 2006 followed by one in 2007 and the last project-wide stakeholder consultation was held in September 2009 to disseminate the final R&R policy, RAP and EMP. The village level specific consultations are still being carried out on various issues such as land acquisition, disbursement of assistance, planning and implementation of social welfare and community infrastructure activities, implementation of livelihood restoration plan, etc. THDC recognizes the need for consultations to be held throughout construction and project implementation.

49. ***The Bank team has also actively engaged with local stakeholders, civil society and other interested parties,*** and has held during every site visit a number of consultations and meetings. The team initiated, and continues to maintain, regular dialogue with civil society representatives in the state, including the identified Requester, as well as other environmentally and socially focused NGOs, academic institutions and the media.

50. ***The Bank also engaged a consultant trained in sociological methodology, to travel regularly to the project site and to ensure concerns of project affected people are registered and communicated to the team so that they may be addressed.*** This consultant worked throughout project preparation and provided an independent assessment of what was happening on the ground.

### **Project's Grievance Redress Mechanism**

51. ***A project-level Grievance Redress Committee (GRC) has been established with representation of project affected people from each of the affected villages, the NGO that is assisting THDC with social outreach, and THDC's project-level social manager as secretary.*** THDC has also developed by-laws for the GRC. Complaints must be processed within 15 days, and if the resolution proposed by this body is not accepted by the aggrieved project affected people, the case can be referred to the Commissioner for land acquisition/resettlement and rehabilitation. THDC maintains a register of complaints, time required for their processing, and their resolution, and provides a copy of the resolution to the complainant. This process and the details given here are in accordance with the directions of the National Policy on Resettlement & Rehabilitation, 2007. So far

there have been 13 formal and 36 informal meetings of the GRC. ***The project-level issues raised by the Requesters have not been presented before the GRC by any party.***

### **Broad Support for the Project**

52. ***VPHEP enjoys a broad base of local and regional support. In its December 2011 judgment, the NGT expressed appreciation for THDC's consultative and participatory process with regard to VPHEP and noted that the project has received significant public endorsements.*** In the words of the NGT: "Following the completion of the additional studies and their incorporation into a single consolidated Environmental Impact Assessment/Environmental Management Plan, in September 2009, THDC organized a Public Hearing at which the findings of all the relevant studies and the associated mitigation measures were shared with project affected people. At the Public Hearing in September 2009, *pradhans* (community leaders), *sarpanches* (elected community officials) and local leaders addressed the public to give their strong endorsement of the project."<sup>15</sup>

53. ***Over the last two years, as the national debate on the development of the upper Ganga has escalated, local stakeholders, including people living in the area of VPHEP, have increasingly voiced their support for hydropower development.*** As these projects are generally located in remote mountain regions with few economic opportunities, local communities often have legitimate expectations of the benefits from development projects. In an attempt to have their voices heard in the national debate, local people have conducted street protests and hunger strikes; sent delegations to the district magistrate and the Chief Minister; and petitioned the national government through their Member of Parliament in favor of the development of hydropower.

### **Environmental Flows**

54. ***THDC is incorporating the preliminary recommendation of the comprehensive cumulative impact assessment to maintain a minimum environmental flow of 15.65 cumecs (one of the highest in the country).*** The assessment is based on valued ecosystems components representing societal preferences including biodiversity conservation, as well as cultural and religious heritage. The environmental flow requirement may be revised once again once the final version of the cumulative impact assessment has been endorsed by MOEF.

55. ***VPHEP is among the first projects in India for which an environmental flow requirement, assessed through a scientifically-based cumulative impact assessment, has been mandated by the Government.*** This is consistent with the adaptive management system contained in the EMP, which includes an institutional mechanism for environmental management that incorporates monitoring of critical parameters, data collection and analysis, and the introduction of operating parameters, when warranted, to mitigate the impact of hydropower on the river ecosystems.

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<sup>15</sup> NGT decision, page 24.



56. ***The SIA also concluded that the project would not interfere with the traditional use of the river.*** The mandated minimum flow of 15.65 cumecs is equivalent to approximately 45 percent of the average low flow recorded for the project stretch of the river and exceeds the recorded low flows of this stretch of the river in many years. This means that water flows that will always be available, even at the time of year when the flows are naturally the lowest, will be within the range of natural conditions experienced in this part of the river. It is Management's considered view that when VPHEP is operational, there will be sufficient water in the river throughout the year, which will not obstruct the traditional use of the river by local people, including performance of religious rituals in the downstream stretch.

57. ***Regarding the use of the river for religious rites, the SIA showed that two cremation ghats would be affected by the project, one at village Haat near the site of the powerhouse and the other at Gulabkoti, near the dam site.*** Based on inputs obtained during public consultation, the impact on the cremation ghat at the village Haat was completely avoided through a re-design of the project layout; additionally, THDC committed to improve access to the ghat under its community development program. The existing ghat at Gulabkoti will be affected and THDC has invited tenders for constructing a new cremation ghat so that villagers retain space by the river bank to conduct their rituals.

### **Water Quality**

58. ***The EA concluded that the project will have no appreciable negative impact on water quality during construction and when it is operating.*** During the construction phase, the project will implement a muck disposal plan, which includes safe disposal of all the debris and silt generated from the tunneling and construction works, thereby preventing debris from being dumped into the river or affecting water quality during construction. In order to preserve water quality during operation, the project design calls for a portion of the river to flow unimpeded through the spillways of the diversion dam. The water that is diverted into the tunnel will pass through desilting chambers, and any retained sediment will be released into the river immediately downstream of the dam at regular intervals in the operation phase. Therefore, the quantity and characteristics of sediments in the river water are not expected to be substantially altered by the project operation. A more detailed description of findings on water quality and flow are provided in Annex 1 (Items 6 and 7).

### **Biodiversity**

59. ***The EA has found no evidence to suggest that there will be any negative impact on critical aquatic biodiversity.*** As discussed in Annex 1 (Item 11), the EA did not identify the presence of the Cheer Pheasant in the project immediate influence area (500 m all around the project affected areas) or the project influence area (determined to be an area 7 km all around the project sites). Neither the bird surveys conducted as part of the EA (which included field sightings as well as habitat surveys), nor the consultations with villagers (including village elders) suggested the presence of the Cheer Pheasant in the project area. In addition to surveys and consultations, the assessment considered available

secondary data including forest census data of the Badrinath and Kedarnath divisions of the state Forest Department. Secondary data sources also did not identify the presence of the Cheer Pheasant, although they did note the presence of other members of the pheasant family, including the Monal and the Kokal (the conservation status as per the IUCN Red List for both of these species is “Least Concern”). With respect to the Cheer Pheasant, the WII report states that the Alakananda-II sub-basin in which VPHEP lies falls within “the distribution range of Cheer pheasant,” but is not an “important habitat of Cheer pheasant.”

60. The EMP contains several provisions aimed at proactively preserving aquatic and terrestrial biodiversity in the project stretch (refer to Item 12 of Annex 1). The implementation and monitoring of the EMP will be fully funded by the project developer.

### **Other Environmental Impacts**

61. ***The environmental impacts of the project have been comprehensively examined in the consolidated EA, and all impacts will be mitigated and monitored through the EMP.*** A project-level assessment was complemented by the cumulative impact assessment of the series of projects along the Alaknanda and Bhagirathi Rivers that was commissioned by the GOI. The EMP will be adapted to include additional corrective actions to address new issues, if identified during implementation.

62. ***The EA concluded that the project will not contribute to deforestation.*** On the contrary, the project will undertake compensatory afforestation in the ratio of 1.2:1 for every hectare of forest, grazing and *van panchayat* (community forest) land acquired by the project. This compensatory afforestation will be financed by THDC and carried out by the State Forest Department. Further, the project will plant 12,306 trees as part of the larger green belt.

### **Livelihood Impacts and Gender Issues**

63. ***None of the households reported a dependence on the river for their livelihoods.*** The dam site and small reservoir are in a steep gorge which has no human settlements or land used by the communities; the river in the rest of the project area is also not used by people for purposes of livelihood. The SIA included a census survey of all project affected households and, among other questions; it investigated the reliance of people in the project area on river based economic activities, such as sand quarrying and fishing. Recreational fishing has, however, been observed in the project stretch, but is not expected to be impacted.

64. In addition to the rituals mentioned earlier, the river is also used on auspicious days by pilgrims for bathing at specific congregation points. On the Alaknanda River, there are five congregation points (Prayags), all located outside the project influence area.

65. ***The project design includes numerous benefits for communities in the project area that exceed national statutory requirements.*** The project will also finance two categories of local development funds: (i) dedicated funds in the amount of INR 310 million that will be used for the 18 affected villages over five years during the

construction period; and (ii) as recommended by the National Hydro Power Policy (2008), one percent of the power generated by the project (or the monetary equivalent) to fund a Local Area Development Fund which will be made available in the form of an annual payment over the life of the project. In addition, THDC has adopted a Corporate Social Responsibility Policy for the implementation of a community development scheme. In order to implement the activities, THDC has established an NGO which is responsible for finalization of activities, funding and monitoring of the utilization of funds and creation of community assets.

66. ***The project developer has given due consideration to impacts on women, including their safety, mobility and livelihood as well as on local culture.*** During the SIA and subsequent consultations with women, their concerns have been recorded and reflected in the project design, including a number of mitigation measures. The main concerns expressed by women centered on possible loss of access to van panchayat (community forest) land for collecting fuel and fodder (a daily chore for most village women) and safety concerns arising from the influx of construction labor.

67. In addition to compensation for food and fodder losses paid by THDC, the civil works contractor will be contractually obligated to undertake measures aimed at securing the safety of women living in villages around the labor camps. The contract document contains specific provisions (like fenced camps, no use of firewood, etc.) to prevent the labor force from accessing community forest lands to ensure the safety of women collecting fodder and firewood.

68. ***THDC retained an NGO<sup>16</sup> to set up Self-help Groups (SHG) in support of women in project affected villages, and is providing training in income-generating activities*** such as improved agriculture practices, vermi-composting, dairy farming, poultry rearing, napier grass production, etc. Some of the SHGs have already started earning a profit. THDC is offering a study scholarship for girls from project affected families to achieve 100 percent literacy among women as well as special assistance to the children of widows.

## **Health Impacts**

69. ***There is no basis to assert that the reservoir will cause the spread of diseases.*** The run-of-river project design includes a small reservoir that will be able to store only up to 5 hours of average flow. The reservoir is in a steep gorge which has no human settlements or land used by the communities in the project area. The average residence time of the water in the small VPHEP reservoir is calculated as 1.75 hours. The water in the reservoir will be flowing and replaced on a daily basis, as distinct from a large reservoir.

## **Conclusion**

70. ***VPHEP has been subjected to various reviews by regulatory and judicial authorities in India and has been found to be a well-prepared project within the ambit***

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<sup>16</sup> Shri Bhubaneshwari Mahila Ashram.

*of existing scientific and technical knowledge.* Its preparation has incorporated broadly accepted international best practices in hydropower and has, in addition, incorporated a number of innovations. As noted above, the NGT expressed its view that the project preparation was robust. Moreover, the Bank's own sustained consultations with a wide range of stakeholders over the years have shown that the project enjoys a broad base of local and regional support.

71. *Management has carefully reviewed the issues raised by the Requesters and does not agree with the allegations of non-compliance and harm.* Management believes that the Bank has made every effort to apply its policies and procedures and to pursue concretely its mission statement in the context of the project. In Management's view, the Bank has followed the guidelines, policies and procedures applicable to the matters raised by the Request. As a result, Management believes that the Requesters' rights or interests have not been, nor will they be, directly and adversely affected by a failure of the Bank to implement its policies and procedures.

**Annex 1.  
Claims and Responses**

No.	Claim	Response
1.	The environmental damage has been ignored instead of undertaking surveys	<p><b>Management believes that VPHEP complies with the Bank's policies and procedures, and also has utilized and embedded international best practice in project design, including on economic, environmental, social and cultural assessments.</b></p> <p><b>The project is widely supported by host communities as demonstrated throughout the consultation process. The Bank team and Management have been responsive to the concerns raised in this Request, and have had extensive interactions with the identified Requester. Management is of the view that THDC has made all reasonable efforts to mitigate potential impacts identified in this Request.</b></p> <p><b>Management is also of the view that the debate on the tradeoffs of hydropower development of the Ganga is legitimate, and it endeavors to support the Indian authorities in this regard.</b></p> <p><b>In November 2009, the Bank successfully appraised the project and determined that it was in compliance with the Bank's operational policies and ready for negotiations.</b></p> <p><b>VPHEP has also been subjected to various reviews by the GOI through its regulatory and judicial authorities and has been found to be a well-prepared project within the ambit of existing scientific and technical knowledge. It should be noted that the development issues related to hydropower development of the Ganga are currently under parallel efforts, namely by the Rajya Sabha (legislative review) and by the Chaturvedi Committee appointed by the Prime Minister.</b></p>
<b>OP 4.01 Environmental Assessment</b>		
2.	VPHEP should be classified as category A in view of the impact on Cheer Pheasant, Otter and Mahaseer fish.	<p><b>Management considers that the preparation and mitigation measures for this project have exceeded normal practices in India and are consistent with Bank policies and procedures and international best practices.</b></p> <p><b>The environmental category of the project has always been "A" and the project meets fully the requirements of OP 4.01 Environmental Assessment, which calls for mitigation of all identified environmental impacts.</b></p> <p><b>The initial screening of VPHEP carried out by the Bank in August 2006 after the GOI invited the Bank to consider the project for financing concluded that the project was "likely to have significant adverse environmental and social impacts that are sensitive, diverse, or unprecedented" which is the criterion applied by the Bank to Category "A" projects (OP 4.01, Environmental Assessment). The specific impacts considered included those on rare, endangered and threatened species, such as the Cheer</b></p>

No.	Claim	Response
		<p>Pheasant, Otter and Mahaseer (a migratory fish), but were not limited to these impacts.</p> <p>Before the engagement of the World Bank in the project, the project developer, THDC India Ltd., had, through an independent consultant, conducted baseline surveys over the period October 2005 to April 2006. The Bank team reviewed this initial work on the environmental assessment in August 2006 and identified additional studies required to comply with World Bank operational policies and project preparation requirements. In order to meet these requirements, THDC hired an independent consultant to undertake these additional environmental studies over the period April 2008-May 2009. The studies included: (i) Study of ecological flows in the project stretch of the Alaknanda River; (ii) Assessment of the aquatic and terrestrial biodiversity impacts of the project; and (iii) Assessment of archeological, physical and cultural resources. In addition, the following studies were prepared to inform project design; (iv) Safety Assurance Plan for the project. (v) SIA and RAP and (vi) Catchment Area Treatment (CAT) plan for the project that was prepared by the Uttarakhand State Forest Department. Extensive field surveys and community consultations were also carried out as part of this exercise.</p> <p>The original environmental assessment and the additional environmental studies were integrated into a consolidated EA/EMP. The EMP includes a number of specific plans aimed at mitigation of the expected environmental impacts.</p> <p>In addition to the project-level EA/EMP for VPHEP, the GOI carried out a cumulative impact assessment of hydropower on the Bhagirathi and Alaknanda Rivers which served as the basis for the environmental flow requirement mandated for the project. The project-level EA/EMP and the cumulative impact assessment carried out by the GOI together address the full range of issues raised by the Requesters, including: environmental flows in the river to meet the needs of both aquatic habitat and human uses; water quality issues; biodiversity and critical habitat; impacts on livelihoods and project affected communities; health and safety issues; and analysis of alternatives.</p> <p>In keeping with Bank disclosure requirements, the draft versions of the consolidated EA/EMP (including the RAP) were presented and discussed at a project-wide public meeting in the project area in September 2009. The entire EA/EMP (including RAP) was translated into Hindi (the local language), which was a significant improvement over the normal practice in India of translating only the Executive Summaries of these documents.</p> <p>These final documents are available on the developer's website at <a href="http://www.thdc.gov.in">www.thdc.gov.in</a> and can also be found at the Project Information Center (PIC) on site. The draft cumulative impact assessment that was commissioned by the MOEF is available at the following website:</p> <p><a href="http://moef.nic.in/modules/others/?f=bhagirathi-study">http://moef.nic.in/modules/others/?f=bhagirathi-study</a></p>

No.	Claim	Response
<b>Analysis of Alternatives</b>		
3.	<p>The Requestors maintain that an alternative design of constructing a partial barrage across the river was not considered:</p> <ul style="list-style-type: none"> <li>• We have suggested to Wildlife Institute of India that the environmental impacts of the hydroelectric projects will be much reduced if part of the water is removed from the river by making a partial obstruction instead of a barrage and allowing free flow of a socially acceptable amount of water as environmental flow. This will allow upstream migration of fish and downstream flow of debris and sediments. This alternative has not been examined by Wildlife Institute or WB Staff.</li> <li>• The alternative of partial obstruction has not been examined. The change in benefits and costs due to such redesign has not been examined.</li> <li>• WB Staff has not taken our suggestion on board. The alternative has not been discussed with affected people.</li> <li>• The adverse impact on the river can be greatly minimized by making a partial obstruction instead of a barrage and allowing free flow of a socially acceptable amount of water as environmental flow. WB Staff have not fully considered this alternative. They have also not looked at what is the socially defined limit</li> </ul>	<p><b>The assessment of alternatives as required under OP 4.01, Environmental Assessment was undertaken, supported by numerous technical and siting alternatives, including the “no project” scenario.</b></p> <p><b>These are detailed in the PAD and in the consolidated EA/EMP which was presented (in advanced draft form, for comment) at a public consultation session held at the project site in September 2009. THDC formed two panels of experts (POE), one technical/dam safety and one social and environmental, to advise it on all aspects of project design, including on the analysis of alternatives. Public meetings were also held by THDC in October 2006 and January 2007.</b></p> <p>The valley at the site of the VPHEP diversion dam is a V-shaped gorge. Once the alluvium is excavated to an acceptable foundation, the river bed will be only a few meters wide. By the time the dam is constructed to a height which would allow the river to be divided into obstructed and unobstructed zones and provide acceptable submergence of the intake, the flow velocity in the unobstructed section would be too high and would not address the concerns raised regarding fish passage.</p> <p>THDC undertook detailed investigations related to design and location of project components. The major siting decisions involved the location of the diversion dam, headrace tunnel, spillway, powerhouse, project township, workers’ accommodation, quarry and borrow areas, approach and haul roads, and muck disposal sites.</p> <p>Location of the diversion dam: Five alternatives were considered and analyzed. While all of these were conceptually possible locations for the diversion dam, there were varying levels of environmental, geological and social issues attached to each. Each of the possible locations was analyzed as to the probable impacts on the physical environment, terrestrial and aquatic biodiversity, and human settlements. The analyses considered the possible dam sites as well as associated impacts from the headrace tunnel, the sedimentation chambers, and the approach roads. On the basis of detailed analyses, the current project site was selected for construction of the diversion dam with a low height spillway. This selection ensured that the submergence caused by the diurnal storage was minimized (only about 21.5 ha on the riverbed), and that no human settlement was affected by submergence. This site selection also ensured that acquisition of private land for the other components of the project would also be minimized so as to avoid, as much as possible, involuntary displacement and other impacts associated with such acquisition. Consequently, about 70 percent of the land required for the project is public land, already vested in the government. Once the dam site was finalized, location/ alignments of other project components like the headrace tunnel, the powerhouse, the approach roads were selected, with due consideration to further</p>

No.	Claim	Response
	<p>of water diversion. They have instead blindly relied on a study by Indian Institute of Technology, Roorkee. The said study has been severely criticized by us as well as other academicians.</p> <ul style="list-style-type: none"> <li>• The OP specifically requires WB Staff to consider if negative environmental impacts will be reduced by project redesign. This has not been done.</li> <li>• The aquatic water system of the river can be much restored by making a partial obstruction instead of a barrage. This has not been considered.</li> <li>• The alternative of making a partial obstruction has not been examined.</li> </ul> <p>The word 'alternatives' in plural enjoins the WB Staff to examine various alternatives. No effort was made by WB Staff to shortlist various alternatives.</p>	<p>minimize the possible environmental and social impacts.</p> <p>The no-project alternative: The demand for power in the agricultural, industrial and domestic sectors in Uttarakhand and other northern states of India is increasing. Most of the states are experiencing chronic and at times severe power shortages. The CEA projected the growth in demand in the northern region at a rate of 7 percent during the 10th Plan period and 6.9 percent during the 11th Plan. The current deficit in power supply in Uttarakhand and North India is 2.8 percent and 9.1 percent, respectively. To overcome the shortage (even in the best case demand management scenario), it is necessary to increase hydropower generation, for which there is significant potential in Uttarakhand. There is no other suitable renewable source of energy to replace hydropower in North India. The no-project-scenario may lead to greater problems of: (i) non-availability of electricity affecting households, hospitals, tourism and other commercial activities, industry and agriculture; and (ii) dependence on diesel generators and firewood to meet local requirements, leading to larger greenhouse gas emissions and other environmental and health related problems. The no project scenario, which aggravates the shortage of clean energy and promotes alternative polluting generation, is replete with larger environmental and health problems, and is unviable.</p> <p>The alternative of a partial obstruction of the river (along the lines of the Bhimgoda Barrage near Haridwar) proposed here is not technically feasible, in particular since it would not allow VPHEP to contribute to peak generating capacity available in the Northern Grid.</p> <p>From an economic perspective, the partial obstruction of the river as proposed would also dramatically reduce the amount of energy generated, and therefore was not considered a viable alternative by GOI.</p>
<b>Scoping, Consultations with Local Communities, and Disclosure</b>		
4.	<p>There was inadequate consultation with stakeholders</p> <ul style="list-style-type: none"> <li>• The impact of the project on different stakeholders has not been assessed.</li> <li>• The Public Hearings under the Environment Protection Act are a complete sham. The people are not given any information. Their opposition is not taken into account. This is what happened at both the hearings in the valley.</li> </ul>	<p><b>Consultations with all stakeholder groups have been continuous and robust, and suggestions and requests from stakeholders made in the consultation process have been incorporated into project design.</b></p> <p><b>As of March 2012, THDC had held some 148 formal consultation sessions; five project-wide public meetings (including two statutory public hearings that are part of the environmental clearance process); 11 meetings focused on environment issues alone; and innumerable informal meetings with project affected persons. Details of most of these formal consultation sessions can be found in the Project Information Center (PIC) at the site. Moreover, support for the project by the majority of people living in project affected communities is well documented including in several regional and media accounts from 2012.</b></p> <p><b>The impacts of the project on stakeholders were fully</b></p>



No.	Claim	Response
	<ul style="list-style-type: none"> <li>Relevant NGOs and experts have not been consulted. In the main, local contractors who are direct beneficiaries of the project have been consulted.</li> </ul>	<p><b>assessed during project preparation and design and are to be mitigated through the EMP.</b></p> <p><b>The developer has exceeded the norms of stakeholder outreach in India and has incorporated several good practices in its commitment to take into account the concerns of stakeholder groups.</b></p> <p>The scope of both the SIA and the EA covered the groups of stakeholders with whom consultations were held. The wide-ranging consultations conducted under the SIA covered project affected communities in 19 villages; <i>van panchayat</i> (forest council) representatives; community leaders, people's elected representatives, and local NGOs. All categories of affected people (directly and indirectly; titleholders and non-titleholders) were covered under the SIA.</p> <p>Relevant project-level documents were publicly disclosed and are available as noted in Item 2 above.</p> <p>THDC hired two trained social workers and retained the services of a reputed local NGO (Shri Bhubaneshwari Mahila Ashram) to interact with the villagers on an ongoing basis in order to bolster its communications and outreach. This team provided people with information about impacts, consulted with them about possible mitigation and compensation measures and is now helping implement these agreed measures, including the RAP and the Livelihood Restoration Activities.</p> <p>Throughout the project preparation period, THDC operated two PICs, one at Haat and the other at Pipalkoti on National Highway 58. These were set up to allow local communities full access to project information and to provide them a platform for registering their queries and concerns. All relevant documents and studies – including the EA/EMP, SIA, and RAP – are readily available in Hindi (the local language). With the completion of THDC's permanent project office in December 2010, these PICs were consolidated into one at the project office in Siyasain, hamlet of Jaisal village, 20 km downstream of the diversion dam.</p> <p>THDC has used innovative outreach tools such as public billboards to communicate the salient features of the R&amp;R Policy; posters to address the major concerns of villagers; and a large 3-D schematic model to explain the physical layout of the project to the villagers. These effective and innovative measures were aimed at informing local people about the project and its possible impacts, and to take into account their concerns and suggestions for avoiding, mitigating and managing these impacts.</p> <p>Consultations with project affected people resulted in several important modifications to the project design and the measures to mitigate impacts, including notably in the case of the village Haat where the powerhouse will be located.</p> <p>THDC's outreach to the local communities continues, with some 39 meetings and many more informal interactions held with project affected people since the project was approved by the World Bank's Board in June 2011.</p>

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		In addition, the Bank team has consulted with a wide range of leading national and regional civil society members and experts, including representatives of pro- and anti-dam CSOs. The team has also consulted widely with project affected communities, as well as their elected representatives in the state and national legislatures.
<b>Minimum Flows for Aquatic Habitat and Human Use</b>		
5.	<p>The diversion of water from the river between the diversion structure and the tailrace outlet adversely impacts the environment and nearby residents in several ways:</p> <ul style="list-style-type: none"> <li>• The rights of the locals on rivers have not been protected. There is no river water available for religious and cultural rituals like bathing festival, funeral rites, river worship, etc.</li> <li>• The rights of the locals on rivers have not been protected. Due to dry rivers, the people who live on the river banks, especially cattle herders, do not get enough water.</li> <li>• The dam has kept the environmental flow of the river at a minimum. The accurate environmental flow required for the river has not even been estimated</li> <li>• In run-off-the river projects, all the way from where the river is pushed into the tunnel till it resurfaces at the Power House, the river basin is either dry or has very little water in it. This also affects aquatic life adversely.</li> </ul>	<p><b>VPHEP would be among the first projects in India to maintain environmental flow assessed through a scientifically-based cumulative impact assessment, which is consistent with international best practice.</b></p> <p><b>The environmental minimum flow requirement of 15.65 cumecs mandated in this project will assure continuous water flow in the river, even at the driest time of year, at a level 45 percent of the average low flows and is one of the highest levels mandated for any hydropower project in India known to Management.</b></p> <p><b>A guiding principle of project preparation was to respect local customs and protect the rights of people living in the project area. The numerous measures taken to achieve this objective are described in the PAD and detailed in the SIA and RAP.</b></p> <p><b>The NGT, which is the country's highest court devoted to considering environmental issues, in its recent judgment on a petition filed by Mr. Bharat Jhunjunwala (the named Requester in this case) commended the project developer for sensitivity to the needs and preferences of people in the project area, and cited the demonstrated strong local support for the project.</b></p> <p><b>Construction of the project has not yet begun. But even when the project is built and operational, there will always be uninterrupted and continuous flow of water in the river.</b></p> <p>The project is located in a stretch of the Alaknanda River which is largely characterized by very steep and rocky slopes that prevent easy access to the river by humans and domesticated animals. In addition, for part of the year, even in those few areas where there is safe access, the river flow is swift and dangerous. People and animals may enter the river only in the low (winter) season in a small number of places where the river is approachable, and this is not commonly practiced in view of the extremely cold temperature of the water. Cattle and other animals reportedly do not depend on river water due to the difficult terrain and because other, safer sources of drinking water are readily available above the river near inhabited areas. Nevertheless, the SIA and EIA documented all possible use of the river by local communities.</p> <p>Regarding the use of the river for religious rites, the SIA showed that two cremation ghats would be affected by the project, one at village Haat near the site of the underground powerhouse and the other at Gulabkoti, near the dam site. Based on inputs obtained</p>

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		<p>during public consultation, the impact on the cremation ghat at the village Haat was completely avoided through a re-design of the project layout; additionally, THDC committed to improve access to the ghat under its community development program. The existing ghat at Gulabkoti will be affected and THDC has invited tenders for constructing a new cremation ghat so that villagers retain their space by the river bank to conduct their rituals.</p> <p>The MOEF mandated a minimum flow of 15.65 cumecs in the project stretch of the river. This requirement was informed by the Cumulative Impact Assessment undertaken under the project and the revised environmental clearance for the project was issued on this basis. This means that even in the months when river flows are naturally lowest, there will always be at least a flow of 15.65 cumecs in the area downstream of the diversion dam unless extreme drought conditions produce natural river flows below this threshold. Moreover, the flows in the river downstream of the diversion dam will be augmented by in-flows from five perennial streams that enter the river before the diverted water is returned to the river.</p> <p>During the monsoon season, the natural flow will often exceed the maximum flow which can be diverted and utilized by the turbines. In such case, the excess water will be released in the river bed immediately downstream of the diversion dam through the spillway gates. Therefore the pre-existing pattern of seasonal flow variations in the riverbed downstream of the dam will be largely preserved.</p> <p>The mandated minimum flow of 15.65 cumecs is equivalent to approximately 45 percent of the average low flow recorded for the project and exceeds the recorded low flows of the river in many years. This means that water flows will always be available, even at the time of year when the flows are naturally lowest. The anticipated flow, in the low flow season will be within the range of natural conditions experienced in this part of the river.</p> <p>The NGT, in its decision of December 14, 2011 in the matter of the petition filed by Mr. Bharat Jhunjhunwala and others to request that the project Stage 1 forest clearance be revoked, noted that, "After examining the figures and facts and the arguments made and considering the provisions made in the stipulations in the Forest Clearance based on a scientific study by IITR within the available timeframe and resources coupled with flexibility option for revising the same, we are of the considered opinion that the stipulations regarding environmental flow certainly follows the sustainable development and precautionary principles." (NGT decision, page 30).</p> <p>In its decision, the NGT also expressed appreciation for the sensitivity to the rights and concerns of local people that was demonstrated by the project developer. The NGT decision noted, "Following the completion of the additional studies and their incorporation into a single consolidated Environmental Impact Assessment/ Environmental Management Plan, in September</p>

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		<p>2009, THDC organized a Public Hearing at which the findings of all the relevant studies and the associated mitigation measures were shared with project affected people. At the Public Hearing in September 2009, <i>pradhans</i>, <i>sarpanches</i> and local leaders addressed the public to give their strong endorsement of the project.” (NGT decision, page 24).</p>
6.	<p>The joy of a free-flowing river cannot be measured. This has not been estimated by the dam proponents</p>	<p><b>In evaluating the project, the Bank took into account the importance of maintaining a free-flowing river, and this aspect was comprehensively assessed through a Study on Managed River Flows, which forms part of the project EA.</b></p> <p><b>The environmental minimum flow requirement of 15.65 cumecs mandated in this project will assure continuous water flow in the river, even at the driest time of year. In addition to the 15.65 cumecs, the river flows downstream of the diversion dam will be augmented by natural inflows from tributaries as well as the water which will be released through the spillway gates during the monsoon when the natural flow will exceed the discharge capacity of the tunnel and turbines.</b></p> <p><b>The broader issue raised here by the Requesters is the valuation of costs and benefits of an investment project. The economic (cost-benefit) analysis of the project that was carried out by the Bank followed the standard methodology used by the Bank and is consistent with OP 10.04 on Economic Evaluation of Investment Operations.</b></p> <p><b>In April 2012, the Prime Minister constituted a high-level, multi-disciplinary group led by a Member of the Planning Commission (the Chaturvedi Committee), to examine the key development issues in the development of the Ganga for hydropower including societal trade-offs, and to put forward recommendations for consideration by GOI.</b></p> <p>The methodology for the analysis followed widely accepted professional standards for economic analysis, taking into account costs and benefits for which robust estimates were available or could be derived from robust proxy data. Specifically as concerns the observation on the value of a free-flowing river, this is an example of a value that can be posited but which is difficult or impossible to measure with existing data or contingent valuations methods in general.</p> <p>There is an extensive body of professional literature on the methodology of economic analysis and methods of valuation of externalities, but many of these are controversial and replete with methodological pitfalls. An example is determination of the “willingness to pay” where the methodological deficiencies include: sampling bias; possible “inflation” of answers given the theoretical nature of the question; lack of sufficient information or technical knowledge on the part of those being interviewed (e.g., on the cost implications of different electricity-generating technologies) which reduces the relevance of responses; influence of the question formulation on the responses; and</p>

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		<p>possible normative influence of the enumerator on the respondent.</p> <p>Given the nature of the value presented here (that of a free-flowing river) the more appropriate level of analysis is the river basin level as opposed to the individual project level. From this perspective, the question is part of a higher level decision-making process that examines the relative costs and benefits of river basin development versus non-development.</p> <p>The environmental flow requirement that was mandated for the project by the GOI can be viewed as a composite measure of the value that society as a whole accords to preserving the river in its natural state as opposed to using the river for other purposes and this value functionally captures the anticipated negative impacts in the analysis as they are understood today. The resolution of this trade-off is a function of values and differing perceptions of the various costs and benefits of alternative uses of river water. The GOI and various sections of Indian society continue to engage in a robust debate on the value to society of a free-flowing river and its use to generate much-needed energy for a growing economy.</p> <p>Of note in this context is the observation of the NGT that “the environmental flow requirement critically depends upon the development stage of the region and what the society expects from the river” (NGT decision December 14, 2011, p. 28). Indian society continues to debate the larger issue of the trade-offs implicit in the development of the Ganga basin for energy-generation as well as other uses. Following a meeting of the NGRBA on April 17, 2012 that was convened precisely to debate these issues of national significance, the Prime Minister’s Office set up the Chaturvedi Committee to further examine these important river-basin level issues development. The Chaturvedi Committee is interacting with all stakeholders, including members from civil society (among them Mr. Jhunjhunwala) in an attempt to arrive at a shared understanding of the trade-offs needed.</p>
<b>Water Quality</b>		
7.	<p>With the river being diverted into a tunnel, the water is no longer freely flowing past the rocks and stones. This is robbing the water of its special qualities.</p>	<p><b>The EA has concluded that the project will have no appreciable negative impact on water quality during construction and when it is operating.</b></p> <p><b>The SIA also concluded that the project will not interfere with the traditional use of the river. When operational, VPHEP will witness sufficient water in the river throughout the year, which will not obstruct its traditional use by local people, including performance of religious rituals on the stretch downstream.</b></p> <p>During construction, the project will implement a muck disposal plan which includes safe disposal of all the debris and silt generated from the tunneling and construction works.</p> <p>Given the normal seasonality of Himalayan rivers, for part of the year, there will often be more water in the river than can be</p>

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		<p>accommodated by the diversion works. Therefore the typical monsoon flow pattern will be largely preserved. During the low flow season, there will be at least 15.65 cumecs, as mandated by the GOI, except in extreme drought conditions when the natural flows may drop below this threshold, at which time the project will not be able to produce power. In addition to this minimum flow, the actual flow in the river will be augmented by in-flows from perennial streams that join the Alaknanda River downstream of the diversion dam.</p>
8.	<p>Silt getting collected in the reservoir is a common problem with dam projects. With many dams being constructed, silt from one reservoir washes ahead and gets collected in the next reservoir. This affects the aquatic life and local temperatures adversely.</p>	<p><b>The EA found no evidence to suggest that there will be any negative impact on critical aquatic biodiversity. The implementation and monitoring of the EMP will be fully funded by the project developer.</b></p> <p><b>The average residence time of the water in the small VPHEP reservoir is calculated as 1.75 hours. The water in the reservoir will be flowing and replaced on a daily basis, as distinct from a large reservoir. The “dead storage” of the pondage is only 0.45 million cubic meters, which is a minuscule volume compared to the volume of silt transported annually by the river.</b></p> <p>Generally, this comment is not relevant to VPHEP but to larger scale reservoir projects. All of the hydropower projects existing or planned on the Alaknanda River are of the run-of-river type. No large reservoir projects exist on the Alaknanda River and none are planned.</p>
9.	<p>The responsibility of assuring that the affected people and environment are protected rests with the WB Staff. This responsibility is not discharged by blind reliance on a study commissioned by the Ministry of Environment and Forests and which has been criticized</p>	<p><b>From 2006, recognizing the sensitivity of this project, the Bank team has worked closely with the developer to ensure that the requirements of all Bank operational policies, including safeguards are met fully and that good social and environmental practices are incorporated in the project preparation and design.</b></p> <p><b>In November 2009, the Bank successfully appraised the project and determined that it was in compliance with the Bank’s operational policies and ready for negotiations. The Bank’s appraisal process includes the investigation of six key aspects of project preparation, as follows: (a) economic, e.g., project costs and the size and distribution of benefits; (b) technical, e.g., engineering design and environmental matters; (c) institutional, e.g., management and organization; (d) financial, e.g., requirements for funds and the financial situation of the implementing agency and of other beneficiaries affected by the project; (e) commercial, e.g., procurement and marketing arrangements; and (f) sociological aspects, e.g., socio-cultural factors and impact on specific target groups such as women, and includes a peer review.</b></p> <p><b>In its judgment of December, 2011 the NGT upheld the first level forest clearance (and its various conditions) for VPHEP, commended project preparation and acknowledged that the</b></p>

No.	Claim	Response
		<p><b>Bank's stringent process was followed.</b></p> <p>THDC, the project developer, has adopted a responsible, progressive and equitable approach to the assessment and management of the social and environmental impacts of the project which has been repeatedly acknowledged by various stakeholders. The NGT acknowledged the good quality of the project preparation in its decision on the petition filed by Mr. Jhunjhunwala and others regarding the forest clearance: "Based on the detailed studies, the project scheme was prepared in an optimized manner giving due attention to all aspects, be it social, environmental or technical. The stringent norms of the World Bank were followed while developing the project scheme and also while finalizing the project parameters."</p> <p>"Following the completion of the additional studies and their incorporation into a single consolidated Environmental Impact Assessment / Environmental management Plan, in September 2009, THDC organized a Public Consultation Session at which the findings of all the relevant studies and the associated mitigation measures were shared with the project affected people. At the public consultation session held in September 2009, <i>pradhans</i>, <i>sarpanches</i> and local leaders addressed the public to give their strong endorsement of the project."</p> <p>The reference to the "study commissioned by the Ministry of Environment and Forests" is to the cumulative impact assessment (see Item 10 below).</p>
<b>Cumulative Impact Assessment Commission by MOEF</b>		
10.	<p>The effects of building one dam after another on the same river has created several negative impacts. However, no cumulative impact assessment study has been done.</p>	<p><b>The GOI, fully cognizant of the potential impact of multiple projects on a river and of the importance of an understanding of basin-level cumulative impacts in addition to project-level impacts, carried out the first comprehensive cumulative impact assessment of the impacts of hydropower development on a major river system (the upper reaches of the Ganga), consistent with international best practice.</b></p> <p>In June 2010, the MOEF commissioned a comprehensive cumulative impact assessment of the impact of hydropower projects (actual and planned) on the Alaknanda and Bhagirathi Rivers. Two institutes of national standing, the Indian Institute of Technology at Roorkee (IITR), and the Wildlife Institute of India (WII) at Dehradun, were tasked with carrying out different aspects of the cumulative impact assessment. The two institutes delivered their analytical outputs and recommendations in keeping with their terms of reference over the period April 2011 to April 2012, and their findings have informed project design.</p> <p>With respect to this study the NGT decision noted,</p> <p>"It is evidenced from the material papers on record that IITR report looks mostly on physical and social aspects in greater details whereas the <i>interim report</i> of WII gives consideration to aquatic and terrestrial ecology only...Undoubtedly, in Indian context, the concept of CIA is an emerging subject area and due</p>

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		to lack of available database, a lot of constraints are posed in conducting CIA; and in the instant case, we sincerely appreciate the efforts put forward by the two leading institutions of the country namely, IITR and WII in producing the voluminous reports with lot of primary database."
<b>OP 4.04 Biodiversity and Critical Habitat</b>		
11.	<p>The site of VPHEP supports the Cheer Pheasant which is an evolutionary relic. The Wildlife Institute of India study [Assessment of Cumulative Impacts of Hydroelectric Projects on Aquatic and Terrestrial Biodiversity in Alaknanda and Bhagirathi Basins, Uttarakhand, Wildlife Institute of India, May 2011] recognizes that Vishnugad-Pipalkoti project will lead to extinction of the Cheer Pheasant (Page 76). The area is also habitat to the Smooth-Coated Otter (Page 72). It is also on the migratory path of the mahaseer fish.</p> <p>Precautionary approach requires that the site may not be disturbed in view of the site being habitat to endangered Cheer Pheasant and Otter. WB Staff have not considered this</p> <p>The site of VPHEP is liable to be classified at Critical Natural Habitat in view of above.</p>	<p><b>No part of the Alaknanda River is classified as a critical natural habitat. On the basis of the EA, an EMP was agreed that is adequately funded by THDC.</b></p> <p><u>Cheer Pheasant:</u></p> <p><b>The WII study that is cited does not claim that VPHEP will lead to the extinction of the Cheer Pheasant or any other species.</b> With respect to the Cheer Pheasant, the report states that the VPHEP "<i>project area has predominantly secondary scrub and steep grassy slopes on either bank that are habitats for the endangered cheer pheasant....These vegetation categories have long been subjected to intensive cutting and annual cool season burning. Presently, the distribution and population status of cheer pheasant in this area is very poor, largely due to habitat degradation and loss as a result of increasing anthropogenic pressures and developmental activities in the area.</i>" (p. 64).</p> <p>The final WII report (April 2012) notes that VPHEP falls within "the distribution range of Cheer pheasant" but does not indicate the sub-basin in which VPHEP is located (Alaknanda sub-basin II) as a primary habitat of the Cheer pheasant.</p> <p>The EA did not identify the presence of the Cheer Pheasant in the project immediate influence area (500 m all around the project affected areas) or the project influence area (determined to be an area 7 km all around the project sites). Neither the bird surveys conducted as part of the EA (which included field sightings as well as habitat surveys), nor the consultations with villagers (including village elders) suggested the presence of the Cheer Pheasant in the project area. In addition to surveys and consultations, the assessment considered available secondary data including forest census data of the Badrinath and Kedarnath divisions of the state Forest Department. Secondary data sources also did not identify the presence of the Cheer Pheasant, although they did note the presence of other members of the pheasant family, including the Monal and the Kokal (the conservation status as per the IUCN Red List for both of these species is "Least Concern"). Another independent primary survey consulted for the EA, also did not include the Cheer pheasant as being sighted in the project influence area (M.S. Bisht, B.S.Kathait and Anoop K. Dobriyal, Department of Zoology, HNB Garhwal University Campus, Pauri Garhwal - 246 001, Uttaranchal titled, "Some Records of the Endangered Cheer Pheasant in Garhwal, Central Himalaya", published in ENVIS Bulletin Vol 10(1): Himalayan Ecology (2005).</p> <p>Nevertheless, in order to improve the protection of habitat of the</p>



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		<p>identified birds, the EMP includes actions that support the reduction of the consumption of wood and fodder by communities in the project area.</p> <p><u>Otter:</u></p> <p>With respect to the otter, the WII report cited states that “the only aquatic mammal reported in the basin was otter but its distribution is doubtful nowadays” (p. 72), and the report does not mention otters in the review of the wildlife in the VPHEP zone of influence.</p> <p>The final WII report (April 2012) notes the possible presence of otters only in the lower Alaknanda sub-basin (downstream of Karnprayag which is about 50 km downstream of VPHEP) and in the Ganga River (formed by the confluence of the Bhagirathi and Alaknanda at Devprayag some 150 km downstream of VPHEP); it further notes that “there was no direct evidence [of the otter] found here during this study.” (p. 107).</p> <p><u>Mahaseer:</u></p> <p>The EA identifies the mahaseer as a fish species of significance in the influence area of the project. Detailed fish surveys were conducted at different locations of the river. These were augmented by interviews with local villagers including people engaged in recreational fishing.</p> <p>The primary survey consisted of sampling at six sites (S0, S1, S2, S3, S4 and S5) identified in the stretch of the project area, sampling site (S0) was located upstream of the dam site at the confluence of the Alaknanda and Dhauliganga rivers at Vishnuprayag. Four sampling sites were located between the dam site and the power house site, while the sixth sampling site (S5) was selected downstream of the site of the powerhouse on the Birahiganga river near its confluence with the Alaknanda river. The sampling was conducted during the period from November 2008 to May 2009. A detailed list of fish species, their local names and conservation status as per the Indian National Bureau of Fish Genetic Resources is included in the EA.</p> <p>Primary data collection for the EA as well as the review of secondary data indicated that two subspecies of the mahaseer (the <i>tor tor</i> and <i>tor putitora</i>) were present in the Alaknanda downstream of its confluence with the Birahiganga, that is, below the project area. The mahaseer was also found in other tributaries of the Alaknanda downstream of the tail race tunnel, that is, below the project area. No evidence of the mahaseer was found at sampling site S0 (immediately upstream of the proposed dam), S1 (at the proposed dam site) or S2 (immediately downstream of the proposed dam). The mahaseer was also not found upstream of the proposed outfall of the tailrace channel. Further, no known earlier study suggests the presence of any of the subspecies of the mahaseer upstream of VPHEP dam.</p> <p>As no evidence of the mahaseer was found in the course of primary investigations carried out under the EA, nor in historical data available for this stretch, the EA concluded that the project</p>

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		<p>will not have any impact on the mahaseer and its migration route (up into the tributaries below the tail race tunnel). However, to contribute to the larger objective of the conservation of migratory fish, the EMP includes a Fish Management Plan which proposes various options for the mahaseer and snow trout, to allow for the environmental management of the project to adapt to unforeseen impacts on these species.</p>
<b>Aquatic Biodiversity</b>		
12.	<p>The Vishnugad Hydro-electric Project will have negative impact on the aquatic biodiversity. The need is to save this biodiversity by removing the existing dams and not to create more dams.</p>	<p><b>The possible impacts on aquatic biodiversity have been comprehensively assessed in the EA and there is no evidence to suggest that there will be any negative impact on critical aquatic biodiversity. The EMP prepared on the basis of the EA is fully budgeted and contains several provisions aimed at proactively preserving aquatic and terrestrial biodiversity in the project stretch.</b></p> <p><b>In addition to these measures, the project's required environmental flow of 15.65 cumecs means that water flows that will always be available to support aquatic life –even at the time of year when the flows are naturally lowest.</b></p> <p>After the GOI requested World Bank support for VPHEP in July 2006, the Bank reviewed the impact assessment work that had been carried out by THDC and identified a number of additional studies needed to supplement the original project EIA. With respect to biodiversity these studies included a study of aquatic ecology and assessment of the terrestrial biodiversity impacts of the project, including a supplemental study of project impact on the Kedarnath Wildlife Sanctuary. The eastern boundary of the Kedarnath Wildlife Sanctuary, which was established primarily as a sanctuary for the Himalayan Musk Deer, falls in the valley adjacent to the Alaknanda River Valley. The distance from this boundary to the nearest surface project infrastructure, the diversion dam, is approximately 5.2 kilometers “as the crow flies”; the terrestrial distance is somewhat greater as a result of the steep valleys that are characteristic of this region. Mitigation measures for impacts on wildlife have been incorporated in the EMP and will be revised as needed on the basis of monitoring.</p> <p>All of the studies, investigations and consultations carried out in the course of the EA process are reflected in the final consolidated EA/EMP which was presented in the project area at a public hearing on September 13, 2009 and disclosed on the THDC website and through the WB Info Shop on September 14, 2009.</p> <p>The impacts on fish life in the river might not be significant given the relative paucity of the fish population, but unforeseen impacts need to be compensated. The Fish Management Plan prepared in consultation with the Uttarakhand State Fisheries Department will include: setting up of a hatchery for snow trout; steps to improve the propagation of mahaseer; measures to improve vegetation cover on the banks of the Birahi River which has been identified as the habitat of vulnerable fish species; supporting the</p>

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		<p>ongoing efforts of relevant fisheries' institutions to divert the migration route of the mahaseer to the Birahi River; and controlling extraction of sand, pebbles, gravels and stones from the Alaknanda River. The EMP includes a budget of INR 11.4 million for such activities.</p> <p>Potential impacts on aquatic and terrestrial biodiversity in the Alaknanda and Bhagirathi basins have also been studied in the cumulative impact assessment commissioned by the GOI. On the basis of the recommendations of that assessment, the environmental flow regime for VPHEP was increased through a revision of the project environmental clearance in June 2011, and the GOI reserves the right to further amend the environmental flow requirement in the future.</p>
<b>Health and Safety</b>		
13.	<p>River water will be released at any time of the day for generation of electricity. This makes the water current in the river uncertain and often causes deaths downstream. This has also led to landslides making the rim very dangerous. No matter how many rules are made, the truth is that water is released according to the needs of the project.</p>	<p><b>Necessary emergency procedures and protocols will be put into place before the project begins operations. The project is compliant with the appraisal stage requirements of OP 4.37, Safety of Dams, and the developer has prepared the Dam Safety Plan required under OP 4.37, which includes Quality Management, Reservoir Operation and Maintenance, Safety of Dam and Other Structures and Emergency Preparedness Plan. The project is not yet under construction and these are the relevant safety requirements for this stage of project development.</b></p> <p>During the monsoon, the plant will run most of the time at full load or close to full load, with very limited discharge variation. During the low flow season, it is envisaged that the plant will be operated to provide electricity to meet peak demand in the morning and in the afternoon/ evening and releases of water will therefore generally be predictable. However, THDC will also make sure that each episode of water release is preceded by adequate public notice, including warning alarms. Actual operating rules aiming at ensuring public safety in all circumstances will be further refined before the operation phase starts.</p> <p>In the course of project preparation THDC carried out a number of technical studies aimed at ensuring the safety of the project design and operation, including: (i) a study of slope and reservoir rim stability; (ii) a stability analysis of the dam abutments, intake area and tailrace outlet area; and (iii) seismic analysis of the dam foundation. These studies were reviewed by the Dam Safety POE, which includes national and international experts. Adequate measures are in place to ensure the safe operation of the plant.</p>
14.	<p>The reservoir made by this project also causes fog and diseases. It also negatively affects the land around the reservoir.</p>	<p><b>There is no basis to assert that the reservoir will cause the spread of diseases or create fog. The project has yet to begin construction and the project design includes a small reservoir that will be able to store up to 5 hours of average flow, with an average residence time of 1.75 hours, neither of which is sufficient time to create any health impacts.</b></p> <p>The dam site and reservoir are in a steep gorge which has no</p>

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		<p>human settlements or land used by the communities in the project area.</p> <p>The rise in the water level in the reservoir will impact only the walls of the gorge. Slope stability studies have been carried out and the impact of the slopes will be mitigated through engineering and operations measures identified with the guidance of the Dam Safety POE.</p>
15.	<p>Thousands of people are engaged in construction work. They live in the same place. The dirt and unhygienic conditions has resulted in an escalation in the spread of diseases. Since most of the workers are immigrants, this movement of people also has an effect on the local culture, and environment for which there can be no compensation.</p>	<p><b>The main works contract will require comprehensive and clearly defined obligations of the contractor to maintain adequate, hygienic and safe conditions at the work site as well at the labor camps.</b></p> <p><b>The main Engineering, Procurement and Construction (EPC) contract has not yet been awarded; and there are no construction workers at site other than a small number engaged in small-scale advance works. The EMP imposes additional management requirements of relevance to ensuring safe and hygienic conditions at site, including HIV/AIDS prevention measures.</b></p> <p>In anticipation of the influx of labor into the area once the main construction contract is underway, provisions have been included in the main contract to minimize the negative impact on the local population of the sort alluded to in this comment. The General Conditions of the contract cover, among other things, the contractor's obligations with respect to: safety procedures; security of the site; staff and labor issues including supply of water and foodstuffs; festivals and religious customs; facilities for staff and labor; conduct; etc. Section VI-A-3 of the contract "Environmental Management Requirements" lays out in detail the contractor's obligations to with respect to social and environmental management. These provisions were formulated on the basis of extensive consultations with project affected communities and in keeping with international best practice.</p> <p>The labor force that will work on the construction of VPHEP will be housed in designated camps carefully sited at two locations (one near the dam site and the other near the powerhouse) to minimize their impinging upon the local communities and the local environment. Strict conditions have been laid out in the contract to ensure that these camps are run in a sensitive manner and maintain the required standards of health, hygiene, safety and security. The contractor is responsible for provision of water and fuel for cooking, and is obligated to dispose of all garbage and other solid and liquid waste properly. The workers' kitchens will use liquefied petroleum gas so that there is no foraging for firewood. In response to a voiced concern from the villagers, the labor force will also not be allowed access to community forest lands to ensure the safety of local women collecting fodder and firewood. The contractor is also obligated to manage health issues at site and to carry out regular awareness-raising activities related to matters of health, respect for the local culture and conflict resolution.</p>

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<b>Other Environmental Impacts</b>		
16.	The mountains are weakening due to the digging of tunnels in the whole river valley. An increase in landslides in the region, are a direct consequence of this. The tunnel being built for this project will also have the same consequences.	<p><b>There is no scientific evidence that the tunneling associated with the project can lead to an increase in the incidence of landslides. The volume of tunneling anticipated for VPHEP is minimal and will have no impact on integrity of the surrounding mountains.</b></p> <p>In the Alaknanda River Valley at present there is only one completed tunnel (the Vishnuprayag Project) and one tunnel under construction (the Tapovan Vishnugad Project).</p>
17.	On the Richter scale, Uttarakhand comes in the IV & V seismic zone. This is considered a high-risk zone. Thousands of people have been killed as a result of these earthquakes. It is a known fact that the risk of earthquakes increases with the building of so many dams. Dams also increase the magnitude of earthquakes. Why are we inviting trouble in the Alaknanda Ganga Valley?	<p><b>There is no evidence that the project will lead to increased seismic risks of the region.</b></p> <p>Detailed seismic analysis was carried out in the course of project preparation. The project design has been cleared by the Indian National Committee on Seismic Design Parameters and has been reviewed by the international Dam Safety POE who gave additional guidance on aspects of the design. To date, the POE has undertaken four visits to the site in addition to numerous visits to THDC headquarters at Rishikesh and will continue to guide the developer during the construction period.</p>
<b>Livelihoods and Social Impacts</b>		
18.	Due to the explosions caused by digging of tunnels in Run-off-the river projects, the sources of water are drying up. In most cases no solution is provided by the project proponent. In Hatsari Tok hamlet of village Haat, 6 sources of water have already been affected but till the time this letter was written, no alternative system for providing water to the affected people has been created.	<p><b>Management is of the view that THDC has made all reasonable efforts to address concerns raised by residents of Hatsari Tok hamlet arising from alleged impacts during geological exploration, and that THDC has taken adequate steps to minimize the negative impact of the project on the hamlet (see below).</b></p> <p><b>The project has established functioning and credible mechanisms for addressing project-level grievances. In keeping with the National Policy on Resettlement and Rehabilitation (R&amp;R) (2007), the Government of Uttarakhand has appointed the District Magistrate of Chamoli district as the Administrator for land acquisition and R&amp;R, and has established a grievance redress committee. The GRC includes a project affected person from each of the affected villages, a representative from the NGO and THDC's project-level social manager as secretary. The GRC has met 13 times since its inception in March 2009 to review formal requests, and it has also held 36 informal meetings. The project-level issues raised by the Requesters have not been presented before the GRC by any party.</b></p> <p>Besides this formal grievance redress mechanism, elected</p>

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		<p>representatives from the project affected villages regularly interact with the R&amp;R Administrator and THDC on matters related to mitigation of adverse impacts and developmental activities in the villages.</p> <p>In response to a complaint from residents of Hatsari Tok about their water supply being disrupted by geological survey work, THDC carried out geological investigations which failed to establish a link between the excavation of the exploratory drift and the reduction of water supply at the hamlet. THDC has repeatedly offered to finance a water supply scheme for Hatsari Tok and offered the contract to a cooperative formed by the villagers. The District Magistrate of Chamoli District has actively facilitated discussions between THDC and the villagers. The last meeting in which the District Magistrate participated took place on March 15, 2012. THDC has subsequently reiterated its offer to enhance water supply in the village. The villagers of Hatsari Tok, however, have not responded to THDC's offer.</p> <p>In addition, the total land acquisition requirements from Hatsari have dropped to 0.6 ha (from the original plan of 8 ha), which is owned by two households that have already accepted compensation. THDC has also changed the alignment of the access tunnel to the powerhouse in March 2012 to mitigate the alleged impacts of the project on the hamlet.</p> <p>Efforts have also been made to encourage the villagers of Hatsari hamlet to access the formal GRC but, unlike other project affected communities, they have preferred not to utilize it.</p>
19.	The dam will reduce the benefits people have from the river. For example, the fish and sand got from the river will no longer be available.	<p><b>None of the households reported a dependence on the river for their livelihoods.</b> The SIA included a census survey of all project affected households and, among other questions, investigated the reliance of people in the project area on sand quarrying and fishing. None of the households reported a dependence on the river for sand quarrying or fishing, as the river flows in a deep gorge for most of the project stretch and access to the water is difficult and dangerous. These two activities were also not reported as sources of household income. Recreational fishing has, however, been observed in the project stretch.</p>
20.	Due to the dust arising from the dam construction site, fodder for animals is getting destroyed. This is also affecting agricultural land and the forest cover of the state.	<p><b>The EMP includes provisions on emission and dust control, which will be put in place once the project is under construction. The contractor (when eventually engaged) will be required to prepare an Emission and Dust Control Plan, in accordance with the requirements of the EMP and the contract documents.</b></p> <p><b>Although the loss of access to <i>van panchayat</i> lands is minimal (around 2 percent of the total), the project will pay every household dependent on the community forest and grazing land 100 days of minimum agriculture wages for a period of five years to allow them to purchase fodder and fuel wood for the period required for maturity of new plantation.</b></p>

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		The project is not yet under construction.
21.	The rise in temperatures due to the dams is also affecting local crops and plants.	<b>The project under consideration has not yet been constructed or begun construction. There is no evidence of a rise in temperature due to dams in Uttarakhand.</b> The comment is of a general nature and seems to refer to the debate about large dams in other parts of the world; large dams are very few in number in Uttarakhand and there are none existing or planned on the Alaknanda River.
22.	The local culture and women's freedom are the worst affected. There can be no compensation for this.	<p><b>Consideration of the project impacts on women (their safety, mobility, interest in livelihood diversification and other aspects) and on local culture was central to the assessment of the project's social impacts.</b></p> <p><b>In accordance with the EMP, THDC will compensate households for food and fodder losses, and the contractor is contractually obligated to undertake measures for securing safety of women living in villages around the labor camps.</b></p> <p>From the start of project preparation THDC has consulted extensively with women in the project area to better understand their concerns and needs, and numerous measures have been incorporated in the RAP as well community development activities to address these concerns. The frequent consultations have been organized to accommodate the time and location best suited to the women in the project area and were facilitated by a woman social worker.</p> <p>During consultations with women, the main concerns expressed centered on possible loss of access to <i>van panchayat</i> (community forest) land for collecting fuel and fodder (a daily chore for most village women) and loss of safety arising from the influx of construction labor.</p> <p>In addition to compensation for food and fodder losses, the civil works contractor will be contractually obligated to undertake measures aimed at securing the safety of women living in villages around the labor camps. The contract document contains specific provisions (like fenced camps, no use of firewood, etc.) to prevent the labor force from accessing community forest lands to ensure the safety of women collecting fodder and firewood.</p> <p>The NGO retained by THDC has helped women in project affected villages set up SHGs and is providing training in income-generating activities such as improved agriculture practices, vermi-composting, dairy farming, poultry rearing, napier grass production, etc. Some of the SHGs have already started earning a profit. THDC is offering a study scholarship for girls from project affected families to achieve 100 percent literacy among women, as well as offering special assistance to the children of widows.</p>
<b>Other Issues</b>		
23.	Since Uttarakhand is in the middle of the Himalayas, its environment remains	<b>The project is not contributing to deforestation. On the contrary, the project will undertake compensatory afforestation for every hectare of forest, grazing and van</b>

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	<p>comparatively cooler. The deforestation caused by the building of dams has led to an increase in temperature which is also contributing to the problem of global warming. The emission of methane gas here will also add to the problem. If we look at the emission of green house gases from reservoirs in the world, India's share has gone up by 17%. Reservoirs created by dams are a part of this problem.</p>	<p><b>panchayat (community forest) land transferred to the project.</b></p> <p><b>As stipulated in the first stage forest clearance given by the MOEF, the project, which needs 100 ha of forest land, will need to facilitate compensatory afforestation in 120 ha. This compensatory afforestation will be financed by THDC and carried out by the State Forest Department.</b></p> <p>Further, the project will plant 12,306 trees as part of the larger green belt. The EMP also includes measures such as preventing disturbance to forest and wildlife during implementation of the Pproject, proper disposal and management of muck and debris, and redevelopment of muck disposal sites and quarries.</p> <p>In addition, a detailed project-level CAT plan, also to be implemented by the State Forest Department, has been prepared to conserve and enhance the degraded patches of the treatable catchment. Compensatory afforestation and CAT are legal obligations of the project developer and are reflected in the EA/EMP.</p> <p><b>With respect to the claim about methane emissions, there is no evidence that dams in the Himalayas are causing increased methane emissions.</b> The methane emissions that are noted from reservoirs are more typically from a combination of relatively shallow reservoirs with very long residence times (on the order of months or above) with large submerged biomass, in tropical and subtropical locations. The small pondage created by this project responds to none of these criteria. The middle Himalayas have a moderate or Alpine climate and the small, daily storage that is associated with the project is characterized by deep and rather cold waters that flow on a daily basis. There are no large storage projects in operation or planned on the Alaknanda River. Given the steep, rocky nature of the gorge at the project site, there will be little vegetation to decay in the small storage pondage.</p>
24.	<p>Cracks appear in the houses under which the tunnel passes. As a result of this, the houses become weak and collapse in very light earthquakes. Cracks appear in the land also. No compensation is paid for this. In the same hamlet Hatsari Tok of village Haat many houses have developed cracks but till the time this letter was written, no action had been taken</p>	<p><b>The main construction works have yet to start at VPHEP and no tunnel has yet been excavated. An exploratory drift (a horizontal shaft) for the power house has been excavated. THDC has made all reasonable efforts to address concerns raised by residents of Hatsari Tok hamlet arising from alleged impacts during the geological exploration, and has taken adequate steps to minimize the negative impact of the project on the hamlet.</b></p> <p><b>The project has proactively anticipated any impacts that might be associated with geological exploratory works and adequate measures are in place to minimize any related impacts and to compensate for them, if they happen.</b> As noted above, the THDC-commissioned third party review found no evidence to link the cracks at Hatsari Tok to the geological exploratory works. As a gesture of corporate responsibility, THDC has still offered to repair these cracks, but their workers were denied access to the village.</p> <p>Construction related impacts (largely in the form of cracks) are a</p>



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		<p>common concern for people living in the areas affected by hydropower projects. In recognition of this genuine apprehension of the villagers, THDC committed to taking the following measures:</p> <ul style="list-style-type: none"> <li>• Use of a Tunnel boring machine to replace the traditional and much more widely practiced “drill and blast” method of tunneling which is more intrusive in terms of noise and intensity (tunnel boring machine also has environmental and technical benefits).</li> <li>• Insurance of all houses in a 500 m corridor of impact along the alignment of the headrace tunnel to ensure that any damage to structures is efficiently and adequately compensated. The NGO retained by THDC has completed a physical survey of all structures in 12 villages that lie along the headrace tunnel and videography of the houses and structures will begin shortly. The construction of the headrace tunnel is scheduled to begin a year after the award of the main civil works contract, which has yet to be awarded.</li> <li>• THDC commissioned IITR to carry out the study “Impact of Blasting on Stability of Terrain and Civil Structures in and around Haat Village due to Underground Excavations, Vishnugad Pipalkoti Hydroelectric Project, Garhwal Himalaya” (March 2009). The study concluded that in Haat village “no damage due to blasting in nearby underground structures is likely.” However, out of respect for people’s apprehensions, the study recommended blasting parameters and protocols designed to minimize disturbances arising from the blasting.</li> </ul>
<b>OP 10.4 and OMS 2.20 Economic Analysis and Project Appraisal</b>		
25.	<p>We have not learnt any lessons from dams built earlier. These projects transfer access of natural resources from the hands of the poor to the rich. The local people also have to bear the negative impact of such projects on the environment while the electricity reaches the urban centers. There has not been any overall assessment of the impact on the local people.</p>	<p><b>The fundamental rationale for Bank engagement in VPHEP was to help build the capacity of THDC to design, construct and operate sustainable hydropower projects consistent with international best practice.</b></p> <p><b>The preparation of VPHEP demonstrates the incorporation into project design of the lessons learned over recent decades from hydropower development and operation in India and other countries. Incorporation of best practices in social, environment and technical aspects of hydropower has been at the heart of the project engagement.</b></p> <p><b>The success of these efforts in the case of VPHEP has been acknowledged by the NGT, by people in the project area, by the Ministry of Power and by other stakeholders who are familiar with the project.</b></p> <p><b>The project design includes numerous benefits for communities in the project area that exceed Bank and Indian statutory requirements. In this remote area of India, alternatives for economic development are limited and local people have repeatedly expressed their support for the</b></p>

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		<p><b>project.</b></p> <p>In terms of planned benefits for local communities, two categories of local development funds will be available: (i) dedicated funds in the amount of INR 310 million that will be used for the 18 affected villages over five years during the construction period; and (ii) as recommended by the National Hydro Power Policy (2008), one percent of the power generated by the project (or the monetary equivalent) to fund a Local Area Development Fund which will be made available in the form of an annual payment over the life of the project. For the first category, investment plans will be prepared by the communities. Civil works will be carried out by contractors or by the <i>gram panchayats</i> with monitoring by the beneficiary community. In addition, during the construction period, contracts for small civil works will to the extent possible be given to eligible project affected people. THDC will also provide 100 kWh of free electricity per month from VPHEP for a period of 10 years to affected households.</p> <p>In addition to the project-specific R&amp;R Policy and RAP, THDC has adopted a Corporate Social Responsibility Policy for the implementation of a community development scheme. The scheme will finance community development in the vicinity of THDC's operating stations where construction has been completed and rehabilitation and resettlement issues addressed. Meanwhile, THDC, in consultation with the project affected communities in the VPHEP area, has identified certain community development activities and is implementing them through separate corporate funding. In order to implement the activities, THDC has established an NGO which is responsible for finalization of activities, funding and monitoring of the utilization of funds and creation of community assets.</p> <p>The project also provides benefits on the national level. An estimated 350 million Indians are without reliable access to electricity today and the majority of these are poor people living in rural India. Households' lack of access to electricity is highly correlated with poverty and poor human development indicators. In addition to the direct impact on households of the lack of electricity, the general impact on the economy of insufficient power supply is significant and is well documented in many countries. India's electricity deficiency has been identified in all investment climate assessments; a recent World Bank study, <i>More and Better Jobs in South Asia</i>, highlighted it as the single most significant barrier to investments and creation of jobs.</p> <p>Following the August 2012 power system failure in most of northern, eastern and northeastern India, there has been widespread documentation of the household-level and national economy impacts of the low access and poor quality of supply of power. For example, "For India, two days in Bharat", Hindu, 3 August 2012.</p>
26.	The project imposes huge environmental costs on the people while providing	<p><b>As conveyed earlier, the environmental impacts of the project have been comprehensively examined in the consolidated EA and will be addressed through the EMP.</b></p>

No.	Claim	Response
	benefits to the well-off sections and is against the WB Mission.	<p><b>This project-level investigation has been complemented by the cumulative impact assessment of hydropower development on the Alaknanda and Bhagirathi Rivers that was commissioned by the MOEF, the recommendations of which were incorporated in the design for VPHEP.</b></p> <p>With respect to benefits, in addition to the points made in Item 25 above, it is worth mentioning that media accounts in recent months consistently show support for VPHEP by people living in the project area. Over the last two years since the debate on the development of the upper reaches of the Ganga has been ongoing, people from the project affected villages have conducted street protests and hunger strikes; sent delegations to the district magistrate and the Chief Minister; and petitioned the national government through their Member of Parliament to allow the development of hydropower projects, including VPHEP. There are few economic opportunities in this remote mountain region other than those afforded by the seasonal religious tourism (active for half a year at best); the communities in the area thus have legitimate expectations of induced development from projects such as these.</p>
27.	The river resource may be used inefficiently because the benefit from free flow may be much greater than the benefit from electricity generation if the latter is valued correctly.	<p><b>The assessment of alternatives as required under OP 4.01, Environmental Assessment was undertaken, supported by numerous technical and siting alternatives, including the “no project” scenario.</b></p> <p>The Bank agrees that valuation of the costs and benefits of a proposed investment is central to the assessment of the project. The economic analysis that was carried out for the project was in accordance with standard Bank practice and was based on widely accepted professional methodology and was peer reviewed by an economist known for his work on valuation of environmental externalities.</p>
28.	WB Staff has ignored the problem of aesthetic value instead of formulating policy to deal with it. It has failed to collect relevant data on use- and non-use values. Survey of non-use value has not been undertaken.	<p><b>The EA/ EMP considered the use value (direct and indirect) of the river, and analyzed the potential effect of the project on these values. No study of the non-use value is required under the Bank operational policies triggered by the project.</b></p> <p>The lack of adequate information on the use values of the river was identified as a gap in the Bank’s initial review in 2006 of the project preparation that had been carried out by THDC. Based on this identification of gaps, the terms of reference for the additional studies agreed between THDC and the Bank specified the need to collect information on the use values (direct and indirect) of the river and to analyze the potential effects of the project on these values. This study is included in the consolidated EA/EMP for the project.</p>
29.	Linking of environmental assessment with economic analysis requires that environmental factors be assessed in monetary terms as far as possible and a	<p><b>As a general statement, the Bank agrees that environmental factors should be incorporated in the economic analysis.</b> The challenge lies in the application of this general principle, which requires resolution of complex methodological and data problems. The EMP identifies and internalizes readily measurable environmental impacts and the budget of the EMP, which</p>

No.	Claim	Response
	comprehensive analysis undertaken thereafter.	incorporates measures to mitigate the expected environmental impacts of the project, is included as a cost in the economic analysis. In addition, the monetary or financial impact of the Government-mandated environmental flow requirement itself is incorporated in the cost-benefit analysis.
30.	There is a clear requirement to undertake a comprehensive analysis of economic benefits and environmental costs. This has not been done. If done, the costs by far outweigh benefits and the VPHEP does not pass the test. A comprehensive analysis will show that the net benefits from VPHEP are much less than those from free flow of river.	<b>The project is consistent with OP 10.04, Economic Evaluation of Investment Operations, which requires that projects funded by the Bank promote the development goals of the borrower country.</b> A comprehensive economic analysis was carried out using professionally accepted methodology, and was peer reviewed by an expert economist. The economic analysis showed that VPHEP has a positive economic return.
31.	WB has not evaluated whether VPHEP promotes development. It is specifically mandated that WB Staff will conduct such economic analysis. WB Staff have informed us that "The project economic analysis was peer-reviewed by an economist who is an acknowledged expert on evaluating environmental aspects of economic analysis and who has published widely on this topic, including specifically on costing methodologies." ( <b>Annexure 3</b> ). However, WB Staff have not provided us with a copy of this review despite a request being made in the rejoinder to the above note.	<b>A project's contribution to development is assessed in the appraisal process. The Bank carried out a comprehensive appraisal of VPHEP and concluded that it will make a positive contribution to development in India on both the national and local levels.</b>  The Bank provided Mr. Jhunjhunwala with the full economic analysis (the model in an Excel spreadsheet) in May 2012.
32.	Examining choice of beneficiaries requires WB Staff to assess impact of the project on different sections of the society. This has not been done thereby hiding the negative impact of the project on the poor people.	Please refer to Items 25 and 26

No.	Claim	Response
33.	The future benefits of the project have not been discounted to present values as per statement filed by THDC with Ministry of Environment and Forests. The cost-Benefit Ratio becomes less than 1 once this is done.	The economic analysis was based on net present value analysis in which future costs and benefits are discounted to present values.
34.	The life cycle analysis of the project, we believe, does not examine scenario in which price of electricity declines.	<b>In general, the internalization of environmental and any other negative externalities into the costs of a power generation project would lead to an increase in the cost of electricity.</b> In fact, this is demonstrated by VPHEP, for which the GOI increased the environmental flow requirement from 3 cumecs to 15.65 cumecs (overall fixed costs remain the same while the output, based on water, is reduced). In the specific conditions of India and its energy supply options, the scenario of a decline in the future price of electricity is extremely unlikely and it would not be wise to base any development plan/decisions on such a hypothesis.
35.	A sensitivity analysis as stipulated has not been done as per our information.	<b>The economic analysis that was carried out for the project included a sensitivity analysis</b> and this was shared with Mr. Jhunjhunwala.
<b>Religious and Cultural Considerations</b>		
36.	River Ganga is a critical natural habitat because it is recognized as sacred by millions of Indian people but WB staff has not taken this into account.	<p><b>The Ganga is indeed considered a sacred river by many in India. However, it is not a critical natural habitat, nor has the basin been declared such by the GOI.</b> The Vishnugad Pipalkoti Hydroelectric Project on the Alaknanda River, a tributary of the Ganga River, and is also not classified as a critical natural habitat.</p> <p>The Bank team has remained fully respectful of the religious and cultural significance of the Ganga and generally of the region in the course of its due diligence. The SIA and EA, which included consultations with local communities, did not reveal the presence of any site of wide religious significance within the project area.</p> <p>The Bank acknowledges and appreciates that Indian society is currently debating the larger issue of the trade-offs implicit in the development of the Ganga basin (for energy generation as well as other uses including irrigation) as well as the high-profile efforts to clean the Ganga. These concerns have figured among the priorities of policy-makers in the GOI in recent years as reflected, for example, in the creation in 2009 of the NGRBA headed by the Prime Minister, and also in the commissioning by the MOEF of the cumulative impact assessment of hydropower development on the Bhagirathi and Alaknanda rivers. (As indicated in the cumulative impact assessment, the VPHEP does not result in any significant conversion or degradation of critical natural habitats.)</p>

No.	Claim	Response
<b>Tehri Reservoir</b>		
37.	<p>With the coming of these projects, the flowing water of the river changes into stagnant reservoir water that reduces the oxygen quantity in the water. Tehri reservoir water is said to be unfit for drinking.</p> <p>Fauna have also been adversely affected because of these projects in Uttarakhand. The Tehri Dam reservoir has caused the destruction of the natural habitat of several species. Hence, the terror of monkeys, pigs, bears and tigers has increased in populated areas.</p>	<p><b>This comment does not pertain to VPHEP or any other projects on the Alaknanda River.</b></p> <p><b>The Tehri Dam Project is a large multi-purpose project on another river, the Bhagirathi, and does not involve the Bank.</b> The Tehri Dam reservoir has a gross storage of 3,540 million cubic meters and water in this reservoir has an average residence time of 50 days.</p> <p>VPHEP, on the other hand, is designed as a run-of-river project with a small reservoir of gross storage 3.63 million cubic meters in which water has an average residence time of 1.75 hours. There will be no significant, long-term impoundment of water and the water will flow almost constantly on a daily basis.</p> <p>Moreover the water from Tehri reservoir (not financed by the Bank) is used in part to supply drinking water to the city of Delhi and accounts for a significant portion of the city's drinking water supply.</p> <p>This comment about fauna also does pertain to VPHEP.</p>
<b>Other Policies Cited by the Requesters</b>		
38.	<b>OP 1.00 Poverty Reduction.</b> The poor in the project area are negatively affected.	<b>The project design includes numerous benefits for communities in the project area that exceed Bank and Indian statutory requirements.</b> See response to Items 25 and 26.
39.	<b>OP 4.00 Piloting the Use of Country Systems</b>	This OP is not applicable.
40.	<b>OP 4.07 Water Resources Management</b>	VPHEP is not intended as a multi-purpose dam, nor does it facilitate flood control.
41.	<b>OP 9.0 Program for Results</b>	This OP not applicable.
42.	A comprehensive analysis will show that the net benefits from VPHEP are much less than those from free flow of river.	<p><b>A comprehensive economic analysis was carried out for VPHEP using professionally accepted methodology, and was peer reviewed by an expert economist.</b> The economic analysis showed that VPHEP has a positive economic return.</p> <p>See response to Items 25 and 26.</p>

## ANNEX 2

### **Chronology of Interactions with Mr Bharat Jhunjunwala**

- 17 June 2011 -- Email from Bharat Jhunjunwala to President and Executive Directors – 17 June 2011 – taking issue with PDOs of project as mentioned in the PID
- 24 June 2011 -- Response from Country Director offering additional information and meeting with TTL
- 28 June 2011 – Email from Bharat Jhunjunwala raising 12 points (tunneling, deterioration of water quality, free flow of river, cost-benefit, methane emissions, cumulative impact etc).
- 30 June 2011 -- VPHEP approved by Board
- 13 July 2011 – Petition against VPHEP admitted in the National Green Tribunal; first hearing scheduled for 24 August 2011
- (Internal Bank deliberations and correspondence agreeing that as the case was pending before India's highest environmental court hence not advisable for the Bank to respond to him until after August 24)
- 2 September 2011 – Email from Bharat Jhunjunwala to President complaining of lack of response from the Bank and alleging the PAD was “inadequate and misleading”.
- 9 September 2011 – Email from TTL Michael Haney offering meeting with CD in early October as CD out of country until then
- 10 September 2011 – Email from Bharat Jhunjunwala saying we have challenged project clearance in NGT
- 12 September 2011 – Email from TTL offering that Mr Jhunjunwala convey his concerns to Mr Shankar Sharma who was due to attend the CSO-India Office interactions during the Annual meetings and who had said he was an associate of Mr Jhunjunwala. And reiterating offer of meeting with CD in October
- 13 September 2011 – Email from Bharat Jhunjunwala talking of cost benefit analysis, inadequacies of environment flows as determined by Cumulative Impact Analysis of IIT Roorkee, non-factoring in of loss to cultural and aesthetic values, environment clearance for small toe-of-dam generating unit, mentioning “withdrawal of agreement” with project authorities by one Vishnugad Punarwas Sangharsh Samiti
- 15 September 2011 – Email from TTL asking for additional information on said “withdrawal of agreement”.
- 16 September 2011 – TTL, Sector Manager Energy and Lead Energy Specialist (Michael Haney, Jyoti Shukla and Mac Cosgrove-Davies) meet Shankar Sharma in Washington to discuss the Bank's energy program in India and specifically VPHEP.
- 19 September 2011 – CD and TTL meet Shankar Sharma in Washington on sidelines of Annual Meetings to discuss concerns around VPHEP raised by Bharat Jhunjunwala via Shankar Sharma
- 30 September 2011 – Bharat Jhunjunwala offers dates in mid-October (12-13) and early Nov (2) to meet with CD and others
- 6 October 2011 – Email from Bharat Jhunjunwala thanking TTL's attempts to set up meeting and repeating points of 13 September



- 16 October 2011 – Email from Bharat Jhunjhunwala to RVP saying CD and TTL not responding to his concerns and listing same six points raised in earlier emails
- 17 October 2011 – EXT (Sona Thakur) calls Bharat Jhunjhunwala to fix up meeting – 2 Nov agreed
- 18 October 2011 – THDC Project manager goes to Mr Bharat Jhunjhunwala's house to meet him and understand his concerns
- 2 November 2011 – CD, Ops Advisor, TTL and EXT meet Bharat Jhunjhunwala and Vimalbhai
- 6 November 2011 – Email from Bharat Jhunjhunwala recapping 11 points he had raised during meeting
- 6 November 2011 – email to Bharat Jhunjhunwala thanking him and promising written response
- 24 November 2011 – Email from Michael Haney to Bharat Jhunjhunwala attaching detailed response to concerns raised during meeting
- 24 November 2011 – Email from Bharat Jhunjhunwala asking for meeting in December to discuss his response to Bank's response
- 24 November 2011 – Email from Michael Haney to Bharat Jhunjhunwala offering dates in end December
- 14 December 2011 – NGT decision not to uphold petition from Bharat Jhunjhunwala, Vimalbhai etc demanding stay of forest clearance for VPHEP; NGT commends careful preparation of VPHEP
- 20 December 2011 – Bharat Jhunjhunwala email with detailed rejoinder to Bank's response of November 2011
- 21-26 December 2011 – VPHEP site visit
- 28 December 2011 – Email from Bharat Jhunjhunwala offering dates in January for meeting
- 13 January 2012 – Operations Adviser and EXT meet Bharat Jhunjhunwala – he verbally reiterates in detail all points in his rejoinder of 20 Dec
- 8 March 2012 – Representation to RVP from Bharat Jhunjhunwala
- 13 March 2012 – Acknowledgement of receipt of representation from Bank
- 14 March 2012 – Email from Bharat Jhunjhunwala offering to meet 30 March
- 15 March 2012 – Bank team gets in touch with several signatories of the representation, including Ms Madhu Kishwar, Mr Jaya Prakash Dabral and Mr Faisal Khan, to request for meetings in order to understand their concerns; all three confirm meetings for the next week
- 17 March 2012 – Bank team meets Shekhar Singh, one of the prominent activists who refrained from signing Mr Jhunjhunwala's petition
- 19 March 2012 – Mr Dabral calls to ask for joint meeting of all representation signatories; Mr Bharat Jhunjhunwala calls Bank to repeat request for joint meeting with "someone with decision-making ability to cancel the project". Bank offers meeting with Operations Adviser.
- 20 March 2012 – CD, Operations Adviser and TTLs of Ganga and VPHEP teams meet with Ms Madhu Kishwar, Swami Avimukteshwaranand and environmental lawyer MC Mehta
- 21 March 2012 – Bank team meets Ravi Chopra, non-official member of the National Ganga River Basin Authority (NGRBA) who had also received a request to join the petition but did not sign it

- 21 March 2012 – email sent to Mr Jhunjhunwala confirming meeting with the signatories of representation on 29 March 2012 at CSDS campus in Delhi; Mr Jhunjhunwala circulates it to other signatories of the petition for information
- 23 March 2012 – Bank team meets Ms Kishwar again to brief her and her team in detail about VPHEP
- 29 March 2012 – Bank team led by CD meets with a civil society group that includes six signatories to the representation. The participants were Mallika B Gupta, Madhu Jhunjhunwala, Bharat Jhunjhunwala, Rajesh Dokwal, Vimal Bhai, Faisal Khan, Faiz Ahmed Ansari, Inamul Husan, Ramesh Kumar Mumukshu, J PDabral, Susan Vishwanathan, Briharshraj Tadiyal, Madhu Kishwar. Bank makes presentation on VPHEP; two hour discussion but some civil society members dominate the discussion and representation not discussed in any detail;
- 31 March 2012 – TTL and EXT meeting with prominent civil society activist Dr Shekhar Singh who had also received the representation but had not signed it.
- 3 April 2012 – email from Mr Jhunjhunwala asking for copies of loan agreement, “economists evaluation of loan proposal”, and a formal response to the representation.
- 5 April 2012 – email from Ms Madhu Kishwar containing her correspondence with Mr Jhunjhunwala to the effect that she has withdrawing her name from the representation
- 13 April 2012 – email from Mr Jhunjhunwala to SARVP asking for an appointment in Washington on either 27 April or 30 April
- 16 April 2012 – email from SARVP to Mr Jhunjhunwala expressing regret at not being able to meet on those dates but stressing that the Bank has taken cognizance of his concerns and suggesting he meet again with the TTL
- 26 April 2012 – Email from Jelson Garcia, Asia Program Manager of Bank Information Center to SARVP’s office seeking meeting for Mr Jhunjhunwala with Bank staff
- 28 April 2012 – Email from TTL to Mr Garcia setting up meeting for 30 April
- 30 April 2012 – Acting VP, India CD, and TTL meet Mr Jhunjhunwala in Washington Office; fix up to meet again 7 June in New Delhi when CD will be back in India
- 22 May 2012 – Bank formal response to representation
- 7 June 2012 – Meeting with Mr Jhunjhunwala and a group of civil society activists including Mohan Singh Gaonwasi, Paritosh Tyagi, Kamal Taori, Ajay Singh, Sheela Taori, Asha Bhangare, Vimalbhai, JP Dabral. Bank represented by Operations Advisor designate, co-TTL of VPHEP and EXT. Mr Jhunjhunwala went through Bank’s response point-by-point and expressed his dissatisfaction with it. Dr Tyagi offered some technical design innovations to traditional hydropower projects. Dr Bhangare suggested Bank convene a discussion on technical aspects between civil society, and government officials. Other activists all seconded this. Bank readily agreed to try and organize this with government counterparts.
- 24-26 July 2012 – VPHEP Technical Mission to Rishikesh – discussions initiated with THDC for holding roundtable discussion with stakeholders on technical issues in hydropower
- 3 August 2012 – Notice of Registration of Request for Inspection

## ANNEX 3

### **Annex 3 - Chronology of Bank Team's Interactions with Harsari Residents**

- Before June 2009 (the date of THDC's agreement with the village Haat), the residents of Harsari were part of the Bank's regular interactions with the village of Haat during the missions.
- April 2010 – The Social Development Specialist of the task team met with a group of women near Dhobighat, Harsari, but the women refused to talk to the Bank team until they had discussed with ••••••••, a major landowner from Harsari who resides in Dehradun and an influential community leader.
- 17 August 2010 -- The Bank team, along with a Social Worker of THDC, met a group of women from Harsari at the village entrance. The women raised the issue of higher compensation; their safety during construction and demanded land-for-land. The Bank team informed them about the agreement reached with Haat (which they were aware of) and suggested that they discuss further with THDC in a larger meeting with fuller representation from the hamlet. A tentative meeting was fixed for the next day but later in the day the Harsari residents informed THDC that they would not be available for it.
- 24 December 2011 -- A group of about 20 (-25) protestors came to the hotel where the Bank mission was staying in Pipalkoti. They were led by Mr. •••••• of Harsari hamlet and ••••••, who is associated with the anti-hydro organization, Matu Jana Sanghatana (an NGO opposed to the development of large dams). The main demand of the group related to expanding the list of people eligible to receive the fuel and fodder allowance, but Mr •••••• also raised the issues of impacts on Harsari. The Bank team said it would highlight the issues to THDC and advised the group to discuss the matter with THDC in detail. The team also suggested to the group to utilize the formal Grievance Redress Mechanism<sup>1</sup> to resolve any outstanding issues, and advised them to avail the assistance of the NGO recruited by THDC to serve as interface with the local communities.
- 11 January 2012 – In order to follow up on the issues regarding Harsari that were highlighted during the December 2011 mission and in response to a specific request from THDC to help resolve the deadlock with the Harsari community, the Social Development Specialist and the EXT representative on the VPHEP team travelled to Dehradun to meet with ••••••••. The latter also invited a few other landowners from Haat who were settled in Dehradun. •••••••• reiterated the issues of land-for-land and higher compensation for land.
- 4 July 2012 – Bank team receives an email from Mr •••••• of Matu Jan Sanghatana regarding “compensation of losses faced upto now in Harsari Tok of village Haat”. Bank requested THDC to provide further details.

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<sup>1</sup> Right from the beginning of the implementation of the resettlement action plan (RAP), the social NGO recruited by THDC explained as well as distributed pamphlets on the grievance redress mechanism. The social worker of THDC has also explained the entire process to the hamlet residents.

- Mid July to third week of July 2012 – Several telephone interactions with Mr ..... and once with Mr ....., uncle of Mr ....., to fix up a meeting with representatives from Harsari village either in Rishikesh or Dehradun or at site as convenient. Finally Mr ..... suggested the Bank team visit the site at the end of August when the villagers would be free from sowing their fields.
- 13 August 2012 – Mr ..... of Harsari village called to ask for a meeting with the Bank team in Delhi as he was in town; the Bank team agreed to meet on 16 August 2012.
- 14 August 2012 – Mr ..... called to say he would be accompanied by Mr ..... of Matu Jan Sanghatan.
- 15 August 2012 – Mr ..... called to cancel the meeting.
- 20 September 2012 – A Bank team, comprising Sector Manager Energy, Operations Advisor India Program, Regional Safeguards Advisor, and the VPHEP task team, accompanied by THDC officials including the Project Head and the Senior Manager Social and Environment, met the residents of Harsari in the village. The Harsari residents who attended the meeting included Mr. ...., Mrs. ...., Mrs. ...., Mr. ...., Mrs. ...., Mr. .... and some other residents. The villagers raised issues around their demand of land-for-land in either Rishikesh or Dehradun; compensation for land to the tune of INR 100 billion; cracks developing in the houses and loss of drinking water sources due to geological exploration and compensation for loss of crop.
- 21 September 2012 – World Bank team requested to meet ..... in Dehradun on its way back from the VPHEP site. .... agreed to a meeting on 22 September but cancelled it on the morning of the meeting.

## ANNEX 4

### Meeting between Harsari Representatives and THDCIL officials

Date	Name of Participants	Issue discussed	THDCIL's response / Agreement reached (attach minutes of agreements If any)	Action taken (if any)/Remarks
15.07.2004	<b>THDCIL</b> 1. Mr. ●●●●●●, Senior Engineer 2. Mr. ●●●●●●, Assistant Engineer 3. Mr. ●●●●●●, Work Assistant  <b>Harsari Representative</b> 4. <b>Village Head</b> 5. Deputy. Village Head 6. Mr. ●●●●●● 7. Mr. ●●●●●● 8. Mr. ●●●●●● 9. Mr. ●●●●●● 10. Mr. ●●●●●● 11. Mr. ●●●●●● 12. Ms. ●●●●●●	1. Villagers apprehended that due to construction of drift, their houses may develop cracks. Participants visited the houses and some cracks were observed. THDCIL officials apprised the villagers that modern technology is used for drilling and blasting which is safe. Chances of cracks due to this activity are negligible.  2. Loss of / depleting water sources due to blasting.  3. Project in high seismic zone.  4. Villagers wished every success for the project in view of the	1. Participants visited the houses and some cracks were observed. THDCIL officials apprised the villagers that modern technology is used for drilling and blasting which is safe. Chances of cracks due to this activity are negligible. If significant loss/cracks observed then further necessary action to be taken as per state government norms.  2. Opinion of geologists shall be taken for any possibility of water source depleting with construction of drift, and action shall be taken up accordingly.  3. THDCIL apprised that the location of the project is in seismic zone and the project-design takes into account safeguard measures against high intensity of earth quake. Modern technologies shall be used during construction to minimize construction induced impacts.  4. No agreement required	For cracks in houses an amount of Rs.15000/= was paid by contractor M/S Shivalik Geotech on 24/11/2004 to Mr. ●●●●●●& Mr. ●●●●●●.  An amount of Rs. 10000/= was paid by THDCIL to Mr. ●●●●●● at Harsari on 20/08/2008.

		<p>National Interests.</p> <p>5. Loss to the community due to project activities. Any loss caused due to construction shall be compensated as per government rules. Residents had apprehensions that since the ongoing exploratory works are preliminary and power House location shall be finalized only after investigation results. In case findings of exploratory works suggest present site as unsuitable for powerhouse location, in such a scenario they requested to safeguard their interests even if the power house location is changed.</p> <p>6. Project affected people discussed the opportunity of possible employment with THDCIL.</p> <p>7. Project affected people liked to know that whether Govt. of India and State Govt. is competent to grant permission for investigation works.</p>	<p>5. Any loss caused due to construction shall be compensated as per government rules. Residents had apprehensions that since the ongoing exploratory works are preliminary and power House location shall be finalized only after investigation results. In case findings of exploratory works suggest present site as unsuitable for powerhouse location, in such a scenario they requested to safeguard their interests even if the power house location is changed</p> <p>6. The project is at initial stage and hence employment opportunities are not available. However in future if project is constructed, accordingly employment opportunities may be available as per government rules.</p> <p>7. It was apprised that the Govt. of India and State Govt. are competent</p>	
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23.12.2009	<b>THDCIL</b> 1. ●●●●●●, Social Worker 2. ●●●●●● Harsari residents	1. Demanded for compensation for damage to crops due to depleting of water source due to project works.	1. District Administration's representative Patwari will assess the damage of crops in Harsari and accordingly action shall be taken on receipt of report.	1. Final report on crop compensation received in March 2011. The residents of Harsari were requested to submit application along with their respective bank account numbers. However they neither submitted the application nor the bank details, to facilitate disbursement of compensation for the loss incurred.
22.06.2011	<b>THDCIL</b> 1. General Manager (P), 2. Senior Manager(S&E),  <b>Residents of Harsari</b> 3. Mr. ●●●●●● 4. Mr. ●●●●●● 5. Mr. ●●●●●● 6. Smt ●●●●●● 7. Mr. ●●●●●● 8. Ms. ●●●●●●	1. Relocation of Harsari 2. Compensation towards crop loss due to depletion of water in water source due to project activities.	1. THDCIL provided information about the committee formed on 20 <sup>th</sup> September 2010 by the DM Chamoli, to resolve the concerns raised by them. The chairman of the committee, SDM called for a meeting on 23.06.2011 and accordingly information was conveyed to the residents.	1. The residents did not come forward for meeting on scheduled date.
23.07.2011,	<b>THDCIL</b> 1. Manager (S&E) <b>Harsari residents:</b> 2. Mr. ●●●●●● 3. Mr. ●●●●●● 4. Ms. ●●●●●● 5. Mr. ●●●●●●	Discussed relocation of villagers	1. Senior Manager (S&E) requested to the residents to arrive at consensus on the issues raised, so that the same could be resolved amicably.	No response from residents.

04.08.2011,	<b>THDCIL</b> 1. Senior Manager (S&E) 2. Senior Manager (B&R) <b>Representatives from Harsari</b> 3. Mr. ●●●●●● 4. Mr. ●●●●●● 5. Mr. ●●●●●● 6. Ms ●●●●●● 7. Ms ●●●●●●	1. The affected people demanded land for land lost. 2. Residents apprehend that their houses may get damaged due to exploratory works; videography may be carried out of 7 houses to establish a baseline of the structure.	1. In the absence of availability of government land for relocation, THDCIL offered all support to facilitate purchase of land from “willing seller”. It was proposed to form a land purchase committee with representative of resident of Harsari and of THDCIL to identify land in the neighboring area. Residents informed that they require time to consult other interested parties who resided outside the project area. 2. THDCIL agreed to video record the structures and to compensate for any damage that may result from construction works of exploratory drift. THDCIL agreed to repair the damaged houses 3. THDCIL agreed to augment existing drinking water facilities with additional water pipe connection.	None of the three agreed actions could be implemented due to lack of support of the residents.
02.09.2011,	<b>THDCIL</b> 1. Deputy General Manager (B&R) 2. Senior Manager (D&P,H) 3. Senior Manager (B&R) 4. Senior Manager (S&E) 5. Deputy Manager (D&P,H) <b>Residents of Harsari</b> 6. Mr. ●●●●●●	1. The affected people demanded land for land lost.	1. Residents stopped ongoing works of power house drift. THDCIL requested that they may raise their concerns at appropriate forum with the Committee chaired by SDM Chamoli and reach a solution. 2. During meeting, it was agreed to hold another meeting on	

	7. Mr. ●●●●●●●● 8. Mr. ●●●●●●●● 9. Ms ●●●●●●●● 10. Ms ●●●●●●●●		03.09.2011.	
03.09.2011,	THDCIL 1. Deputy General Manager (B&R), 2. Senior Manager (D&PH), 3. Senior Manager (B&R), 4. Senior Manager (S&E), 5. Deputy Manager (D&PH), <b>Residents of Harsari</b> 6. Mr. ●●●●●●●● 7. Mr. ●●●●●●●● 8. Mr. ●●●●●●●● 9. Ms. ●●●●●●●●	1. Land for Land lost.	1. The residents were informed that a meeting was held in Harsari on 04.08.2011 wherein demand for land for land lost was sought by the residents. THDC further informed that in absence of availability of government land for relocation, THDCIL offered all support to facilitate purchase of land from “willing seller”. It was proposed to form a land purchase committee with representative of resident of Harsari and of THDCIL to identify land in the neighboring area. 2. Mr. ●●●●●●●●, who lives in Faridabad, informed that he was not available on the meeting held on 04.08.2011. Further some residents are out of station presently and likely to assemble in a marriage ceremony in 1st week of October 2011. Residents will try to make some consensus that time.	Harsari residents did not come forward with any consensus even after October 2011.

## Correspondence between Harsari Representatives and THDCIL

Letter received from Harsaari	Response from THDC	Action Taken (if any)
---	<p><b>Letter no 77 dt. 15.07.2010</b></p> <ol style="list-style-type: none"> <li>1. Letter sent to Residents of Harsari (henceforth referred to as Residents) to suggest suitable date and time to facilitate a meeting of the Committee chaired by Sub Divisional Magistrate (SDM) to resolve outstanding issues.</li> </ol>	Residents did not respond
<p><b>Letter dated nil from residents</b></p> <p><b>Following issues were raised vide above letter</b></p> <ol style="list-style-type: none"> <li>1. Land for relocation, house at relocation site and augmentation of drinking water supply was demanded.</li> <li>2. Till above arrangements are made no work should be carried out on Harsari agricultural land and road.</li> </ol>	<p><b>Letter no. 93 dated 07.08.2010</b></p> <ol style="list-style-type: none"> <li>1. Residents informed about non availability of government land in the District Chamoli for relocation.</li> <li>2. As per clause 2.3.1 of Resettlement and Rehabilitation policy for the project, residents may purchase land within 25km radius from a willing seller.</li> <li>3. If house is acquired compensation rate will be determined on the basis of the norms laid down by Public Works Department. 30% solatium on the amount and grants equivalent to the amount disbursed to displaced from Haat which is over and above the compensation and solatium to build their houses at location suitable to them</li> <li>4. To mitigate the water storage problem in Harsari, A PVC water storage tank with capacity 3000 liters shall be provided.</li> <li>5. Residents to suggest a suitable date for</li> </ol>	<ol style="list-style-type: none"> <li>1. For storage of water a PVC water tank of 3000 liter capacity provided to Harsari on 21.12.2010.</li> <li>2. Residents did not respond to the request to suggest a date and time for a meeting to resolve the outstanding issues.</li> </ol>

	meeting to resolve outstanding issues.	
<p><b>Letter dated 28.07.2011</b></p> <ol style="list-style-type: none"> <li>1. The construction activities for Vishnugad Pipakoti Hydro Electric Project (VPHEP), to discontinue till agricultural land in lieu of land that will be acquired is not provided for. We have also apprised hon'ble President of India, Prime Minister of India, Minister of Opposition, and Governor of Uttarakhand of the same.</li> </ol>	<p><b>Responded vide letter no. 133 dated 25.08.2011:</b></p> <ol style="list-style-type: none"> <li>1. Land acquisition from Harsari Hamlet is not considered at this stage.</li> <li>2. District Magistrate (DM) constituted a committee under the chairmanship of Sub Divisional Magistrate (SDM), Chamoli to resolve outstanding issues of residents.</li> <li>3. THDCIL expressed willingness to participate in the meetings for early settlement of issues</li> <li>4. All Residents requested to attend the meeting to amicably resolve outstanding issues.</li> </ol>	Residents did not respond
<p><b>Letter dated 07.11.2011</b></p> <ol style="list-style-type: none"> <li>1. With reference to a media report forecasting earthquake in near future in Chamoli District, will result in total collapse of houses damaged due to exploratory works.</li> </ol>	<p><b>Letter no. 239 , dated 17.11.2011</b></p> <ol style="list-style-type: none"> <li>1. Underground power house proposed near Haat</li> <li>2. Entire land of Haat (except Harsari) being acquired as per agreement with Haat.</li> <li>3. Main Access tunnel is proposed below Residents Land</li> <li>4. During construction of tunnel, impacts on the structures of residents cannot be ruled out.</li> <li>5. Meeting held with residents time to time with a request to select feasible options to mitigate any unforeseen impacts that may occur during constructions. Options offered are reiterated as below; <ol style="list-style-type: none"> <li>a. Land for land option is not possible due to non availability of the government land for the purpose.</li> <li>b. Residents may purchase land from willing seller. THDCIL will facilitate the process.</li> <li>c. Residents may lease out their land</li> </ol> </li> </ol>	Residents did not respond.

	<p>during the construction instead of acquisition.</p> <p>d. If none of the above options are suitable to the residents, THDCIL may arrange accommodation elsewhere not to be affected by construction.</p> <p>6. Residents are not reaching consensus rather causing hindrances to the work from time to time.</p> <p>7. DM constituted a committee to resolve the issues of Harsari. THDCIL is continuously requesting Residents to attend meeting to resolve the issues.</p> <p>8. To resolve the issues SDM organized committee meeting on 23.06.2011, but the Residents did not participate.</p> <p>9. THDCIL is keen to resolve the concerns of Residents in presence of District Administration.</p> <p>10. Meeting was requested to resolve the issues.</p>	
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**Tri-partite Meeting between Harsari representatives and THDC officials  
and District Administration, Government of Uttarakhand (GoU)**

<b>Date</b>	<b>Name of Participants</b>	<b>Issue discussed</b>	<b>Response from THDC / Agreement reached (attach minutes of the meeting if any)</b>	<b>Action taken (if any)/Remarks</b>
28.11.2009	<b>THDCIL &amp; GoU</b> 1. ●●●●●●, General Manager (Personnel), 2. Mr. ●●●●●●, Senior Manager, 3. Dr. ●●●●●●, Manager, 4. SDM, Chamoli  <b>Harsari Representative</b> 5. Gram Pradhan, Haat 6. ●●●●●●	1. Residents to be compensated for crop loss. 2. Arrive at an agreement on the measure for mitigating adverse impacts. 3. Exploratory works causes disturbances.	1. Crop loss if any shall be compensated as per assessment prepared by revenue department/District Administration. 2. Regarding land acquisition/lease whatever decision shall be taken by District Administration, THDCIL and residents shall agree. 3. No disturbances shall be caused due to underground exploratory works. THDCIL will try to convene another meeting shortly.	
24.06.2010	<b>THDCIL &amp; GoU</b> 1. DM, Chamoli 2. SDM, Chamoli 3. General Manager(P), 4. Mr. ●●●●●●, Senior Manager, 5. Mr. ●●●●●●, Senior Manager 6. Dr. ●●●●●●, Manager 7. Mr. ●●●●●●, Social Worker	1. Mr. ●●●●●● from Harsari , requested for discussions on acquisition of land from Harsari.	1. THDCIL informed that presently the land from Harsari is not under acquisition. However THDCIL is open to discuss possible options to address possible adverse impacts during construction of the project.	1. DM constituted a committee headed by SDM, Chamoli District, with representative of residents and THDCIL.

	<b>Villagers from Haat</b> 8. Around 70 persons from village Haat			
23.06.2011	<b>THDCIL &amp; GoU</b> 1. SDM, Chamoli 2. Senior Manager (S&E), <b>3. Manager(S)</b>  <b>Harsari Representative</b> 4. Gram Pradhan Haat	1. SDM convened a meeting of the committee on 23.06.2011.		1. THDCIL officials and gram pradhan of Haat attended the meeting. Nominated representatives of residents did not participate
29.11.2011,	<b>THDCIL &amp; GoU</b> 1. SDM, Chamoli 2. Mr. ●●●●●●, Chamoli 3. Senior Manager (S&E)  <b>Residents of Harsari</b> 4. Mr. ●●●●●● 5. Ms. ●●●●●● 6. Mr. ●●●●●● 7. Ms. ●●●●●●	1. Project Review Panel (PRP) was likely to visit proposed power house site on 29.11.2011. Residents assumed that World Bank officials will visit the site. SDM Chamoli was requested by THDCIL to convince the residents that the proposed visit is of PRP and the residents should not cause disturbances during the visit. Accordingly SDM visited Harsari. The Residents demanded mitigation measures towards adverse impacts i.e. land for land lost, compensation for crop.	1. SDM assured to organize another meeting in near future to resolve the issues of Residents. They assured full support during the project site visit of PRP.	1. Despite assurances of Residents to cooperate during PRP's visit, they obstructed the visit to proposed powerhouse site on 29.11.2009.
15.03.2012,	<b>THDCIL &amp; GoU</b> 1. DM, Chamoli 2. Revenue Inspector Patwari, Kaudia 3. Patwari, Chhinka	1. Residents informed that there is scarcity of drinking water due to exploratory works and cracks developed in houses for which they should be compensated.	1. THDCIL to provide drinking water facility. THDCIL to compensate for cracks in houses after reaching a	1. Work order issued to cooperative society of



	<p>4. General Manager (Personnel) 5. Senior Manager (S&amp;E) 6. Senior Manager-I (D&amp;PH) 7. Senior Manager-II (D&amp;PH) 8. Manager-I(S) 9. Officer(CC)</p> <p><b>Residents of Haat and Harsari</b> 10. Gam Pradhan, Haat 11. Van Panchayat Sarpanch, Naurakh, Pipalkoti 12. 40-50 villagers from village Harsari and Haat.</p>	<p>2. Residents demanded land for land as measure for rehabilitation. 3. THDCIL offered following options. a. Residents can opt for package offered to affected by Haat. b. During construction period residents can lease the land to THDCIL. c. THDCIL to provide alternate accommodation. d. THDCIL may change alignment of tunnel.</p> <p>4. Mr. ●●●●●●, who resides in District Head Quarter, Gopeswar also participated in the meeting and intimated that his family owns 40 Nalli of land in Kothiyal Harsari. His family is ready to sell the land to THDCIL on the terms offered to Haat.</p> <p>5. DM, Chamoli requested Residents to reach at a consensus and take appropriate decision for smooth implementation of the project.</p>	<p>settlement options offered to the residents. 2. THDCIL informed non availability of government land. DM reiterated that the possibilities of land for land as an option is not feasible as the administration is unable to arrange adequate land to rehabilitate the recently displaced people due to natural disasters. 3. Residents requested for time to arrive at a consensus. Accordingly DM Chamoli gave ten days and scheduled the next meeting on 26.03.2012.</p>	<p>residents to undertake the works on water supply. However, the society has not initiated works despite reminders.</p>
26.03.2012,	<p><b>THDCIL &amp; GoU</b> 1. DM, Chamoli 2. ADM, Chamoli 3. SDM, Chamoli 4. Community Development Officer , Chamoli 5. General Manager (P), 6. Senior Manager. (S&amp;E)</p>	<p>1. Follow up of the previous meeting held on 15.03.2012.</p>	<p>1. Residents did not participate. 2. DM and other officials of district administration reviewed the issues previously raised by Residents and concluded that r they are not ready to</p>	<p>THDCIL submitted proposal of alternate alignment to DM on 27.03.2012 and initiated work on alternate route.</p>

	<p>7. Senior Manager. (D&amp;PH)</p> <p><b>Representative of Harsari</b></p> <p>8. Gram Pradhan, Haat</p>		<p>resolve the problems.</p> <p>3. Following orders were issued by DM:</p> <p>a. THDCIL should change the alignment of the tunnel in such a manner that it does not pass below the residents land. THDC should submit a proposal in this regard to DM.</p> <p>b. If anyone tries to disrupt work at alternate site, law would take its course.</p> <p>c. Similarly, if anyone tries to disrupt work on 1.665 Ha land already acquired/land transferred from PWD, he/she may be panelized for disruption under the law.</p>	
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## Correspondence between District Administration, GoU and THDCIL officials

Letter from District Administration to THDCIL	Response from THDCIL	Action Taken (if any)
<p><b>Letter no. 8561 dated September 9, 2010</b></p> <p>1. DM asked to expedite actions on decisions taken on during the meeting with villagers from Haat and Harsari held on 24.06.2010</p>	<p><b>Letter no 127 dated 16.09.2010</b></p> <p>1. As per minutes of meeting held on 24.06.2010, discussions were to be held with Residents to resolve the issues. Despite written requests Residents did not come forward for discussions.</p>	<p><b>DM vide letter no 8897 dated September 20, 2010</b> constituted following committee to resolve concerns of Residents of Harsari.</p> <ol style="list-style-type: none"> <li>1. SDM</li> <li>2. Senior. Officer from THDCIL</li> <li>3. Village Pradhan</li> <li>4. Mr. ●●●●●●, Harsari</li> <li>5. Mr. ●●●●●●, Harsari</li> </ol> <p>Representatives of Harsari requested to provide suitable dates for meeting. They did not respond.</p> <p>Despite lack of cooperation, meeting was scheduled by SDM on 23.06.2011 to resolve the issues. Gram Pradhan (Haat), THDCIL representatives joined in the meeting but Representatives did not participate.</p>
<p><b>Letter no 7622 dated August 12, 2011,</b></p> <p>The DM forwarded letter from Residents seeking following support for the assets that be acquired:</p> <ol style="list-style-type: none"> <li>a. Land for land;</li> <li>b. Cowshed for cowshed;</li> <li>c. Employment with THDCIL;</li> </ol>	<p><b>Letter no 146, dated October 9, 2011</b></p> <ol style="list-style-type: none"> <li>1. DM has constituted a Committee to resolve concerns. THDCIL has all along requested Residents to attend the meetings to discuss all possible options.</li> <li>2. Under the Chairperson SDM, a meeting was scheduled on 23.06.2011. The member of the Committee participated, however, Harsari representatives did not join.</li> </ol>	

<p>d. House for house.</p>	<p>3. THDCIL is keen to arrive at an early solution. <i>See table B</i> - On 25.07.2011, THDCIL officials held discussions with Residents. Residents sought 10 days time before the second round of discussions. Residents asked to stop the work till the next meeting. Discussions were again held on 4.08.2011. Most of the Residents demanded land for land. THDCIL informed them about non availability of government land and suggested that the officers will extend support to the Residents to purchase land from willing seller. Residents mentioned that they will consult with others who were out of station and arrive at appropriate decision.</p> <p>4. On 02.09.2011, Residents obstructed exploratory works carried out on land transferred by PWD for the project.</p> <p>5. It appears that Residents are unable to build consensus on any of the options suggested i.e. to lease out land during construction; provision of residential facility at one end of the land; and agree for acquisition. In addition, explore other options suitable to the Residents.</p> <p>6. DM was requested to intervene to facilitate continuation of works stopped by Residents.</p>	
<p><b>Letter no. 6430 dated May 31, 2012</b> Residents letter forwarded with following</p>	<p><b>Letter no. 21 dated August 9, 2012</b> 1. DM held a meeting in Harsari on</p>	<p>1. DM Vide letter 4483 dated March 28, 2012</p>

<p>demands:</p> <ol style="list-style-type: none"> <li>1. Compensation of losses caused due to project.</li> <li>2. Despite opposition, if project is constructed, alignment of tunnel may be changed.</li> <li>3. THDCIL should give in writing that water sources shall not be disturbed and dust and vibrations shall not affect them.</li> </ol>	<p>15.03.2012 to reconvene in administration's office on 26.03.2012, but Residents did not participate. All present for the meeting recognized that Residents are not serious towards resolving the concerns. Rather their interest is to disturb the works.</p> <p>2. THDCIL's view on the compensation demanded are as below:</p> <ol style="list-style-type: none"> <li>a. <i>Drinking water supply</i>: It could not be established that water source has dried up due to exploratory works. However THDCIL offered to lay water supply line for which a cooperative of Residents was formed to take up the works. However, Residents have not come forward.</li> </ol>	<p>issued following instructions:</p> <ol style="list-style-type: none"> <li>a. THDCIL should consider a change in the alignment of the tunnel in such a manner that it does not pass below the land of the Residents and submit a proposal.</li> <li>b. If anyone tries to disrupt work at alternate site, he may be booked under law and order violation.</li> <li>c. Similarly, if anyone tries to disrupt work on 1.665 Ha land already transferred from PWD, s/he may be booked under law.</li> </ol> <p>2. THDCIL has submitted proposal to change the alignment of the tunnel alignment. Exploratory drift is under progress for the new alignment.</p>
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	<p>b. <i>Repair of cracks</i>: THDCIL is willing to repair the cracks observed in the houses after assessment by an expert.</p> <p>c. <i>Crop compensation</i>: THDCIL is ready to pay compensation towards crop loss as evaluated by District Administration. However, Residents have yet to submit the application and bank details for release of payment.</p> <p>3. The chances of disturbances during construction period are remote due to dust, vibrations with the new alignment. However, THDCIL is committed to mitigate adverse impacts, if observed during construction.</p> <p>4. THDCIL is serious and desires to jointly resolve all the justified concerns of Residents once and for all for smooth implementation of the project.</p>	
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## Correspondence District Administration, GoU & Residents of Harsari

Letter from Harsari	Response from District Administration
<p style="text-align: center;"><b>Letter dated August 22, 2012</b></p> <ol style="list-style-type: none"> <li>1. Residents do not have alternate agriculture land. They are not willing to give the land for the project.</li> <li>2. Residents requested to stop the work and following issues were raised:               <ol style="list-style-type: none"> <li>a. THDCIL officials are misusing government money and are working on a divide and rule policy.</li> <li>b. Residents should not be harassed /disturbed in any way.</li> <li>c. Hamlet of Residents is located near river Alaknanda between two Nallas</li> <li>d. During rock testing, water sources have dried up, agriculture land, forest, residential houses, cattle shed have damaged. They have not received any compensation for the loss.</li> <li>e. Administration, THDCIL, Village Head, World Bank officials indulge in corrupt practices and this requires enquiry.</li> </ol> </li> </ol>	<p><b>ADM vide letter no 9442 dated September 18, 2012 has forwarded the enquiry report of SDM to THDCIL, which includes:</b></p> <ol style="list-style-type: none"> <li>1. No case of misuse of government funds was established. THDCIL is paying package to resident house owners of Haat and the money is utilized to construct houses.</li> <li>2. There is no incident of harassment of any resident by THDCIL officials.</li> <li>3. Harsari is a hamlet of village Haat. Land of Haat is acquired after mutual agreement. Land of Residents is not acquired as no agreement was reached. Project may not require land of Residents.</li> <li>4. THDCIL has stopped the work of drift below Residents' land in view of the protest. As per instructions of DM, THDCIL is constructing drift at an alternate route that does not pass beneath the residents' land. Regular measurements of vibrations are being taken by THDCIL and vibrations are within stipulated limits.</li> <li>5. DM held a meeting in Harsari on 15.03.2012 and Residents were asked to arrive at a consensus on possible options. Residents requested for more time. Another meeting was scheduled on 26.03.2012 but Residents did not participate.</li> <li>6. No damage has been caused to agriculture and forest land. Some cracks are observed in houses. However it is not possible to assess that whether these cracks are due to previous earthquake or from drift construction. On the assessment of expert, THDCIL is willing to pay compensation or repair the cracks. Regarding water source, THDCIL informed that it was assessed by geologists that clearly established that there is no correlation between construction of drift and drying up of water source. THDCIL is willing to pay crop compensation as per assessment done by District Administration.</li> <li>7. It is not appropriate to offer any comment on point no 5.</li> </ol>

## ANNEX 5



## ANNEX 5 PHOTOGRAPHS



Photograph 1: Planned site location of the dam



Photograph 2: Hatsari hamlet (marked) with reference to Haat Village (below right)



Photograph 3: Haat Village





Photograph 4: One of the sites where villagers from Haat are being resettled



Photograph 5: Cracked exterior wall. No link could be established between project related geological testing and the cracks.



Photograph 5: Cracked exterior wall. No link could be established between project related geological testing and the cracks.



