

25 July 2014

Dear CDM Executive Board members,

Objections to and comments on CDM credits for
Mangdechu hydropower project in Bhutan
and export of hydropower from it to India
by Mangdechhu Hydroelectric Project Authority

This supersedes the comments we submitted on 23 July 2014.

We hereby strongly oppose the granting of CDM credits to Mangdechhu Hydroelectric Project Authority (MHPA) for the 720 MW Mangdechhu hydro power project in Bhutan for the following amongst other reasons.

The project is non-additional; there are serious flaws in the investment analysis

- 1) The PDD fails to disclose that 30% of the project funding is in the form of a grant from India. Please see the website of the Indian Embassy in Bhutan. <http://www.indianembassythimphu.bt/pages.php?id=98> Hence the financial viability of the project is not correctly assessed in the PDD. Granting of CDM credits to MHPA will result in a windfall gain to MHPA. On this ground alone the project should not be considered for CDM credits.

All projects that are being developed to provide 10,000 MW to India by 2020 have grants from India. This is also true of the 1,020 MW Punatsangchhu-II hydropower project that has also applied for CDM credits <http://cdm.unfccc.int/Projects/Validation/DB/976VA2GJENO0ZMVYWRQJ8XOPG2JXB5/view.html> and the PDD of this project also fails to disclose that 30% of the project funding is in the form of a grant from India. Please see website of Indian Embassy in Bhutan. <http://www.indianembassythimphu.bt/pages.php?id=97>

The UNFCCC has already registered Punatsangchhu-I hydropower project of the Punatsangchhu Hydropower Authority as a CDM project on 29 November 2013. <http://cdm.unfccc.int/Projects/DB/BVQI1356508539.12/view> The PDD of this project too did not disclose that it received 40% grant support and 60% loan support from India. Please see website of Indian Embassy in Bhutan. <http://www.indianembassythimphu.bt/pages.php?id=96>

- 2) Since the grant for the project from India has not been considered, the project's actual IRR benchmark is much lower than what is stated in the PDD. MHPA is a publicly owned company, owned by the government of India and the Government of Bhutan. The Government of India, making the grant, does not need the same rate of return as a private company. The Government of India is developing its hydropower capacity for a range of reasons, including reducing the country's dependence on imported coal, and diversifying its energy supply. These benefits contributed to the decision of the

Indian government to provide a grant, and to devote funds generally to hydropower development in Bhutan, and thus the actual benchmark of the Indian government in providing the grant and founding MHPA is much lower than commercial rates.

- 3) The difficulty assessing the true benchmark required by the Indian government in providing the grant and founding MHPA, considering a wide range of project benefits beyond return on investment, highlights the inappropriateness of the use of an IRR benchmark in assessing the additionality of government investments. Due the range of benefits from such a project, as stated in India's planning documents, and India's commitment to build hydropower and establish quantitative goals for this development, an IRR benchmark based on simple commercial terms is not an accurate predictor of the decision of the government to build an individual project. An IRR benchmark based on simple commercial terms should not be used to assess the additionality of large government investments.
- 4) The Indian government in its most recent budget of July 2014 has earmarked finances for the development of hydropower in Bhutan. Hydropower development in Bhutan with joint efforts of India and Bhutan is on-going and is part of the national planning process of both countries. This project is also one of the projects identified to be developed to supply 10,000 MW to India by 2020. See the website of the Indian Embassy in Bhutan mentioned above.

All such hydropower development in Bhutan using earmarked finances are planned for development and thus are non-additional, and should be considered non-additional by the CDM governance bodies and the project validator.

- 5) In addition, Bhutan has a deficit of power, especially in the lean season. It imports power from India during this period. For Bhutan to be self sufficient in power it needs to develop hydropower and other renewable energy (solar, wind, micro hydro, etc) as Bhutan does not have fossil fuels. Hydropower projects would have been developed to meet Bhutan's power requirements. This is another reason the power provided by the project is non-additional and should be considered non-additional.
- 6) It is unclear from the PDD if the value of the electricity provided to Bhutan, called a "royalty" in the table on page 19 of the PDD, is included in the revenues earned by MHPA. Surely the value of this power to Bhutan should be included as revenues of the project. The financial value of the project to the Government of Bhutan, partial owner of MHPA, looks very different whether or not that electricity is generated and provided to Bhutan.
- 7) On page 32 of the PDD it is stated that the proposed activity is not common practice in the region. This is patently false. Elsewhere in the PDD the region has been taken to be Bhutan and NEWNE grid in India where the hydropower is to be used. This is an appropriate region for the common practice assessment since most of the power is expected to be used in the NEWNE region. The proposed activity is common practice in India that forms part of the NEWNE grid. For example, in the states of Sikkim and West Bengal on the Teesta River is the completed Teesta-V and under construction are Teesta-III, Teesta-VI, Teesta Low Dam-III and Teesta Low Dam-IV. For an exhaustive list of hydropower dams that have received environmental sanction between April 2007 and December 2012 and would be in various stages of

construction see page 16 onwards of

http://sandrp.in/env_governance/TOR_and_EC_Clearance_status_all_India_Overview_Feb2013.pdf.

While listing the projects in Bhutan that are within a range of +/- 50% of the project on page 31, the 1,020 MW Punatsangchhu-II hydropower project has been omitted.

The Punatsangchhu-II hydropower project has also applied for CDM credits.

<http://cdm.unfccc.int/Projects/Validation/DB/976VA2GJENO0ZMVYWRQJ8XOPG2JXB5/view.html>

In addition, the Indian states of Arunachal Pradesh and Sikkim have identified 164 and 27 hydropower dams respectively and most of them are run-of-the-river peaking power plants. India's Central Electricity Authority has identified around 80 hydropower dams in Bhutan. Attached is a map of the identified locations in Bhutan. India and Bhutan have plans to build up Bhutan hydropower capacity, and are doing so by government backed efforts that do not require commercial level returns on investment. Hence the project is not additional.

The project negatively impacts the Manas National Park, a UNESCO World Heritage Site

- 8) Mangdechhu flows through the Royal Manas National Park in Bhutan and the Manas National Park in India. Manas National Park is a UNESCO World Heritage Site. The Mangdechhu hydropower project is a peaking power project with diurnal fluctuations (page 59 of the PDD). The fluctuations of water flows due to the dam will certainly impact the flora and fauna in the Manas National Park and hence the concern of the World Heritage Committee.

At its 36th meeting held in 2012 the World Heritage Committee asked the Royal Government of Bhutan to provide information on the Mangdechhu hydropower project, including its Environment Impact Assessment (EIA) report. It also raised concern of the cumulative impacts of this and the Kurichhu hydropower project on Manas National Park.

The Royal Government of Bhutan has not provided the EIA nor any information for the 38th meeting of the World Heritage Committee in Doha, Qatar, in June 2014.

(source: Bhutan mum on project, Roopak Goswami, The Telegraph, 12 May 2014

http://www.telegraphindia.com/1140512/jsp/northeast/story_18332018.jsp#.U8QhHqhXL08).

Point 8 on page 120 of the Decisions Adopted By The World Heritage Committee At Its 38th Session (Doha, 2014) is as under <http://whc.unesco.org/archive/2014/whc14-38com-16en.pdf>

“Reiterates its request to the State Party of Bhutan to submit a copy of the Environmental Impact Assessment (EIA) of the Mangdechhu hydro-electric project as per Decision 36 COM 7B.10, including an assessment of potential impacts on the property’s OUV and cumulative impacts in relation to the existing Kurichu dam, in conformity with IUCN’s World Heritage advice note on Environmental Assessment;”

Not only does the project impact on a World Heritage Site, the Royal Government of Bhutan has also failed to cooperate with the World Heritage Committee request to review the project EIA. Unless it is determined that the project does not pose a threat to this World Heritage Site it should not be considered for registration under the CDM. On this ground alone the project should not be considered.

Stakeholder consultation requirements have not been met

- 9) The EIA of Mangdechhu hydropower project has not been made available to the affected communities and citizens of Bhutan even though right to information is a constitutional right in Bhutan. We state this after a visit to Trongsa in November 2013 and having spoken to people living downstream of the dam and near the powerhouse. The EIA is not available on the website of the National Environment Commission (NEC) of the Royal Government of Bhutan <http://www.nec.gov.bt/>. The EIA is not in the public domain. All of our attempts to see the EIA of the Mangdechhu hydropower project during the course of four visits to Bhutan in 2013 and 2014, including requests directly to officials of the NEC, were unsuccessful. None of the NGOs, media persona and citizens we spoke to had seen the EIA of the project. On this ground alone the project should be rejected.

- 10) The local stakeholder consultation that is stated on pages 66-67 of the PDD is at variance with our experience interacting with affected communities in November 2013. People living downstream of the dam site and near the power house asked us basic questions regarding the dam and operations of a hydropower project. They said no one had explained to them what will happen once the project is operational. They said that they were told that the project is coming and they had no choice in the matter. One person said that he has been working as a daily wage earner for more than two years and that he has not been given permanent employment even though he was told he would be made permanent after one year. He said that there were many complaints by people near the power house site. A woman living a short distance downstream of the dam but upstream of the power house asked us basic questions regarding fluctuations in flow of water that she would experience and whether she would lose her productive agricultural land. Our interactions with these and other individuals directly affected by the project indicate that stakeholder consultation, as required for all CDM projects, was not adequately conducted for this project and that the public consultation during the EIA and CDM processes are *prima facie* flawed. On this ground alone the project should be rejected.

The project poses a range of serious environmental impacts not documented in the PDD

- 11) Some of the other issues with respect to forests, ecology and environment are:
 - a) The reservoir submerges dense forests which are home to a resident population of the endangered golden langur.
 - b) Development of dams in Bhutan largely follows the Indian model which has many issues and problems and has scant regard for the environment. Common problems include muck dumping in the riverbed and on forested hill slopes,

inadequate release of minimum flows from dams, no monitoring of flows released, etc. Photographs of muck dumping by this project are enclosed.

- c) It is not possible to translocate rare species of orchids and tree ferns, as mentioned on page 59 of the PDD.
- d) A sum of Nu 500,000 (approx. US \$6,350) for strengthening of protected areas is grossly inadequate (page 62 of PDD).
- e) Resources for the fish hatchery have not been earmarked (page 63 of PDD).
- f) Allocation of money for the Environment Management Plan is not mentioned (page 63 of PDD).
- g) The minimum flows from dams in Bhutan are prescribed as 10% of lean season flow. This is not scientifically based and grossly inadequate. The river and riverine ecology respond to seasonal fluctuations in flows. A diurnal fluctuation will send completely wrong signals to the flora and fauna. This has not been addressed by the project. The project should provide for environmental flows that are calculated using a “holistic methodology” such as Building Block Methodology that is prescribed by India’s (Federal) Ministry of Environment & Forests. A holistic methodology while calculating the environment flows would take into consideration not just the ecological requirement but also social, cultural and religious requirements. It would also mandate mimicking the natural flow regime in the river, which includes floods. The quantity and flow rate in the river are also essential signals to aquatic life on when to spawn, when to migrate, etc. There is no mention of what the environmental flow regime will be.
- h) While the project’s life has been shown to be 35 years (page 4 of PDD), it fails to state what will happen to the project thereafter. Dams have serious impacts on the marine biodiversity. It is for this reason that over a thousand dams have been decommissioned in USA alone. Restoration efforts that will be done after the life of the project is over should be spelt out.

False statements in the PDD

- 12) It is evident that portions of the PDD is a cut-paste job from another PDD. See the section on Glacial Lake Outburst Floods (GLOFs) starting on page 22 of the PDD. On page 26 in the paragraph below the table the figures are for Punatsangchhu and not Mangdechhu.
- 13) Similarly, the entire section on Glacial Retreat starting at page 26 of the PDD is for Punatsangchhu and not Mangdechhu. The PDD provides information for a different river and not the river on which the project is.
- 14) With respect to including off grid power plants in the project electricity system, on page 35 of the PDD it is stated that the information is not available in the public domain. The project participant is a government company. It can easily obtain the

information from the Department of Renewable Energy, Royal Government of Bhutan.

- 15) On page 67 of the PDD it is stated that the entitled share of benefits to the communities will be credited to the Royal Government of Bhutan from where it will be allocated. The present experience is that the money does not find its way to the communities. The Druk Green Power Corporation pays a percentage from its projects under the Payment for Ecosystem Services (PES) scheme. The Department of Forests finds it extremely difficult to get the funds released for its PES work. There's no guarantee that the money will find its way back to the communities.
- 16) In Appendix 2 it is stated that there is no public funding involved. The Government of India has provided a grant. This is public money. It cannot be said that there is no public funding involved.
- 17) As per information available, the tailrace of the proposed 118 MW Nikachhu hydropower project on the Nikachhu will empty into the reservoir of the Mangdechhu hydropower project thereby boosting generation of the 720 MW Mangdechhu hydropower project. The Environment Impact Assessment report of the 118 MW Nikachhu is under preparation (source: email correspondence with Kaoru Ogino, Senior Energy Specialist, Asian Development Bank). The 118 MW Nikachhu hydropower project is an ADB funded project being project 44444-013: Green Power Development Project II. <http://www.adb.org/projects/44444-013/main> Mangdechhu project will hence benefit from funding by Annex-I countries. This is contrary to what is stated on page 7 of the PDD, namely, that no public funding from Annex-I countries is involved.

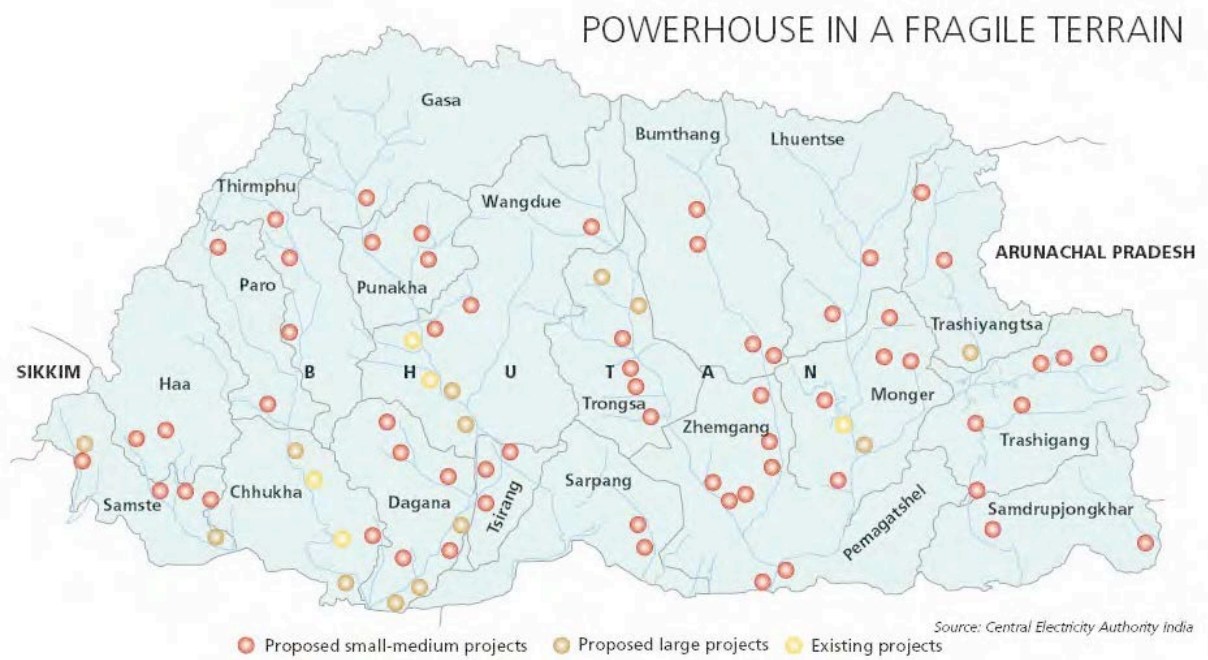
All in all, looking at all the above issues, Mangdechhu hydropower project does not deserve to receive carbon credits under the UNFCCC. Doing so will only be a mockery of the displaced population and submerged forests, damaged biodiversity, clean development mechanism concept and global climate change mitigation efforts.

Yours faithfully,



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Map of hydropower dams in Bhutan prepared by Central Electricity Authority, India



Photograph of dumping on forested hill slope



Photograph of dumping in riverbed
with gabion retention walls on opposite bank crumbling

