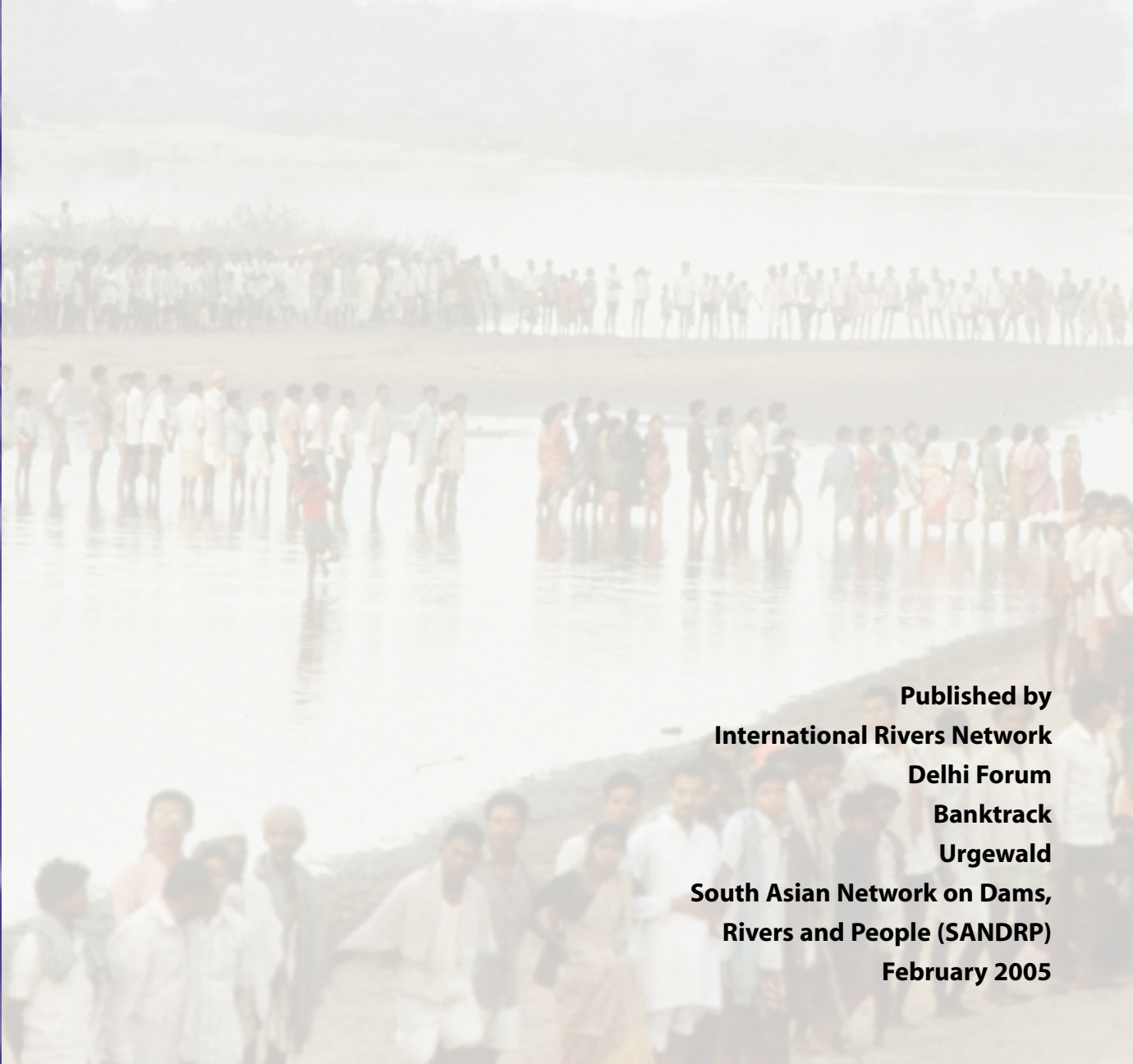


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# FINANCING DAMS IN INDIA: RISKS AND CHALLENGES

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## INTRODUCTION

**In 2003, the Government of India proposed to double the current electricity generation in the country, proposing 162 new Hydroelectric Projects. The government endowed India's National Hydroelectric Power Corporation (NHPC) with the largest number of projects. This Briefing Paper informs financial institutions about the risks of doing business with NHPC.**

Financial institutions seeking to support NHPC will find themselves in an uncomfortable spotlight. NHPC has repeatedly violated national and international standards and regulations for dam building. This has resulted in cost and time overruns, social and environmental negligence, security concerns, widespread public opposition, human rights violations, court cases and the suspension of projects in the pipeline or even during construction.

The last ten years have seen massive public campaigns against Indian dam projects such as Sardar Sarovar, Tehri, Maheshwar, Omkareshwar, Tipaimukh and more recently Allain Duhangan. These campaigns were successful in raising awareness of the negative impacts of dams and large hydropower projects and the responsibility of financial institutions in industrialized countries for financing such projects.

By late 2003, financial institutions from Sweden, Norway, the United Kingdom, Canada, Japan and Germany had provided loans to NHPC. Skandinaviska Enskilda Banken, Credit Commercial de France, HSBC, the Nordic Investment Bank, the Export Development Corporation, the Japan Bank for International Cooperation, ABN Amro, ANZ, Barclays, Emirates, Natwest, Standard Chartered, Sumitomo and a syndicate headed by Deutsche Bank extended loans that amounted to slightly more than 10 percent of NHPC's assets.

## BASIC FACTS ABOUT NHPC

### **NHPC IN ACTION: THE INDIRA SAGAR PROJECT**

“We were evicted at gun point. With the use of bulldozers. When we begged the officer “Saab, please do not bulldoze our houses, let us remove our belongings”, he ordered the bulldozers to work even faster.” Women from Baldi village of the Indira Sagar submergence area report.<sup>1</sup>

The Indira Sagar Project in the State of Madhya Pradesh exemplifies NHPC's mode of operating. This 92 meter high dam will displace over 200,000 farmers, tribals and fisherpeople and will impound more land than any other hydro project in India. Instead of fulfilling its contractual obligations to provide land-based resettlement, NHPC quickly became notorious for its use of

intimidation, threats and Special Armed Forces against people in the project area. Villagers were forced to accept small amounts of cash instead of the land-based compensation they are legally entitled to. Those who tried to complain were told that this would result in a loss of their right to any compensation.

After NHPC managed to receive a corporate loan from several UK banks in December 2003, the company sped up construction and announced that it would be able to finish Indira Sagar ahead of schedule. The scenes that followed in the 2004 monsoon were dramatic as people were simply flooded out of their homes. In August 2004, local newspapers carried reports like the following: “A tribal family from village Mahendgaon climbed a tree to save

their lives from the waters of the Indira Sagar Dam.”; “12 year old Rahul Solanki risked his life to keep a 3 year old child from submerging”.

The daily newspaper Naiduniya reported the fate of one of the many tribal villages in the area: “On 23rd of August during heavy rains and increase of water because of the dam, the villagers took refuge in the school building of close by village Karanpura. Only two days before the village submerged, the Land Acquisition Officer had informed these tribals that their village would not be submerged this year. Absolutely nothing remains of the houses, clothing and food provisions of these submergence affected families. These people were only able to survive because the residents of the next village came to their rescue.” Apart from 120 villages already submerged, the government estimates that with the closure of the gates of the dam within a few months, 130 additional villages will come under submergence. Non-governmental organisations fear that submergence may be even greater.

### INSTALLED CAPACITY AND EXPANSION PLANS

NHPC was set up in 1975. It is the largest public sector undertaking developing and operating hydropower projects in India. Its share capital is exclusively held by the Indian government.

In 2003, the Indian government proposed to double electricity generation in the country, by adding another 100,000 MW of generating capacity during the 10th and 11th five-year plan periods, i.e. up to March 2012. Towards this ambitious program, the government launched the “50,000 MW hydroelectric initiative”. It proposes 162 new hydroelectric projects, endowing NHPC with the largest number of projects. NHPC focuses on projects which are difficult to develop, or politically sensitive. In 2000, NHPC entered into joint ventures with state utilities to promote particularly difficult projects. NHPC formed a joint venture with the government of Madhya Pradesh to develop and implement projects on the Narmada River. The Narmada Hydroelectric Development Corporation is now building two of the biggest dams on the river, the Omkareshwar and Indira Sagar dams.

In the last 29 years, NHPC has executed no more than eight projects in India on its own, with a combined capacity of 2,475 MW. Compared with this modest existing portfolio, NHPC’s expansion plans are highly ambitious. NHPC aims to expand its total installed capacity by 4 622 MW during the Tenth Plan period (2002-2007). Between 2008 and 2017, NHPC hopes to add no less than 27,908 MW. NHPC is currently looking to foreign banks to help finance this expansion.



Villagers were forced to destroy their own houses in the Indira Sagar submergence area. Credit: Angana Chatterji, 2004.

### NHPC POLICIES AND REGULATIONS

Corporate social responsibility is absent from NHPC’s business model. NHPC has no social policy. Its quarter page environment policy only illustrates its lack of commitment for the environment, as does its track record of project implementation. In addition, it is a company that shows little inclination to follow Indian environmental regulations.

NHPC has been repeatedly convicted for violating Indian State and Federal laws, national project clearance processes and legal regulatory requirements. A State Forest Department only recently took NHPC to court for violating national regulations in connection to the Teesta V project.

Internationally acknowledged standards for hydropower development, such as the recommendations of the World Commission on Dams (WCD), World Bank standards or the Equator Principles, are not part of NHPC’s business policies and practices. Almost all NHPC projects are carried out in violation of those standards. NHPC’s chairman, Yogendra Prasad, is known to be a staunch opponent of the WCD’s recommendations. He has also repeatedly claimed that India’s environmental clearance system hinders the development of hydropower in the country.

***“We were evicted at gun point. With the use of bulldozers. When we begged the officer ‘Saab, please do not bulldoze our houses, let us remove our belongings’, he ordered the bulldozers to work even faster.”***

<sup>1</sup> Jan Sangharsh Morcha/SANDRP/Manthan, Savaging a civilisation, July 2004

## SIX THINGS TO CONSIDER

### COST AND TIME OVERRUNS

NHPC projects generally fall short on two key performance indicators: they are rarely executed on time or on budget.

Of the eight operational NHPC projects, three were completed much behind schedule. Baira Siul, which was completed in 1981, had a time overrun of 75 months, Loktak, which started to generate energy in 1983, had time overruns of 110 months and Tanakpur, completed in 1992, was 40 months behind schedule.

Of the announced addition of 4 622 MW during the Tenth Plan period (2002-2007), so far, only 300 MW (Chamera II) have been added. Many NHPC projects have been categorized as “in the pipeline” or “under construction” for many years.

All NHPC projects that experience delays during the construction phase also experience massive cost escalations.

- The work for the 390 MW **Dulhasti** hydropower project in the Indian state of Jammu and Kashmir is still referred to as “under construction”. The project was to be completed in November 1990. Meanwhile, the revised deadline for the project, March 2001, has also lapsed. The final cost for the project is expected to be three times larger than the initial cost estimates. In December 2004, an NHPC employees union filed a writ petition against NHPC and the court in Jammu and Kashmir issued notices against the company for the huge time and cost overruns.

- The **Loktak Downstream** project, also “under construction”, has experienced severe delays and long interruptions during the project implementation period. As a result of the construction being stalled for several years, the costs for the project will almost double.<sup>1</sup> In recent months, NHPC has declared that the project is no longer economically viable. The 2004 year end review of the

Indian Ministry of Power has confirmed that the Loktak Downstream project faces severe security concerns, high power costs and huge delays. The Ministry of Statistics and Programme Implementation has therefore demanded a review of the project.

- Clearance for the **Indira Sagar** dam, “under construction”, was given in 1987. The construction of the project was temporarily halted several times, most notably in 1999. A fast of oustees and activists forced the government to suspend construction for one year.
- Indian authorities have decided to discontinue one of NHPC’s largest projects, the 710 MW **Koel Karo** hydropower project, in 2003. Still, NHPC features Koel Karo as a project “in the



Primitive resettlement camp. NHPC’s projects, particularly in the country’s Northeast and the Narmada valley, affect large numbers of indigenous and lower caste people. Credit: Angana Chatterji, 2004.

pipeline”. The power ministry decided to cancel the project since today’s costs of the project are five times higher than initial cost estimates. Also, the per-unit cost of electricity generated would have been several times higher than average unit costs. Prior to the decision to shelve the project, the construction of Koel Karo dam had been stalled for two years.

<sup>1</sup> The Sangai Express, November 29, 2004.

### INVOLUNTARY DISPLACEMENT

NHPC projects, particularly in the country's Northeast and the Narmada Valley, affect large numbers of indigenous and lower caste people. NHPC routinely violates national regulations and court decisions regarding the compensation, resettlement and rehabilitation of project affected people.

- During the construction of the **Indira Sagar** dam, NHPC's Narmada Hydroelectric Development Corporation (NHDC) disregarded the state's rehabilitation policy, an order of the Supreme Court and the Ministry of Environment and Forests' rehabilitation provisions. Contrary to these regulations, no land for land compensation was granted and for most of the villages, no resettlement sites existed at the time of submergence. Monetary compensation was paid only weeks before the submergence, with some people not receiving any cash up to the date when their villages were submerged. Other villages were not informed that the swelling waters of the reservoir would flood their houses – they only survived by climbing nearby trees.
- NHPC's negligence regarding timely information about upcoming submergence appears to be a recurring feature. Villagers affected by the **Chamera I** dam were also not informed about the impoundment and had to flee in a rush when the reservoir began filling. No resettlement sites were provided.
- NHPC has a track record of underestimating the number of people displaced and eligible for resettlement and compensation. In the case of the **Omkareshwar** project, NHPC's estimates of affected families are grossly inadequate. Only people who paid bribes to the surveyors were counted, lower caste people were not included in the calculations and people that are affected by the irrigation canals have been neglected altogether.<sup>2</sup>

### DECISION-MAKING PROCESSES

As part of the clearing process for infrastructure projects, Indian authorities are required to hold public hearings. The project authorities have the responsibility to provide citizens with detailed information about the project in a local language ahead of the public hearings. If the public hearings are not conducted properly, the approval process for projects needs to be extended. NHPC has violated rules and regulations that govern project approval processes many times.

- NHPC failed to give affected citizens timely access to project documents regarding the **Middle Siang** project in local languages. As a consequence, the first public hearing needed to be repeated several months later, which postponed the entire project by more than three months.
- NHPC also violated several procedural rules and regulations in connection with the construction of the **Lower Subansiri**

dam. The failure to implement certain environmental guidelines for dam building resulted in the interruption of construction activities for many months during the summer of 2004.

- NHPC also violated the stipulations of India's Ministry of Environment and Forests in the public hearing process for the **Chamera III** project in October 2004. Local people were not allowed to either access to the EIA documents or to have a say at the time of the public hearing, leading to wide spread protests against the process. The project has yet to get the environmental clearance.
- In the case of **Teesta Low Dams III and IV**, NHPC violated the legally binding public hearing norms and the public hearing had to be held several times. Teesta Low Dam IV site had to be changed and the project is yet to get an environmental clearance.

### GROWING OPPOSITION AGAINST NHPC PROJECTS

In the past years, NHPC has been subject to massive protests by affected citizens and their allies and has also been challenged in the Indian courts, including the Supreme Court, numerous times.

- The strong movement against the 710 MW **Koel Karo** hydropower project was carried by local villagers and supported by civil society groups and international networks. In 2001, the police killed eight peaceful protesters. With no weakening of local opposition in sight, the project had to be cancelled.
- In 2003, affected people filed a case in India's Supreme Court against NHPC's **Lower Subansiri** hydropower project. In response, construction activities were suspended and the Supreme Court identified conditions that NHPC had to fulfill before project clearance could be given and construction activities could be resumed.
- In 2004, the Madhya Pradesh High Court accepted rehabilitation related complaints by inhabitants of Harsud, a town submerged by the **Indira Sagar** dam.
- Farmers affected by the destruction of their fields and fish farms as a result of NHPC's **Loktak** project have mounted a serious public campaign. They demand compensation and the decommissioning of the dam. In the mid-nineties, the Guwahati High Court sentenced NHPC to pay compensation to the claimants. The Loktak Development Authority recently passed a resolution requesting NHPC to open the sluice gates of the dam for more than eight months a year. In 2004, the Loktak project's chief engineer was charged for corruption in a local court in Manipur.
- Public resistance against the **Omkareshwar** project formed quickly after construction began in October 2003. Thousands of affected farmers and local boat and fisher men have staged demonstrations against the Omkareshwar dam.

<sup>2</sup> Urgewald, The Omkareshwar Dam in India, 2004, p.6.



The lifeline of the valley and its people: for decades villagers have rallied against the construction of dams on the Narmada.  
Credit: Rainer Horig

### ENVIRONMENTAL IMPACTS

The majority of dams in NHPC's pipeline will be located in the Himalayan regions of Northern and Northeast India. These regions are culturally and ecologically very sensitive, with mighty rivers shaping the natural environment and the livelihoods of the people.

- NHPC's **Loktak** project, commissioned in 1983, had severe ecological impacts on the surrounding areas, including the destruction of the largest freshwater lake in the Indian subcontinent. Since the inception of the project, the downstream Loktak Lake has been degraded considerably. With the quality and quantity of the water in the lake constantly declining, local plant and fish species have disappeared.
- The construction of NHPC's **Lower Subansiri** project on the border of Arunachal Pradesh and Assam in Northeast India has repeatedly disrupted the area's wildlife. NHPC started with construction activities in and near a protected forest area two years before the necessary clearances were given. During the construction phase, NHPC violated environmental regulations by dumping muck and debris in the river. NHPC's activities furthermore led to the disruption and destruction of habitats of endangered species, including elephants, near the dam site.
- The **Indira Sagar** dam, once finalized, will have the largest impoundment area of all mega dams in India. It will submerge 91,000 hectares of land, including over 40,000 hectares of Central India's largest remaining natural forest. NHDC has

disclosed very little information on their efforts to comply with mandatory environmental rehabilitation guidelines. Reports by government agencies have clearly established that the corporation is violating environmental rehabilitation rules in this project.

### THE IMPACTS OF CLIMATE CHANGE

It is widely acknowledged that global warming is accelerating the melting of glaciers in the Himalayas and thereby altering the hydrology of the rivers that spring from the mountains. The increased siltation of rivers and the unpredictable fluctuation of the water levels will pose a threat not only to the human and ecological environment, but also to river infrastructure projects. It is likely that the increased sediment load of the rivers will speed up the sedimentation of reservoirs, thereby reducing the life span and economic viability of hydropower projects.

Due to the lack of data and knowledge about the degree of glacial melting, it is very unclear how much water Himalayan rivers will carry in the future. It is, however, likely that the water levels will differ substantially from current levels. In addition, sudden bursts of glacial lakes pose a threat to large infrastructure projects. The generation of energy may be jeopardized by the need to release water to prevent dam breaks. Climate changes will make it more and more difficult to predict future revenues from hydropower in the Himalayan regions. Since NHPC's existing and planned dams are concentrated in the Himalayas, climate change is exposing the company to a high degree of risk.

## SUMMARY AND RECOMMENDATIONS

In September 2004, the Narmada Bachao Andolan declared: “The Narmada Bachao Andolan and the forum of 17 people’s organizations in Madhya Pradesh deplore and condemn this deliberately created human tragedy and demand that there should be a judicial enquiry into the criminal negligence and dereliction of duty on part of the NHDC and government officials that has resulted in illegal submergence without rehabilitation in this and earlier years, that culpability be fixed and the responsible officials punished.”<sup>3</sup> Peoples’ movements in the Narmada Valley and elsewhere in India are demanding that NHPC finally be held accountable for the impacts of its operations.

Financial institutions should therefore be aware that NHPC will be subject to increased public scrutiny both in India and abroad over the next years. NHPC has violated national and international standards and laws for dam building. This has resulted in cost and time overruns, security concerns, widespread public opposition against NHPC projects, court cases against NHPC and the suspension or even cancellation of projects.

Private banks and the World Bank’s Multilateral Investment Guarantee Agency recently turned down applications from NHPC to finance the Omkareshwar hydropower project. Environmental and social concerns as well as reputational risks motivated these decisions. The Sardar Sarovar



Peoples resistance was able to stop the Maheshwar dam in the Narmada valley. Credit: Heffa Schücking

Project on the Narmada River, initially considered “too big to fail”, and then abandoned by the World Bank and the Japanese government, is still on people’s minds. Financial institutions do not easily associate themselves with dam building in India any longer, where the anti-dam struggles are widespread and have powerful allies.

NHPC therefore figures high on the watch list of Indian and international civil society organizations, and the media. All banks that con-

sider providing finance for this institution should be aware that engaging with NHPC carries high financial and reputational risks. Until NHPC undergoes fundamental reforms, any banks which support this institution will in effect be helping to destroy the environment, to undermine Indian laws and to unleash misery upon the poor. NGOs therefore call upon banks and export credit and insurance agencies to desist from supporting NHPC through loans, bonds, guarantees or any other financial instruments.

**For more information about dam building in India and civil society concerns regarding private financing of dams, please visit:**

- [www.janmanch.org/newsletter/](http://www.janmanch.org/newsletter/)
- [www.irn.org](http://www.irn.org)
- [www.urgewald.de](http://www.urgewald.de)
- [www.banktrack.org](http://www.banktrack.org)
- [www.narmada.org](http://www.narmada.org)

*The author Arundhati Roy, winner of the Booker Prize, commented in the summer of 2004:*

**“The Madhya Pradesh government and its partner, the NHPC, have rampaged through the region with a callousness that would shock even a seasoned cynic. ... A crime of this proportion is not going to be forgotten so easily. If it goes unpunished, it cannot but damage India's image as a benign destination for International Finance: thousands of people, evicted from their homes with nowhere to go.”**

<sup>3</sup> NBA Press Release, Sept. 2004, [www.narmada.org](http://www.narmada.org).

<sup>4</sup> Arundhati Roy, The Road to Harsud, Outlook, July 2004.

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IRN supports local communities working to protect their rivers and watersheds. We work to halt destructive river development projects and to encourage equitable and sustainable methods of meeting needs for water, energy and flood management.