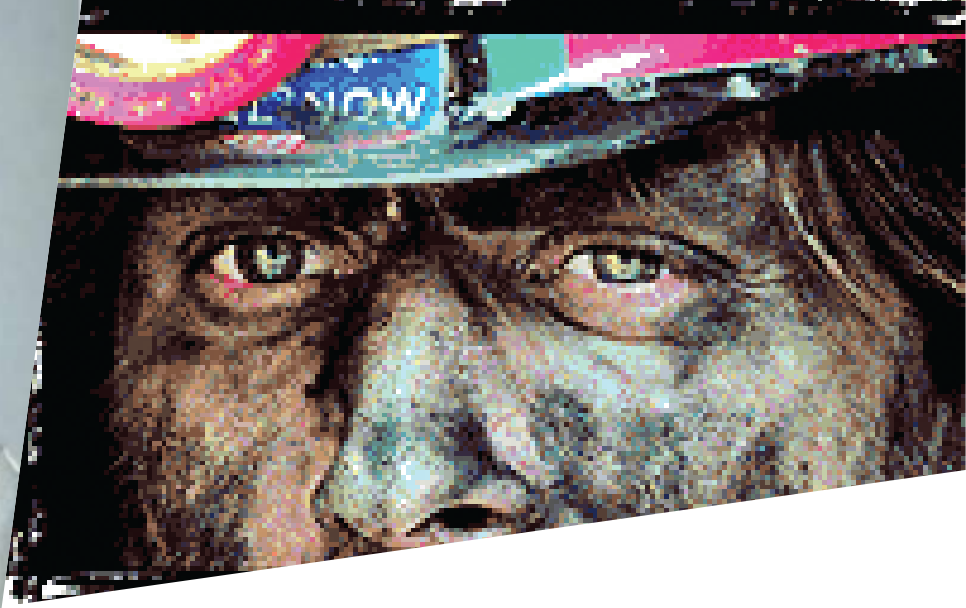

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Environmental and Social Risks in Project Financing: Evidence from India

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Koyel Mandal is Program Head, Environment at the Centre for Development Finance (CDF), IFMR and Vivek Venkataramani is a Researcher with the Environment Program at CDF, IFMR.

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List of Acronyms

ADHPL	Allain Duhangan Hydro Power Limited
APSEZ	Adani Ports and Special Economic Zone Limited
BEL	Bhilwara Energy Limited
CDM	Clean Development Mechanism
CDR	Corporate Debt Restructuring
CEC	Central Empowered Committee
CER	Certified Emission Reduction
CESC	Calcutta Electric Supply Corporation
CRZ	Coastal Regulation Zone
CSE	Centre for Science and Environment
CSR	Corporate Social Responsibility
DPCL	Dhamra Port Corporation Limited
EAC	Expert Appraisal Committee
EDC	Export Development Canada
EIA	Environment Impact Assessment
EP	Equator Principles
EPA	Environment Protection Act
EPFI	Equator Principles Financial Institutions
ESIA	Environmental and Social Impact Assessment
FCA	Forest Conservation Act
FI	Financial Institutions
FPIC	Free Prior and Informed Consent
FRA	Forest Rights Act
GoI	Government of India
GoM	Group of Ministers
GoU	Government of Uttarakhand
GRI	Global Reporting Initiative
Ha	Hectares
HCC	Hindustan Construction Company
ICICI	Industrial Credit and Investment Corporation of India
ICML	Integrated Coal Mining Limited

IDBI	Industrial Development Bank of India
IFC	International Finance Corporation
Il & FS	Infrastructure Leasing and Financial Services
IPO	Initial Public Offer
ISPL	International Seaports Private Limited
ISRO	Indian Space Research Organization
JSPL	Jindal Steel and Power Limited
L&T	Larsen & Toubro
LCL	Lavasa Corporation Limited
MoEF	Ministry of Environment and Forests
MoST	Ministry of Surface Transport
MoU	Memorandum of Understanding
MPCL	Malana Power Corporation Limited
MSEB	Maharashtra State Electricity Board
MT	Metric Tonnes
Mtpa	Million Tonnes per Annum
MW	Megawatt
NBFC	Non-Banking Financial Corporations
NCAS	National Centre for Advocacy Studies
NEEA	National Environment Appellate Authority
NGO	Non-Governmental Organization
NGRBA	National Ganga River Basin Authority
NGT	National Green Tribunal
NHPC	National Hydro Power Corporation
NOC	No Objection Certificate
NSFP	Norway's Statkraft Norfund Power
NTPC	National Thermal Power Corporation
OBPC	Orissa Beach Protection Council
OMCL	Odisha Mining Corporation Limited
PIL	Public Interest Litigation
PPSS	Posco Pratirodh Sangram Samiti
PRI	Principles of Responsible Investment
RBI	Reserve Bank of India

RTI	Right to Information
SBI	State Bank of India
SEBI	Securities and Exchange Board of India
SEZ	Special Economic Zone
SIIL	Sterlite Industries India Limited
ToR	Terms of Reference
UJVNL	Uttarakhand Jal Vidyut Nigam Limited
UNCED	United Nations Conference on Environment and Development
UNEP FI	United Nations Environment Programme Finance Initiative
UNFCCC	United Nations Framework Convention on Climate Change
VAL	Vedanta Alumina Limited
PESA	Panchayat (Extension to Scheduled Areas) Act

Introduction

Banks and other financial institutions (FIs) play a central role in the economy as financial intermediaries. While the impact of financial institutions on the environment may be indirect in comparison with industries, it is no less crucial. Financial institutions as service companies may not be polluters themselves but they quite often finance companies and projects that are polluters or may become polluters in the future (Carse, 2010). Financial institutions are involved in environmental issues from the moment they start acting as financial intermediaries, analysts, risk managers and becoming directly or indirectly involved in financing projects.

With growing environmental problems and increasing awareness, banks and FIs are being held responsible for the undesirable environmental impacts resulting from projects or activities that they have financed. In recent years, bankers have come to realize that banking operations, in particular lending, affect and are affected by the environment, and, consequently, that banks and FIs might have an important role to play in helping to raise environmental standards. Since the banks' long term success and sustainability depends on their client's performance and business sustainability and they can influence multiple stakeholders, integration of environmental and social dimensions in bank's business can have influence across industries, sectors and communities.

Environmental risks associated with commercial lending and credit extension may arise when a borrower's cash flows are adversely affected by various environmental factors, ranging from clean-up costs from pollution to a decrease in value of property taken as collateral due to contamination. Protest by the NGOs and communities and legal liabilities arising out of environmental and social disputes lead to temporary or permanent closure of the projects which affect the cash-flow for the banks and may also create reputation risks.

Appropriate due diligence and systematic evaluation of the environmental risks can reduce the chances of non-performing assets, increase the reliability of securing collateral of the right value and mitigate environmental and social risks in a lender's portfolio. Banks can go a step further to create business opportunities in the form of new markets, new products and new services. The global trend of identifying sustainable business opportunities and funding them is gaining momentum in India as well. These new business categories require specialized skills, advisory services, experts and risk taking ability on the part

of financial institutions. Private investments in India's clean energy sector in 2011 stood at $10.2 billion. India ranks No. 6 among G-20 nations in terms of private investments.[1] While Indian banks have become adept at identifying eco-friendly business opportunities, they are yet to take significant action on managing environmental risk.

Internationally, there are several initiatives to come up with a common protocol to manage environmental concerns. The United Nations Environment Programme Finance Initiative (UNEP FI) and the Equator Principles are most notable. The UNEP FI is a global partnership between the UNEP and the private financial sector. It is associated with over 160 financial institutions worldwide to develop and promote linkages between the environment, sustainability and financial performance. Principles of Responsible Investment (PRI) and Global Reporting Initiative (GRI) are some of its major contributions in this direction. The Equator Principles are a set of voluntary guidelines for the categorization, assessment and management of social and environmental risks in project finance. The EPs were announced in 2003, drafted by 10 leading banks in consultation with the IFC. Till date, 68 institutions have voluntarily adopted the Principles including 16 from the emerging markets[2]. Equator Principles Financial Institutions (EPFIs) commit to applying extensive environmental and social due diligence to all project loans exceeding US$ 10 million. The EPFIs commit not to finance projects that fail to meet the principles. To date no Indian financial institution has signed the Equator Principles, and YES Bank is the only Indian bank to sign the UNEP FI. Among FIs, Infrastructure Leasing and Financial Services (IL&FS) is the only signatory to UNEP FI.

Indian banks are slowly beginning to face regulatory pressure to go green. In December 2007, the Reserve Bank of India (RBI) issued a circular to banks citing the importance for banks to act responsibly and contribute to sustainable development. The circular referred banks to the Equator Principles and suggested that there is a need for Indian banks to evolve institutional mechanisms to enshrine sustainability.[3] Though it does not give any particular direction for action it definitely is a remarkable step towards generating awareness in the Indian banking industry. More recently, the Government of India has issued guidelines/instructions to banks on "Green Initiatives." These include use of electronic payment, use of core banking solutions, enhanced/maximum use of electronic payment systems, use of video conferencing, electronic payments to staff, vendors and

1 Who's Winning the Clean Energy Race, 2010, The PEW Charitable Trusts

2 Equator Principles, Available at - www.equator-principles.com, accessed January, 2013

3 The Hindu, Business Line, 21st December, 2007, Available at http://www.thehindubusinessline.com/2007/12/21/stories/2007122151790600.htm, accessed on 2nd Jan 08

clients etc. These initiatives, put in place through several circulars issued in 2011 and 2012, are applicable to all Public Sector Banks and Regional Rural Banks operating in India. The Government also requested the RBI to issue appropriate guidelines so that the private sector banks and the Non-Banking Financial Corporations (NBFCs) can play a more useful role in the financial sector (Finance, 2012).

In India, the environmental aspects of project finance deals are governed primarily by legislation. A project developer is required by regulation to undertake an Environment Impact Assessment (EIA) in order to obtain environmental clearance, which is the major prerequisite for starting projects and thus is demanded by banks in all project finance deals in India. This has been done as an obligation and there has been virtually no initiative from either banks or project promoters to incorporate environmental management systems as an integral part of projects.

Sustainable finance begins with recognizing the sources of risks – be it financial, social or environmental. Internationally, examples abound of companies or projects that have been shut down or heavily penalized as a result of adverse environmental and social impacts. Financial institutions that invest in such projects face a multitude of risks – from credit and collateral, as well as legal, regulatory and reputational risks. The threat of such penalties creates a strong incentive to integrate environmental and social risk assessment and management into financial institutions' risk management processes. In the last decade or so, there have been similar cases in India as well. This report compiles some such case studies of developmental projects in India that have been affected by environmental and social impacts arising out of the project activities. There are ten case studies in total. In selecting these cases, the following criteria have been used:

Spatial Diversity: The projects that have been selected for case studies were picked from different States across India in order to eliminate any State-specific investment and/ or policy bias. Three of the case studies viz., Vedanta Aluminum, Posco Steel Plant and Dhamra Port are from the State of Orissa. Another two, viz., Bhaironghati Hydel Power Project and Loharinag Pala Hydro Power Project are from the State of Uttarakhand. The remaining five case studies are from five different States – Himachal Pradesh, Chattisgarh, Maharashtra, Gujarat, and West Bengal.

Sectoral Representation: An attempt was made to select projects from different industry sectors to demonstrate that these risks are not confined to projects in a particular sector. Three of the projects viz., Allain Duhangan, Bhaironghati and Loharinag Pala are hydro-

power projects. Posco Steel Plant is a coal based integrated steel plant project. It included constructing a steel plant and a captive port, captive mining facilities for iron ore and coal, ancillary infrastructure and an integrated township. Vedanta Aluminum project included an alumina plant and a coal powered captive power plant. The rest of the projects are from different sectors, including thermal power, mining, ports, housing and cement.

Non-repetition of Principal Banker: The case selection was done in a way so as to avoid cases where the same set of principal bankers/FIs was engaged. Allain Duhangan and Sarshatali Coal Mining are the only two projects where the International Finance Corporation (IFC) was the biggest financer. Interestingly, both of them are examples of positive cases where the project promoters have successfully managed adverse environmental and social impacts arising out of project activities.

Ongoing or Recently Completed/Scrapped Projects: The projects selected for the case studies are either ongoing ones or ones that have been recently (within the last five years) completed or scrapped, as the case may be. This was done to make the report more relevant, keeping in view current debates around the issue and easy recall during interviews with bank personnel. There is only one case study – Sarshatali Coal Mining Project – where the project was completed in 2002. As mentioned earlier, this is an example of a project where the project promoter has proactively conformed to established environmental and social guidelines. More recent positive examples that meet all other criteria were not available.

Investment Amount: The cases selected are all in line with the investment limits prescribed by Equator Principles (capital cost of US $10 million or above).

Environmental and Social Impacts of the Projects: Out of the ten projects that have been selected for the case studies, eight of them have had adverse environmental and social impacts resulting from project activities. The remaining two case studies - Allain Duhangan and Sarshatali Coal Mining Project - are positive examples where the project promoters/ developers have been proactive in conforming to established environmental and social guidelines and also addressing the negative impacts of their project activities through innovative approaches.

All the case studies have been developed using a combination of secondary research and personal interviews[4] with officials of banks and FIs. Unlike other reports and case studies

4 The interviewees chose to remain anonymous

that have dealt more with the exact nature of environmental and social impacts of these projects, the main purpose of this report is to focus on the risks faced by banks and FIs who have financed these projects. Detailed information on the exact amount of investments, terms of lending and repayment etc. are not always available in the public domain. Some risks, such as reputational risks and brand loyalty cannot be monetized easily. However, the information provided in the case studies on delay in project completion, cost overruns, change in project promoter's share prices, legal and reputational risks etc. should provide readers with a sense of the additional financial risks incurred by banks and FIs who were invested in these projects. More importantly, many of these risks and potential losses are avoidable and can also lead to additional benefits in the form of carbon credits and business opportunities in new and emerging areas. The case studies on Allain Duhangan and Sarshatali Coal Mining projects are two such examples.

The authors hope that this report would be useful to a wide range of stakeholders, especially Indian banks and FIs in identifying and understanding environmental and social risks associated with their lending operations and consequently, start a dialogue on ways to incorporate these risks in their financing decisions.

Case Study 1

Bhaironghati Hydel Power Project

Clear case of project termination due to neglect of environmental and social impacts

Key Issue

The construction of a gravity dam over the Bhagirathi River (tributary of the Ganga River) that became controversial due to its environmental risks and disregard to cultural belief system of the local communities.

Project Name	Bhaironghati Hydel Power Project
Project Proponent	Uttarakhand Jal Vidyut Nigam Limited (UJVNL)
Project Location	Uttarakhand
Project Cost	Rs 296.82 Crores
Project Duration	2003-08 (5 years)
Delay in Completion	Project was scrapped

Chronology of Events

The gravity dam was to be constructed over the river Bhagirathi with a proposed installation of 65MW, which aimed at an annual power generation of 293.18 GWh. The tariff at the 2003 price levels was expected to be Rs 1.57/KWh. This project was initiated in 2003 and was to be completed by 2008.

February 2008: The Detailed Project Report (DPR) of the project was returned to the Uttarakhand Jal Vidyut Nigam Limited (UJVNL) due to insufficient clearances. Geological investigations were initiated and widespread protests were staged opposing these hydro-power projects

June 2009: The Uttarakhand High Court authorized the National Ganga River Basin Authority (NGRBA) to decide on the Bhaironghati project

October 2009: The first meeting of the National Ganga River Basin Authority was held under the Chairmanship of the Prime Minister. The following decisions were made during this meeting:

- Approval was given for "*Mission Clean Ganga*"
- The on-going sewage treatment projects were to be put on fast-track and States were asked to formulate Detailed Project Reports for such new projects in critical pollution hotspots and major towns on Ganga and its major tributaries, by November 30, 2009
- Ministry of Environment and Forests(MoEF) was to work with States to prepare specific action plans for dealing with the problem of industrial pollution in Ganga Basin by January 31, 2010
- The issue of hydro-electric projects in the upper reaches of Bhagirathi (Loharinag Pala, Pala Maneri and Bhaironghati) was to be studied by the MoEF and Ministry of Power and a report was to be submitted to NGRBA within 60 days.
- A Standing Committee of NGRBA, headed by Union Finance Minister, was to be constituted in order to meet more frequently and review implementation of projects on the Ganges

March 2010: The Group of Ministers (GoM) headed by the then Finance Minister, Mr. Pranab Mukherjee decided to shelve the Bhaironghati project due to its anticipated environmental consequences.

Project Financing

The project has been financed by the Power Finance Corporation through a fund which was activated from the Export Development Canada (EDC) with a debt-equity ratio of 70:30, with a 16% interest on equity capital and 10% return on the loan component.

Environmental Impacts

The Bhaironghati power project had its own share of perceived impacts on the environment.

- Developing a hydro power project with a capacity of more than 25MW in an eco-sensitive zone would severely damage the ecology of the surrounding area.
- There are nearly 30-40 tributaries of the Ganges that directly run into the river and fall in the stretch of 135kms from Gaumukh to Uttarkashi. These are Himalayan rivers, which are very pristine, clear and unpolluted. The impact of the project on these rivers hasn't been studied in the EIA of the dam.

- Noise pollution levels in this region weren't monitored by the MoEF and there were no mandatory guidelines for noise pollution management for such eco-sensitive zones.
- Soil Erosion as a result of operation of construction equipment.
- Disruption of the water ecology, increased water pollution and loss of aquatic wildlife were a few of the predicted consequences of the project on the aquatic ecosystem.
- Cumulative impact study of all the hydro power projects on the river Ganga wasn't estimated.

Roadblocks for the Project

The project was initiated in 2003, but it faced widespread protests from conservationists, spiritual activists and the civil society. The main opposition that the Bhaironghati project faced was from an eminent environmentalist, Dr. G.D. Agarwal, who had taken up a fast-undo-death protest appealing to the Government of Uttarakhand (GoU) and the Government of India (GoI) that the river Ganga must be allowed to flow in its natural state in the uppermost reach between Gangotri and Uttarkashi. He opposed the construction of any dam on the holy river.

Finally, in August, 2010, Shri. Jairam Ramesh (the then Union Minister of Environment and Forests), handed over a letter from the then Union Finance Minister & head of the GoM to Dr. G.D. Agarwal. The letter confirmed a few decisions taken by the GoI.

The GoI scrapped the Bhaironghati hydel project on the river Bhagirathi. The GoU had earlier suspended work on its Pala-Maneri and Loharinag Pala projects. The GoI also declared approximately 135 km from Gaumukh (upstream of Gangotri) to Uttarkashi as an eco-sensitive zone under the Environment Protection Act (1986). These decisions were taken keeping in mind the faith that millions of Indians have in the sanctity of the Ganges. The Government entrusted the responsibility for preparing a comprehensive Basin Management Plan with a consortium of seven Indian Institutes of Technology. The consortium was advised to engage in the widest possible public consultations for this work.

The above decisions of the GoI were formally ratified at a meeting of the National Ganga River Basin Authority. Dr G.D. Agrawal and his selected supporters were to address the Authority. Thus, the Bhaironghati Hydro Power project and a few other similar projects aiming at power generation from the Ganges were scrapped.

Financial Repercussions

Work had been commenced on the construction of the hydro power project by the time the project was scrapped. Hence, the total expenditure of Rs. 296.82 Crores that included construction costs, equipment, interests on loans had to be recovered. It wasn't possible to salvage the entire cost incurred on the project. Unlike the Loharinag Pala power project on the Ganges that was also scrapped, in this case there was no compensation provided to the UJVNL by the Union Ministry for the losses incurred by the promoters.

Case Study 2

Dhamra Port

Development of port or endangered turtle species: battle between corporates and conservationists

Key Issue

The Dhamra Port case is a typical example of weak governance and incomprehensive impact assessment in a haste to clear large developmental projects. Construction on this port began in 1998. The port is situated just 20 kms away from the Nasi group of islands, the Gahirmatha Marine Sanctuary and the Bhitarkanika National Park. The impact of this initiative on the fishing communities and on sea turtles has been regularly highlighted to the government and the project proponents.

Project Name	Dhamra Port Limited
Project Proponent	Tata Steel and Larsen & Toubro Ltd
Project Location	Odisha
Project Cost	Rs. 3200 Crores
Project Duration	Original plan 1998-03, subsequently revised
Delay in Completion	Eight years from original plan for the first phase

Project Background

The Dhamra Port project is a joint venture between Larsen & Toubro (L&T) and Tata Steel in a public-private partnership with the Government of Orissa. The original project proponent was International Seaports Private Limited (ISPL), which signed a concession agreement with the Government of Orissa on 2nd April, 1998 to develop the port. This project entailed three components viz. dredging of an access channel, construction of a port and the construction of a 62 km road and rail to Bhadrak in the north and the Howrah-Chennai main line. The first phase, which involved the construction of two berths, was to be completed by December 2009. This was expected to handle 83 million tonnes of cargo annually. This would involve dredging of 60 million cubic metres.

Chronology of Events

June 1997: State Government issues letter to reduce area of Bhitarkanika National Park to ensure Dhamra is outside the boundaries

July 1997: Coastal Regulation Zone notification amended conferring power on the Ministry of Surface Transport (MoST) to grant environmental clearance to ports

September 1997: Notification declaring the Gahirmatha Marine Sanctuary issued

October 1997: International Sea Ports Pvt. Ltd. with Larsen & Toubro as major stakeholder gets an Environmental Impact Assessment (EIA) report prepared by Kirloskar Consultants, Pune

December 1997: Fresh proclamation issued for Bhitarkanika National Park

September 1998: Final notification for 145 sq. km. Bhitarkanika National Park issued. The Dhamra Port site was now outside the national park boundaries

January 2000: The MoST grants clearance to Dhamra port

March 2000: 20th Annual Sea Turtle Symposium passes resolution expressing concern over Dhamra port

December 2003: Lead financier ICICI Bank suggests modifications in the concession agreement for the project and interest in its construction is revived

February 2004: Tata Steel expresses interest in joint venture with L&T

July 2004: Supreme Court appointed Central Empowered Committee proposes an alternative site for the port since the current site would seriously impact Gahirmatha's nesting turtles and lead to the beach being abandoned by the marine creatures.

August 2004: Korean Steel Major Posco and Australian mining company BHP-Billiton express interest in an integrated iron ore mining, steel plant and Dhamra port construction project with a proposed investment of Rs. 39,000 Crores

September 2004: International campaign to save Dhamra gathers steam

October 2004: Tata Steel and L&T sign agreement for construction of Dhamra port

March 2007: IDBI agrees to partly fund the project

July 2007: Greenpeace opposes Tata on its project's impact

February 2008: Construction work of Phase I underway

May 2011: After completing construction of Phase I, the port operations were commissioned

Project Financing

ISPL had assigned and subrogated all its rights and obligations to Dhamra Port Corporation Limited (DPCL) for implementation of the project. The DPCL is a 50:50 joint venture initiated by Larsen and Toubro Ltd. and Tata Steel. The cost of Phase I of the project was estimated to be approximately Rs. 3,200 Crores. The debt-equity ratio for the funding of this project was 70:30. Tata Steel raised Rs.246 Crores through equity, and set aside another Rs. 208 Crores towards this project. The construction was funded by a consortium of eight lenders led by Industrial Development Bank of India (IDBI) and other banks like the Industrial Credit and Investment Corporation of India (ICICI).

Legal Loopholes

The scope of Indian laws that govern coastal development and wildlife protection, along with frequent amendments in the acts made it easy for such development initiatives to ease through environmental clearance.

The Dhamra port is considered to be a *"Minor"* port according to the Indian Ports Act, 1908. This brought the port under the purview of the State Government while "*Major*" ports are governed by the Central Government.

Minor ports are exempt from the process of environmental clearance under EIA Notification of 1994. In reality, however, most minor ports are large in costs and scale, and would require undertaking an EIA. Ports certified as minor will have to conduct an EIA and seek clearance under another law viz. the Coastal Regulation Zone (CRZ) Notification, 1991. But this doesn't mandate any public hearings of the clearance, which didn't allow the local communities to participate in the environmental clearance process.

An amendment in July 1997 to the CRZ notification transferred environmental clearance of port projects from the Ministry of Environment and Forests (MoEF) to the Ministry of Surface Transport. This made is easier for project developers to acquire environmental clearance. There was a grave conflict of interest between port development and environment conservation, which resulted in the provision of environmental clearance for the Dhamra Port project even before this amendment was reversed in August 2000. This clearance was opposed by the Orissa Beach Protection Council (OBPC), which filed a petition with the National Environment Appellate Authority (NEEA). The NEEA, overlooking many facts regarding the project site and its environment, upheld the port's clearance. There were petitions filed by other organizations, which were pending for a long time before being rejected.

Environmental Impacts

Dhamra port is one of the biggest ports in eastern India. Being located on the Bay of Bengal, this port is very close to the Bhitarkanika National Park and just 10 km away from the Gahirmatha Marine Sanctuary. The proximity of the port construction and the impact of dredging were expected to have a lethal impact on the vast turtle congregation zone. The Bhitarkanika National Park and the Gahirmatha Marine Sanctuary were omitted in the independent EIA undertaken by the proponent. The impact of shipping and its related activities, oil spills, collision, grounding activities, re-fuelling of ships etc. on the congregation zone of the Olive Ridley turtles and the dolphins, which were found to be in the area, were not adequately examined.

FIGURE 2.1: LOCATION OF DHAMRA PORT

Source: Scoping Mission to Dhamra Port Project, IUCN

Greenpeace, a Non-Governmental Organization (NGO), was the biggest adversary of the project. They studied the impact of the proposed port on the nesting grounds of Olive Ridley turtles and argued that the region (where the port was coming up) was the world's biggest nesting site for this endangered turtle species. In addition to this, several environmentalists alleged that the part of the land allotted for building of port was falling under the protected forest category. Although the State Forest Notification, 1961 did not mark the forest area in ground, environmentalists claimed that the forest blocks overlapped the area required for the port development. They claimed that 300 hectares of forest land was diverted for construction activity, hence this violated the Forest Conservation Act of 1980 as the land category was changed without permission from the Central Government. The alleged violation of the Forest Conservation Act became the basis for the environmentalists approaching Supreme Court to stop the project.

Financial Repercussions

The Dhamra port project's financial closure was delayed by more than four years due to hassles in obtaining environmental clearances. The construction was to start by the end of 2000, but the project achieved financial closure only in February 2005. The delay not only pushed the revenue stream of the port further, but also resulted in unquantifiable losses to industries that had planned investments in order to gain from the port. However, the major loss in terms of brand erosion and financial returns would be faced by the main stakeholders in the project viz. Tata Steel and Larsen and Toubro (L & T) who held 50% of the share capital each. Given below is the share price performance of Tata Steel in comparison with the Sensex for a five-year period. A sharp decline in prices in the year 2009, when the construction was on-going and the controversy escalated, can be observed in the company's graph[5]. In addition to project delays, in 2010 the DPCL had to commit a one-time Rs. 30 Crores for wildlife and habitat conservation in the region. This was on the recommendation of the Supreme Court appointed Central Empowered Committee[6].

FIGURE 2.2: SHARE PRICE PERFORMACE OF TATA STEEL (2004-10)

Source: Money control available at http://www.moneycontrol.com/stockcharts/tatasteel/charts/TIS#TIS

Current Status

The Supreme Court of India, acting on the petition filed by environmentalists, cleared the project for development. The Court appointed Central Empowered Committee (CEC)

5 Money Control, Tata Steel (2004-10), Available at http://www.moneycontrol.com/stock-charts/tatasteel/charts/TIS#TIS, accessed January 2013

6 Down To Earth, 15th October, 2010, Available at http://www.downtoearth.org.in/node/1982 accessed February 2013

provided inputs that became the basis of its ruling in favour of the port developers, side-lining MoEF's report. The Court ruled that the port area should be treated as non-forest land, thus confirmed the interpretation of the notification of the State Government of Orissa. This has ended all the controversies that were marring the project development for decades.

The port was completed in 2011 and is now operating on a commercial basis. DPCL had commissioned two terminals of 12.5 MT each, one of which was for the import of dry bulk cargo and the other for export. The second phase of the project aims at setting up of 11 terminals in the next five years. This would entail huge expenditure which has forced the promoters to involve another strategic partner to undertake the process of port expansion.

Adani Ports and Special Economic Zone Ltd. (APSEZ) has agreed to buy the Dhamra Port in a consortium comprising L&T and Tata Steel Ltd. for approximately Rs. 5000 Crores. This take over might materialize provided the existing promoters acquire environmental clearance for the construction of the second phase of the port. The application is being processed by MoEF. It is expected that a more robust clearance process would be followed this time.

Case Study 3

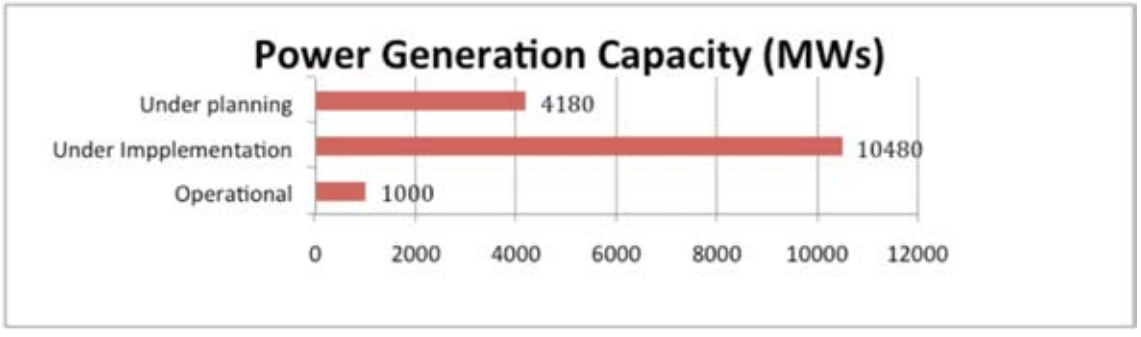
Jindal Power

Project Name	Tamnar-II
Project Proponent	Jindal Steel and Power Limited (JSPL)
Project Location	Chattisgarh
Project Cost	Estimated (as on March 2010) at Rs.13,410 Crores
Project Duration	Originally, 2007-08 to 2010-11, with subsequent revisions
Delay in Completion	As on date, three years from the original plan (for first phase of Tamnar-II). Plant not commissioned yet

Company Background

Jindal Power (a wholly owned subsidiary of Jindal Steel and Power Limited (JSPL)), with its experience of operating captive power plants for its steel business, has expanded into independent power plants. The company, having an existing capacity of 1000MW in Tamnar (Chattisgarh), has aggressive capacity expansion plans. Jindal Power entered the power sector with 250MW (first phase of 1000MW power project) in the year 2007, the current projects under implementation are more than 10 times the existing operational capacity of the company. The graph below displays Jindal's aggressive plans of attaining a leadership position among private energy sector players.

FIGURE 3.1 POWER GENERATION CAPACITY EXPANSION PLANS OF JINDAL POWER



Source: Data from web sources and analysis by Study team

Project Background

The focus of this case is the 2400 MW thermal power project at Tamnar in Raigarh, Chattisgarh. The project is an expansion of the plant that Jindal has been operating at

the same site. In 2007, the company planned for the capacity expansion of the existing project by 1320 MW. Jindal Power applied for the expansion of the project when the first phase (of 1000MW) was still under construction. With an additional land requirement of 750 hectares, the company secured the Terms of Reference (ToR) in the same year for the second phase, which was to be built adjacent to the existing plant. However, in August 2009, the company revised the expansion plans and applied for another proposal pegging the expansion at 2400 MW, this required an additional 300 hectares of land (on top of the 750 hectares required for previously planned expansion).

Project Financing

The second phase of Tamnar (Tamnar –II) was estimated to cost Rs. 13,410 Crores. The company planned to go for a debt-equity ratio of 3:1, which required an external financing of Rs. 10,057 Crores. The money was arranged through a term loan with tenure of 14 years from a consortium of 23 banks and financial institutions. State Bank of India (SBI) was the sole financial advisor and arranger of the loan.

Since Jindal power has plans to promote multiple power projects with overlapping implementation schedule, it was necessary to use financing tools that isolate the project risk for Tamnar power project from other projects. A unique two-tranche financing structure was employed by SBI Capital Markets for financing Jindal's Tamnar project. Using a blend of project finance and conventional debt financing, an optimal risk allocation structure was arrived between Jindal Power and its lenders.

The remaining amount had to be generated by Jindal Power through internal accruals and sale of equity shares. Jindal Power planned to raise Rs. 4,000 Crores from the primary market to partially fund its Tamnar-II project.

Environmental Concerns and Roadblocks

The problems for the project started in April 2010 when the State government of Chattisgarh ordered public hearing for the phase-II of Tamnar under the Environmental Protection Act (EPA) provision. It came to the notice of the government that Jindal Power had already begun construction for the expansion of the plant without getting the requisite environmental clearances.

The Ministry of Environment and Forests (MoEF) had advised Jindal Power in March 2009 to undertake fresh EIA study as part of the ToR. The company was also directed

to submit the draft EIA findings to the State Pollution Control Board for public hearing. The final EIA (after incorporating the issues identified during public hearing) was to be submitted to the MoEF.

The MoEF, acting on a complaint against Jindal Power, discovered that Jindal Power had started the construction work on the site that was designated for 1000MW power plant for which separate clearance from MoEF was granted in 2007. The authorities from the State Pollution Control Board concluded that the construction of the 2400MW power plant was initiated without any prior permission from competent authorities and this was in clear violation of the provision of EIA notification 2006. It was also found that the expansion work for the project had been undertaken based on the ToR that was received by the company in 2007 for the 1320 MW expansion and the company had not received fresh ToR for the 2400 MW plant.

This resulted in MoEF directing the State of Chattisgarh to invoke action against the company under section 19 of Environmental Protection Act (of 1986). Also, in June 2010, the MoEF retracted the ToR granted to the project for the original expansion plans.

The hurdles faced by Jindal Power have delayed the implementation of the project. Also, the whole issue has exposed the violations and other irregularities in the project, damaging brand Jindal and exposing it to further litigations in the future. This was expected to further increase the costs of the project and have implications on the Initial Public Offering (IPO) that the company was planning to bring in order to raise Rs. 7200 Crores from Indian markets.

Financial Repercussions

The initial uncertainty and finally the (temporary) revoking of the ToR stalled the on-going work, resulting in halting of orders midway and blocking the financial resources of the company for an uncertain period. Jindal Power had already placed orders for turbines worth Rs. 5000 Crores with BHEL, paying Rs. 765 Crores as advance. As of April 2010, it had deployed Rs. 829 Crores in the project[7].

The IPO planned by the company that was supposed to hit the markets in Nov 2010 was initially delayed due to escalating controversies around its projects and later due to financial market uncertainties and waning interests of foreign institutional investors.

7 Corporate presentation available at www.jindalpower.com

Finally in December 2012, Jindal Power shelved its IPO plan quoting unfavourable market conditions[8].

FIGURE 3.2: SHARE PRICE PERFORMACE OF JINDAL STEEL & POWER (2008-12)

Source: Yahoo Finance available at http://finance.yahoo.com/q/bc?t=5y&s=JINDALSTE.NS&l=on&z=l&q=l&c=SENSEX.BO%2C+&ql=1

The lower performance of Jindal Steel & Power Ltd stocks in comparison with the Sensex from the second half of 2009 onwards may be attributed to sudden controversies revolving around the Tamnar II project.

Current Status

After a delay of 18 months, the EAC submitted its report to MoEF in December 2010 recommending the project for environmental clearance for expansion. This cleared the way for the Tamnar-II project.

The expansion project of 2400 MW has been divided into two phases of 1200 MW (2x600MW) each. The first phase of 1200 MW has been granted coal linkage by the Government of India. The company was targeting to commission this before March 2012[9],

8 Business Standard, 4th December, 2012, Available at http://www.business-standard.com/article/companies/end-of-mega-profits-for-jindal-power-112120400185_1.html, accessed January 2013.

9 Corporate presentation available at www.jindalpower.com

but it has got postponed due to the delay in acquiring environmental clearance. Jindal Power has achieved financial closure for the first phase expansion of 1200 MW (2x600 MW). A consortium of nine lenders led by the State Bank of India (SBI) has sanctioned a Rupee Term Loan of Rs. 5,418 Crores to finance this. Apart from SBI, the consortium of banks includes HDFC bank, Canara bank, Kotak Mahindra bank, L&T Infrastructure Finance, State Bank of Bikaner & Jaipur, State Bank of Patiala, State Bank of Hyderabad and State Bank of Travancore. The execution of loan agreements was concluded in July 2013, which ensured the commissioning of the plant in FY 2013-14[10].

10 Jindal Power, Available at - http://www.jindalpower.com/media/press-release.aspx - accessed July 2013

Case Study 4

Lavasa Housing Project

The case of Lavasa hill city and the Ministry of Environment and Forests (MoEF) confrontation is an interesting case that captures corporate interests overarching environmental concerns and the reactive approach of the government. The Lavasa Corp. has been actively constructing the city since 2004 with regular voices raised by local communities about the violations of environmental laws, but the State responded at the time when the project was at the verge of completing its first phase. With the damage to environment already done, the MoEF is working on a compromise formula and conditional clearance to the project.

Project Name	Lavasa Housing Project
Project Proponent	Lavasa Corporation Limited (LCL)
Project Location	Maharashtra
Project Cost	Rs. 30,000 Crores
Project Duration	2004-2021 (the first phase of the project was scheduled to be complete by 2010-11 and last phase by 2020-21)
Delay in Completion	More than one year for the first phase

Project Background

Revered to be one of the largest housing projects and the first planned hill city in India (after independence), Lavasa offered world class amenities and services to its consumers in a small hill-town that is close to 200 kms from Mumbai.

Spread across 12,500 acres, Lavasa Corporation Limited is developing a world class property with a built up area of 200 million sq. feet to be constructed in four phases between years 2004-2020. The first phase of the project, viz. development of Dasve village, was to be made available to consumers by 2010-11. The actual work at Lavasa city started in 2004. By 2009, the road network, water and sewage treatment plant were completed. The planned dam was built and the water pipeline network in the city was laid down. The electricity distribution system and sub-stations were in place. LCL has already been able to tap electricity from the Maharashtra State Electricity Board (MSEB) transmission line, which passes through the neighbouring area. The company has also entered into a power purchase agreement with Tata Power for the supply of electricity. The Dasve

village is now under final stages of development, while the second village of Mugaon was launched in 2012.

Project Financing

Lavasa is one of the biggest residential projects in India. It is promoted by the Hindustan Construction Company (HCC) and consortium under the subsidiary registered as Lavasa Corporation (hence the name Lavasa for the city and the project). With an investment projected at Rs. 30,000 Crores, the consortium plans to generate revenue stream of Rs. 147,000 Crores by 2020.

HCC is the major stakeholder in the project (i.e. Lavasa Corp.) with 65% stake, while Thapar Group and Venkateshwara Hatcheries are the other big partners with 15% and 12.5 % stakes respectively in the project. The remaining 7.5% stakes are held by two smaller entities. The corporation has raised funds for development through a mix of equity options (from promoters), debt, private equity and joint ventures. The banks and financial institutions hold over 11% of the shares through convertible debentures.

Lavasa Corp. plans to make the project financially self-sustainable once Phase I is complete. The revenues from the sale of the property (developed during Phase I) and the Rs. 2000 Crores raised through IPO (Initial Public Offer) are the options available with the corporate.

Exposure of the Financial Institutions

HCC is the biggest equity stakeholder in the Lavasa Corp. Besides HCC, nine Indian banks and one foreign bank are involved in this project. Of these, at least eight banks have subscribed to deep discount convertible debentures of Lavasa Corp. Notable among them are ICICI bank's exposure of Rs. 250 Crores, Axis bank's Rs. 225 Crores and Bank of India's Rs. 150 Crores[11]. The equity pattern and the share of banks in the project are depicted in the graph displayed below.

As of June 2010, the equity shareholders' fund in the company was Rs. 592 Crores. The debt repayment (to banks) has been guaranteed by the promoters by way of corporate/ personal guarantee with a 'put option' on HCC along with the revenue that is generated from business out of the project activity. While some banks have agreed to convert the

11 The Hindu, Business Line, 20th January, 2011, Available at - http://www.thehindubusinessline.in/2011/01/20/stories/2011012051390200.htm, accessed February 2013

debentures into equity shares, others have opted for partial repayment, part conversion into equity or non-convertible debentures[12]. The sheer size of Lavasa project is dragging its promoter companies due to its high debt-equity ratio; HCC (the major promoter) has been underperforming the Economic Times Construction Index[13].

FIGURE 4.1: SHAREHOLDERS AND CAPITAL CONTRIBUTION FOR LAVASA HOUSING PROJECT

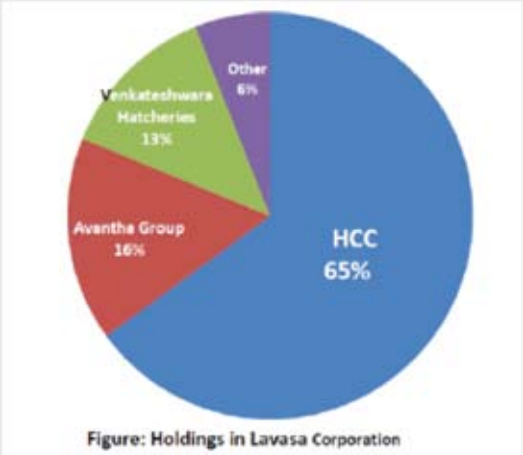


Figure: Holdings in Lavasa Corporation

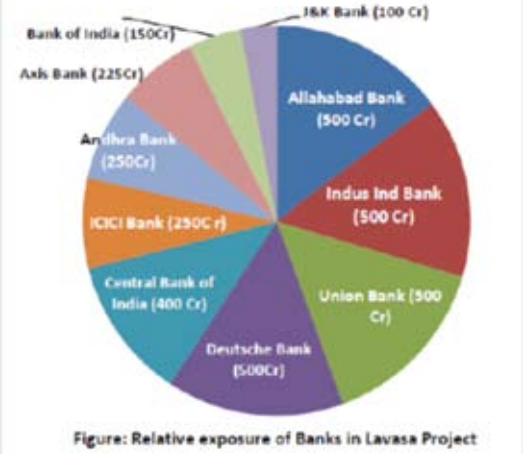


Figure: Relative exposure of Banks in Lavasa Project

The promoters of the Lavasa Project estimated revenue of Rs. 1,47,000 Crores from the project during the period 2010-20. The estimated project cost was Rs. 30,000 Crores and the promoters expected the project to become financially self-sustainable once the Phase I of the project started generating revenues.

During 2007-09 the investment of Rs. 225 Crores by Axis Bank (in the form of convertible preference shares and convertible debentures) gave a valuation of Rs. 10,000 Crores to the project and the same was confirmed by the 5% stakes that were managed by Deutsche Bank Singapore for Rs. 500 Crores.

Source: Web sources and analysis by study team

12 The Hindu, Business Line, 20th January, 2011, Available at - http://www.thehindubusinessline.in/2011/01/20/stories/2011012051390200.htm, accessed February 2013

13 Fullerton Securities, HCC, October 15th, 2010, Available at http://www.fullertonsecurities.co.in/equity/markets/rsch_reports/1_0_15102010Fullerton_HCC%2015th%20Oct%202010.pdf, accessed December 2012

Environmental Regulations and Lavasa

The Ministry of Environment and Forests blamed the company for violating environmental regulations and bypassing the rules under the guise of State rulings. The statement from the Ministry stated that Lavasa violated the Environment Impact Assessment notification (1994) and did not seek environment clearance under the Environment protection Act (1986). Further, the MoEF also stated that the clearances given to the project by the Maharashtra State Government are in fact illegal[14].

The MoEF, in its report submitted to the Mumbai High Court, took note of the fact that the permission to the Lavasa project was awarded a day after the Hill Station Policy of the Government of Maharashtra was declared[15], hinting that the policy was specially formulated by the Maharashtra Government to facilitate the project.

Lavasa Corp., however, has refuted these claims made by the Environment Ministry. The Ministry's concerns and Lavasa Corp.'s response are summarized in the table below.

TABLE 4.1: MOEF'S CONCERNS AND LAVASA CORP.'S COUNTER-ARGUMENTS REGARDING THE HOUSING PROJECT

Environment Ministry's blame	Lavasa's counter-argument
Lavasa did not get clearance under Environment Impact Assessment Notification, 1994	Project was exempted from clearance under Schedule 1, Serial 18 of 1994 notification
State's Environment Department issued permissions without statutory powers to do so	Being a tourism project, it did not require environmental clearance from Union government
Construction crossed 1,000 meters altitude threshold for tourism-related projects	No developmental work was carried out in areas notified as being above 1,000 meters
Project authorities forcibly relocated tribal communities and villagers from the project land	Company does not own any tribal land, but bought tracts from private owners

Source: Moef Order, show cause notice to Lavasa Corp. and Business Standard article (available at http://www.business-standard.com/india/news/the-hillsalivethe-soundcontroversy/407277/)

14 ENVIS, GoM, Available at http://envis.maharashtra.gov.in/envis_data/?q=enrmcnws_jan11, accessed November 2012

15 ENVIS, GoM, Available at http://envis.maharashtra.gov.in/envis_data/?q=enrmcnws_jan11, accessed November 2012

In order to settle the disputes, MoEF has recommended that Lavasa set up an Environmental Restoration Fund under the Ministry's supervision. Environmental laws do not mandate such a fund to let the violators off the hook, but the Ministry can get an order from the High Court to back it, giving it the legal teeth to penalize Lavasa heavily.

Financial Repercussions

Lavasa project is already under the scanner of various Ministries, NGOs and legislative bodies for alleged environmental violations and deviations from the original plans. It will be too premature to comment on the future of the Lavasa project, but the project is expected to get delayed. The first phase of the project was held up for almost 13 months before it finally received MoEF clearance. For a project of such scale, it is a significant challenge to bring it back on track.

MoEF has set stringent pre-conditions to the clearance relating to preserving the environment, and maintaining soil, water and air quality, all of which will result in additional costs for the company. As per the pre-conditions, Lavasa is also expected to spend at least five per cent of the total project cost on Corporate Social Responsibility (CSR) activities both at the site as well as the neighbouring 18 villages. In addition, clearances for other phases of the project will be thoroughly scrutinized.

The first setback to the project, because of the environmental controversy, was the withdrawal of IPO by the Lavasa Corp. Lavasa had filed the Red Herring Prospectus in Nov 2010 for raising Rs. 2000 Crores from the Indian markets[16]. Despite getting a nod from the Securities and Exchange Board of India (SEBI), the company was forced to withdraw its IPO. The withdrawal of the IPO was primarily to postpone the launch to a later date so that the environmental concerns regarding the project do not affect prospective investors. This delay has denied the company access to cheap capital at a time when the economy was facing a liquidity crunch and the fiscal regime was forcing financial institutions to make borrowings costlier (in order to curb inflation).

The first phase of the Lavasa project is now almost complete, but the timing of the controversy has exposed the future phases to financial and legislative risks. Further, the revenue stream of the company has taken a hit because of the derailment of the first phase of the project. The company has publicly stated that due to the stoppage of work

16 *The Economic Times,* Available at - http://economictimes.indiatimes.com/markets/stocks/stocks-in-news/Controversies-delay-in-Lavasa-Corps-IPO-mire-HCC/articleshow/7065602.cms, accessed January 2013

as ordered by the Environment Ministry in November 2010, it had lost Rs. 2 Crores a day. This has further cut down the operating profits of the company[17].

All this is reflected in the financial performance of the parent company of the Lavasa Corp. The annual growth rates of the company over a period (actual and expected) show sharp movements with no clear growth trends. Brand erosion is another concern for the project promoters. Building and retaining the trust and faith of the consumers and investors will be a difficult task for the company. If share price is considered to be a reflection of investors' faith in the company's performance and management, then clearly HCC has performed poorly. The company's share prices which followed the market trend till March 2010 have displayed a downward movement during the period March –November 2010. This was the period when Lavasa Corp.'s controversies were emerging.

FIGURE 4.2: SHARE PERFORMANCE OF HCC (OCT'09-OCT'10)

Source: Fullerton securities available at http://www.fullertonsecurities.co.in/equity/markets/rsch_reports/1_0_15102010Fullerton_HCC%2015th%20Oct%202010.pdf

In 2012, Lavasa had sought infrastructure status from the Reserve Bank of India (RBI) on the grounds that it would help the company join the corporate debt restructuring (CDR) cell set up by banks. The CDR cell helps companies restructure debt, ensuring that their loans stay as a standard asset on banks books. However, the RBI rejected Lavasa's request. The Rs. 850-Crores loans on Lavasa's books are now treated as bad loans by most banks[18].

17 The Hindu, Business Line, 20th January, 2011, Available at - http://www.thehindubusinessline.in/2011/01/20/stories/2011012051390200.htm, accessed February 2013

18 Youth Ki Awaaz, 7th September, 2012, Available at http://www.youthkiawaaz.com/2012/09/difficult-times-ahead-for-lavasa-indias-biggest-urban-infrastructure-project/, accessed January 2013

Current Status

The November 2010 directive by MoEF to Lavasa Corp. to stop all construction activity at the project site resulted in Lavasa moving to Mumbai High Court against the MoEF directive. The High Court declined to stay the order, but asked the MoEF to inspect the site and examine the state of affairs and also sought the project proponent's explanation before proceeding[19].

After inspecting the project site, the MoEF had submitted documents that support the Ministry's claim that construction activity was carried out at places that were 1000 meters above sea level[20]. MoEF finally gave clearance to Lavasa's first phase in November 2011, subject to pre-conditions including an environmental restoration fund, profit percentage earmarked for CSR and a revised development plan.

On the operational front, Lavasa Corp. had commenced sale of residential and commercial space under the first phase of its project in 2010. The company clocked Rs. 480 Crores of revenue and Rs. 140 Crores profit in FY 10. Interest costs stole a good 50 per cent of the earnings before interest, depreciation and taxes[21]. The Dasve village is now under an advanced stage of development, with structures in education, hospitality and leisure fast nearing completion. It has also launched its second town, Mugaon, which the company expects to complete by 2015.

19 Business Standard, 18th January, 2011, Available at - http://www.business-standard.com/india/news/moef-maintains-status-quo-at-lavasa/422127/, accessed February 2013

20 Business Standard, 18th January, 2011, Available at - http://www.business-standard.com/india/news/moef-maintains-status-quo-at-lavasa/422127/, accessed February 2013

21 The Hindu, Business Line, 20th January, 2011, Available at - http://www.thehindubusinessline.in/2011/01/20/stories/2011012051390200.htm, accessed February 2013

Case Study 5

Loharinag Pala Hydro Power Project

The Loharinag Pala hydro power project is an example of a project disrespecting the local environment and more importantly, religious sentiments of the local inhabitants, and losing the battle despite strong backing from the State Government. The project witnessed protests from the civil society and rallying of religious leaders that forced the policy makers to give directives for stalling the project, notwithstanding the fact that immense investments had already been made on project implementation. This derailed the energy plans of Uttarakhand State and delayed the growth projectile of the National Thermal Power Corporation (NTPC). Mere environmental due diligence is not enough to ensure safe implementation of a project.

Project Name	Loharinag Pala Hydro Power Project
Project Proponent	NTPC (National Thermal Power Corporation)
Project Location	Uttarakhand
Project Cost	Rs. 2,895.1 Crores
Project Duration	2006-11 (5 years)
Delay in Completion	Project was scrapped

Project Background

The Loharinag Pala hydro power project is part of the ambitious plan of the Government of Uttarakhand to reduce power deficit in the State and promote Uttarakhand as an attractive hub for economic activities. The plan was to tame all the major rivers originating in the State to generate hydro power. On the Bhagirathi river alone, apart from Loharinag Pala power plant, there are nine other projects that are operating, under construction and planned. Of these, Tehri Dam and Maneri Bhali dams are operational and the other four projects are under construction. In all, the overall planned power generation from Bhagirathi river basin is 4200 MW.

The Loharinag Pala project was assigned to the National Thermal Power Corporation, and the dam was planned in the district of Uttarkashi (about 100 kms upstream from Tehri dam on the river Bhagirathi). With a planned completion date of 2011, the project had an installed power generation capacity of 600 MW.

The project (along with other hydro-electric projects on the river Bhagirathi) had prepared an extensive Environmental Impact Assessment (EIA) report, conducted public hearings and had got all the requisite clearances from the State Pollution Control Board and the Ministry of Environment and Forests (MoEF). It had strong backing from the State Government and therefore, acquiring project clearances was easier. Since the population density in the region was low, the project didn't face any strong opposition from the local communities. The 2007 EIA summary report prepared for the project by NTPC estimated the project's cost to be Rs. 2,895.1 Crores. This report also estimated the cost of environment management at Rs. 20.1 Crores.

Environmental Impacts

The EIA document prepared by NTPC stated that the project will change the hydrology of the Bhagirathi river. The aquatic life of the river would be severely impacted, with a decline in fish population in the downstream. The EIA also stated that there will be loss of agricultural and forest land due to the construction of the dam. Construction of roads to access the dam and the actual construction of a dam in an eco-sensitive zone is to be prohibited.

TABLE 5.1: LIKELY PRIMARY ADVERSE ENVIRONMENTAL AND SOCIAL IMPACTS OF THE PROJECT

Indicators	Impact	Extent of impact	Impact duration
Hydrology	Reduced river flows between barrage and tailrace outlet Decline in river water quality	Along a 16 km stretch of river	Permanent Permanent
Aquatic ecosystems	Alteration of the river ecosystem Prevention of upstream fish movement	14 km of the Bhagirathi and the pond inundation area Up to 82 km of the Bhagirathi and its tributaries	Permanent Permanent
Land resources	Loss of agricultural and forest land	188.7 ha of land conversion	Permanent
Social	Resettlement of households	Approximately 36 households had relocated	Permanent

Source: ADB website, available at http://www.adb.org/Documents/Environment /IND/41904-IND-SEIA.pdf

As advised by MoEF, the EIA proposed methods for mitigation of impact on the aquatic life and downstream population by maintaining environmentally acceptable flow of water from the Loharinag Pala dam. To minimize impact on the aquatic life, the project along with the State fisheries department agreed on steps that could help provide support to the fish population through hatcheries, nurseries and rearing tanks to ensure that the fish population is maintained.

Project Progress

Infrastructure works for the project were inaugurated in February, 2004 and the project construction started in 2005. Up until then, an expenditure of over Rs. 600 Crores had been incurred and an additional expenditure of Rs.1927 Crores had been committed towards the project. The NTPC had placed orders for procuring equipment worth Rs. 2000 Crores.

The Environment Impact Assessment report for the project, which contained catchments area treatment plan, health delivery system, biodiversity management, resettlement and rehabilitation plan etc. was considered by the Expert Appraisal Committee and the environmental clearance was granted in February, 2005

What Went Wrong?

The Loharinag Pala project was neither the first nor the biggest project on the river Bhagirathi. Hence it enjoyed the late starter's advantage as most of the environmental problems associated with any run-of-the-river power project (related to the effect on the aquatic life and river flow) were pre-existing on the proposed site due to other projects operating on the river basin.

For nearly three years the Loharinag Pala project did not face any difficulty in implementation. The work on the proposed site continued without much hindrance till 2008, when suddenly the civil society, along with the religious groups of the region started an agitation asking for suspension of the project work. The arguments were environmental as well as religious in nature. The Bhagirathi river was one of the major tributaries of the river Ganga and periodic obstruction of the river flow would have a direct impact on the quantity and quality of water in the river Ganga. The religious concerns over the project and scientific studies highlighting the project's impact on the river caused the State Government to suspend the project.

The project, which was already midway in construction, had to approach the High Court of Uttarakhand against the decision of the State Government. The High Court in turn referred the matter to the National Ganga River Basin Authority (NGRBA)[22]. NGRBA held its first meeting in Oct 2009 under the chairmanship of the Prime Minister. The Authority decided that all issues related to hydroelectric projects in the upper reaches of the Bhagirathi river need further examination, and directed the MoEF and Ministry of Power to submit its report to NGBRA by Dec 2009[23].

Reverting to its earlier stance on the project, the MoEF recommended scrapping of the project due to its adverse impact on the "Valley of Flowers." The MoEF also recommended suspension of all the hydro power projects near the "Valley of Flowers." Based on the recommendations of the MoEF, the Group of Ministers (GoM) in Dec 2010 scrapped the Loharinag Pala power project (along with two other proposed projects on the Bhagirathi river).

Setback for NTPC

The scrapping of the Loharinag Pala power project forced NTPC to rethink its diversification into hydro power segment. This was a huge setback for NTPC, which had tried to diversify into power production facilities.

TABLE 5.2: NTPC'S HYDROELECTRIC PLANS

Company	Incorporated	Existing	Planned capacity
National Hydro Power Corp.	1975	5175 MW	9800 MW (by 2016)
NTPC Hydro limited	2002	0 MW	9000 MW (by 2017)

Source: NTPC website, available at http://www.kseboa.org/news/ntpc-targets-9000mw-hydro-power-generation-by-2017-2411948.html

NTPC being the biggest power player in the country, had plans to become a leader in hydro power in the coming decade. The aggressive plans of NTPC were clear when comparing its planned capacity with that of the National Hydro Power Corporation (NHPC). The scrapping of Loharinag Pala power project compromised NTPC's plans of enhancing electricity generation capacity and resulted in locking of a huge capital without

22 Infraline, June 2010, Available at- http://www.infraline.com/power/setup/ntpc/LoharinagPalaStatusJune10.aspx?AspxAutoDetectCookieSupport=1, accessed September 2013

23 Infraline, June 2010, Available at- http://www.infraline.com/power/setup/ntpc/LoharinagPalaStatusJune10.aspx?AspxAutoDetectCookieSupport=1, accessed September 2013

any returns[24]. The result was the policy decision by NTPC to stop further ventures in the hydro power sector[25]. The project was NTPC's chance to enter into the renewable energy sector; the increasing focus on clean energy sources in the country will leave NTPC in a disadvantageous position in comparison to power companies that operate in the hydro and the solar space. The failure of the Loharinag Pala project will have significant repercussions for the competitiveness of NTPC.

Current Status

Proposals have been made to compensate NTPC for the expenditure already incurred. However, NTPC not giving up hope, made a presentation to the Planning Commission of India opposing the order. The Ministry of Power has recommended to the Cabinet that the losses of NTPC be compensated for, which would include Rs. 600 Crores of direct investment in the project site and the Rs. 2000 Crores orders placed by NTPC for machinery and other peripherals[26]. In March 2013, after several rounds of discussion between the project promoter and different tiers of the government, the Finance Ministry has set aside a provision for compensating NTPC for the closure of this hydro power project.

24 Project Monitor, Available at http://www.projectsmonitor.com/POWDIST/ntpc-to-rethink-hydro-power, accessed December 2012

25 Project Monitor, Available at http://www.projectsmonitor.com/POWDIST/ntpc-to-rethink-hydro-power, accessed December 2012

26 DnaIndia, Loharinag Pala, 25th August, 2010, Availablt at - http://www.dnaindia.com/money/1427767/report-ntpc-may-get-rs2000-crore-for-scrapped-hydel-unit, accessed September 2012

Case Study 6

Nirma cement Plant

Is it environmentally sustainable or has the pro-corporate government attitude portrayed it so?

Key Issue

In 2008, Nirma Limited initiated the process of setting up a cement plant in Mahuva district, Bhavnagar, Gujarat. This project faced widespread resistance from the people of the district due to perceived detrimental impacts of the plant on the environment and the livelihood of the local community.

Project Name	Nirma Cement Factory
Project Proponent	Nirma Limited
Project Location	Gujarat
Project Cost	Rs 895Crores
Project Duration	2008-2010
Delay in Completion	Project has been stalled

Chronology of Events

December 2007: The Department of Revenue, Government of Gujarat, passed a resolution for the allocation of 268 ha of land in favour of Nirma Ltd for setting up its cement factory

April 2008: The land of 268 ha was granted to the company

December 2008: Environmental Clearance was provided by the Ministry of Environment and Forests (MoEF) based on the Environmental Impact Assessment Report (EIA) submitted by Nirma Ltd

Jan-March 2009: Special Civil Applications were filed by farmer representatives before the High Court of Gujarat regarding the allocation of land for the establishment of the cement plant and development of Samadhiyala Bhandara[27], its project and revenue record.

May 2009: The Government of Gujarat appointed an Expert Committee to analyze all the aspects related to Samadhiyala Bhandara from which a part of the land was allocated to Nirma Ltd.

27 It is the reservoir or artificial river created to prevent salinity ingress and provide irrigation to the land

August 2009: The Expert Committee submitted its report and recommended three options regarding the allocation of land for the construction of the cement plant

November 2009: The Cabinet Sub-Committee, which was formed to discuss the recommendations of the Expert Committee, decided to recommend the second option whereby it directed Nirma Ltd. to return 54 ha of the land to the Government, and retain the remaining 214 ha of the Samadhiyala Bhandara land that was allocated to it. This resolution was passed, subject to a few conditions.

December 2009: The Cabinet Sub-Committee passed a resolution withdrawing 54 ha of land, and approved the construction of the cement plant. This was then placed before the High Court, which permitted the construction of the cement plant after withdrawing 54 ha of land.

February 2010: The farmer representatives filed a Right to Information (RTI) demanding the State Government's report, and submitted satellite images from the Indian Space Research Organization (ISRO) to prove that the proposed project was actually situated on a water body.

April 2010: After several rounds of negotiations, the High Court approved Nirma Ltd. to commence construction of its cement plant, provided it returned an additional 46 ha of land to the Government.

December 2010: Farmer representatives appealed further to the Supreme Court, when the latter directed the MoEF to study the impact of the proposed plant on the water body and undertake a site inspection

Implications of the Project

Social Aspects

Arguments (made by Nirma Ltd.)	Counter-arguments
· The company had affirmed to provide employment opportunities to 418 people once the factory starts its operations	· Local Communities perceived a huge decline in their livelihoods due to loss of agricultural land, loss in onion and cotton production, and probable closure of the cotton ginning factory. Also, there was no guarantee from the company for absorbing the local community in their factory work

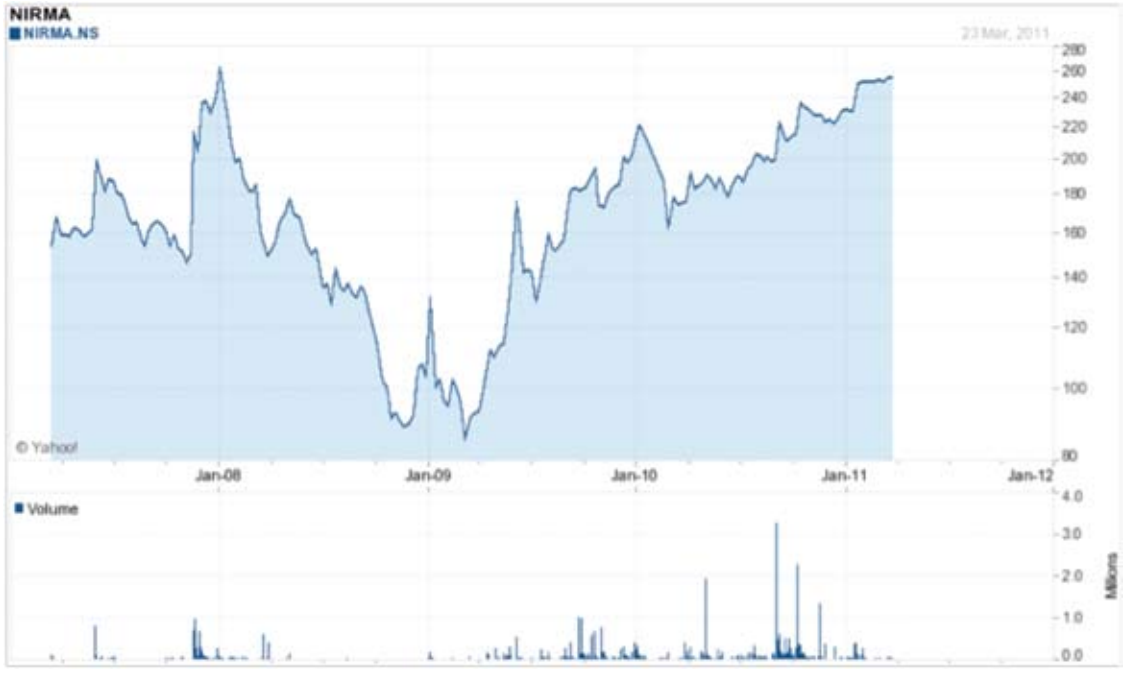
Political Aspects

Political unrest	Inaction on the government front	Law enforcement issues
· Widespread protests led by Kanubhai Kalsariya (former Bharatiya Janata Party legislator) were organized in 15 villages	· Even after farmers' repetitive filing of RTIs and Special Civil Applications with the government, no immediate action was taken by them, and only selective records were provided by the government for examination	· The police was used as a tool to break down the agitation of the local communities. Agitators and people's representatives were beaten up by the policemen, and arrested on many occasions

Economic/ Financial Aspects

The decline in share prices of Nirma Ltd during the period January 08 – March 09 could be an indication of brand erosion as a result of the Bhavnagar issue and the gaining media attention on the controversy.

FIGURE 6.1: SHARE PERFORMANCE OF NIRMA LTD. (2007-11)



Source: Yahoo Finance available at http://in.finance.yahoo.com/q/bc?s=NIRMA.NS&t=5y&l=on&z=l&q=l&c=

Legal Aspects

Arguments (made by Nirma Ltd.)	Counter-arguments
· The proposed cement plant would be constructed on a wasteland and there was no existance of any water body in the area · As per the official project document, housing and necessary infrastructure for the construction labourers would be provided for within the project site	· Both the parties viz. the Government of Gujarat and Nirma Ltd. failed to reveal the fact that the proposed project site was on an actual water body, and that the cement plant would be contructed on the catchment area of the reservoir · No such construction was observed during the site inspection carried out by the MoEF

Environment Aspects

Arguments (made by Nirma Ltd.)	Counter-arguements
· The proposed cement plant would be constructed on a wasteland.The company stated that the project area was a low-lying area and hence sufficient drainage facilities would have to be constructed. It had mentioned that the project area would be flooded due to seasonal rainfall. · The limestone requirements of the company would be met by the captive mines in the local area · Ambient Air Quality levels and noise would be monitored at various locations and will be maintained under the prescribed limits of the Environment Protection Act (EPA) and State authorities · Coastal Regulation Zone (CRZ) clearance for laying pipelines in the coastal areas will be obtained · An impact assessment of the disposal of treated effluent into seawater would be carried out	· The environmental clearance for the project was obtained by the company by suppressing the existence of Samadhiyala Bhandara reservoir. The project proponent also failed to mention that the proposed factory would be on a water body, viz. the Shensuri river and the catchment area of the Bhandara reservoir. Since the project would be constructed on a water body, it would get flooded by the river water. · There was no environmental clearance for the usage of captive mines for meeting the company's limestone requirements · There was no site earmarked for monitoring stations to be set up · The CRZ clearance wasn't yet obtained · No such report was available

Current Status

In May 2011, the MoEF, after inspecting the project site and making several observations, issued a show cause notice to Nirma Ltd. under Section 5 of the Environment Protection Act to revoke the environmental clearance provided in 2008 for the cement plant, coke oven plant, and the captive power plant in Bhavnagar. The MoEF directed the company to provide its objections before the Government on the scheduled date, and instructed the company to desist from any action at the site until further clearance was provided by the former party.

In December 2011, the MoEF, informed the Supreme Court that the divisive cement plant of Nirma Industries is situated in an environmentally sensitive wetland area. Thus, Nirma had to stop all construction activities on the site as instructed by the MoEF.

Nirma decided to appeal against the Ministry's notice to the National Green Tribunal (NGT). After nearly a year of discussions on the appeal, the tribunal in February, 2013, has decided to re-evaluate the project by sending a team of experts to the project site. The tribunal stated that several expert committees' reports on this issue have given contrasting views on the project site's environment value and nature, and hence it is necessary to re-examine the case. This has sparked another controversy on the previous reports submitted by the MoEF and the need for re-examining the site by the NGT, which the MoEF has opposed. This site inspection is expected to decide the fate of the long delayed Nirma cement plant in Bhavnagar.

Case Study 7

Posco Steel Plant

Port or to de-port!

Key Issues

- The construction of an integrated steel plant and captive power plant in Jagatsinghpur, Odisha, over an area of 4,004 acres. This sparked widespread protests from the villages near the proposed plant site. In additions to this, NGOs estimated degradation of the coast, which was already damaged by the ports constructed previously in the State
- Dispossession of farmers' lands without due consideration to their inheritance rights.
- Disregard for protests and inept handling of the entire issue on all fronts by the government as well as project proponent

Project Name	Posco Steel Plant
Project Proponent	Posco India Pvt. Ltd
Project Location	Odisha
Project Cost	Rs. 52,810 Crores
Project Duration	Original plan (2007-10); Anticipated completion date (2016-17)
Project Delay	Seven years

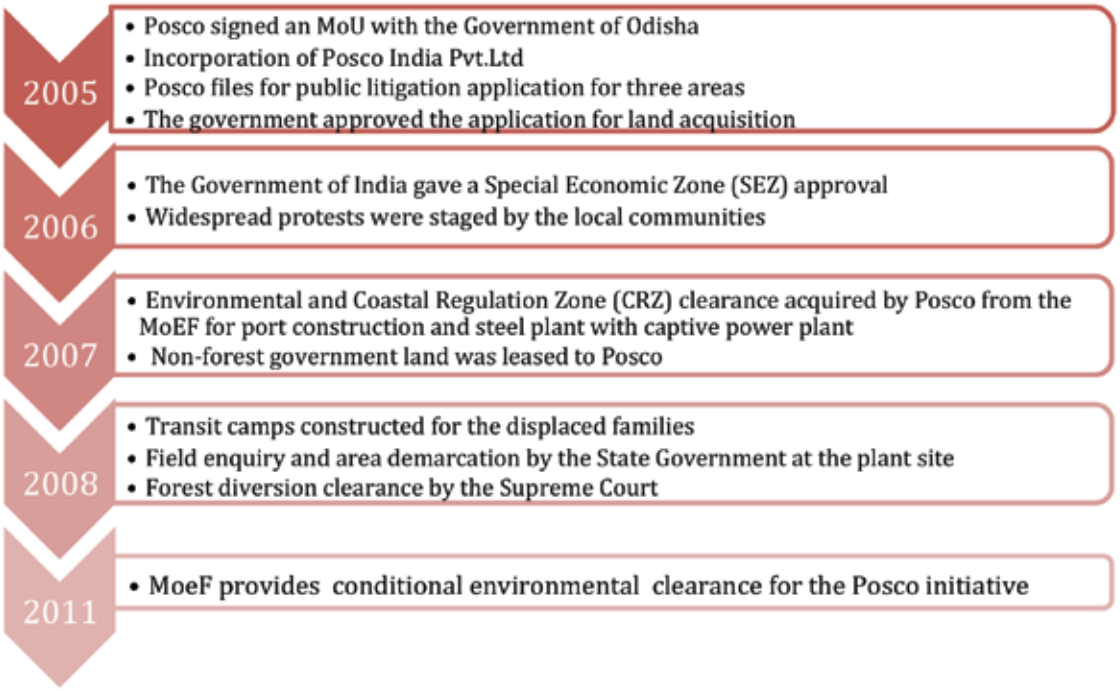
Project Background

The massive coal based integrated steel plant project initiated by Posco India Ltd is located in the Jagatsinghpur district of Odisha (10 km south of Paradeep port). This project included constructing a steel plant and a captive port, captive mining facilities for iron ore and coal, ancillary infrastructure and an integrated township, apart from an office in Bhubaneshwar. The proposed integrated steel plant required a total of 4004 acres of land of which 437.6 acres was private land and the remaining was government land. Of the entire government land, 2958.7 acres were forest land and 607.5 acres non-forest land. This steel plant was to be set up after the signing of a MoU[28] between POSCO, Korea

28 MoU refers to a Memorandum of understanding which describes a bilateral or unilateral agreement between any two parties

and the State Government of Odisha in 2005. The 12 MTPA (Million Tonnes per annum) integrated steel plant was scheduled to be completed in three phases of four MTPA each. The plant was expected to have an annual production capacity of 12 million tonnes. This project was to include iron ore mine development over a period of 30 years at captive mines at Keonjhar and Sundergarh districts in Odisha, and also overall development of the ancillary infrastructure. The construction of the first phase was expected to be completed by 2010-11.

FIGURE 7.1: CHRONOLOGY OF EVENTS



Source: Several web sources and Posco India available at http://www.posco-india.com/

Environmental Impacts

The proposed project includes the construction of an integrated steel plant and a captive minor port and hence, the environmental impact of the project would be cumulative of both the port and the plant. Along with having an environmental impact, this project would have a considerable effect on the livelihoods of the local communities. The Centre for Science and Environment (CSE), at the request of the National Centre for Advocacy Studies (NCAS), a Maharashtra based NGO representing Posco Pratirodh Sangram Samiti (PPSS), which is a mass people's rights movement against POSCO project impacts,

prepared a marine environmental impact assessment of the Posco project. CSE stated the following possible impacts of the project on the local environment and the fishing community:

- The proposed port site is on a coast where two ports viz. Paradeep and Dhamra are in existence, and hence the impact of the current proposal on the fragile ecosystem of the coasts needs to be studied as a cumulative impact of the three ports and not as an isolated case
- Since the proposed plant would be located on the mouth of the Jatadhari river, it would block the flow of drainage that is collected from the district and hence result in flooding
- Sand dunes that act as a barrier for water entering into the villages might get flattened due to the construction of the port and hence make them vulnerable to natural disasters. Disaster management plans are inadequate in the project proposal.
- Coastal erosion as a result of construction of breakwater structures, as mentioned in the Environmental Impact Assessment (EIA) of the Posco project, could be another possible impact of the port., This phenomenon can be observed near other ports like Pondicherry.
- There could be indirect impacts of dredging, transportation of raw materials and the resultant habitat destruction of the Olive Ridley turtles, which needed further assessment.

FIGURE 7.2: LOCATION OF POSCO STEEL PLANT

Source: Environment Impact Assessment, Posco

Forest Rights Act, 2006

As per Forest Rights Act, 2006, the recognition of the rights of scheduled tribes and other forest dwellers on the land allocated for the purpose of constructing the Posco port and steel plant is indisputable. The 2958.7 acres of forest land that the government had assigned to the corporate would come under the purview of the aforesaid Forest Act, which would authorize the communities residing in the villages rights to use this land for their cultivation.

Livelihood Impacts

Beetel Cultivation

The port would result in substantial loss of income for the communities who earn their living from beetel vineyards. Beetel cultivation is the main source of livelihood for the farmers in this region. The loss of income due to the port construction and the feasibility of a possible shift of beetel cultivation were not given due importance by the proponent.

Fish Cultivation

The construction of a port would result in a sizeable loss of catch for the 30,000 fishing communities that thrive in this area. The *Jatadhari* estuary, which would be closed due to the port construction, serves as a breeding ground for several species of fish. Fish cultivation is an ancestral livelihood strategy for the local communities in the region, and a mode of compensation for the loss of income for the affected wasn't given due importance.

Project Financing

Pohang Steel Company (Posco) was the major financer for the project. It was the biggest foreign direct investment for India.

Share Price

Share prices can be a good indicator of profits or losses accrued to a company due to change in its brand image. Occurrence of steep dips in Posco common stock prices during 2008-09 is evident from the figure below. However, these may not be the only losses incurred by the company as a repercussion of the controversy staged in India. It had made huge investments in terms of plant and machinery and land acquired for the project, which got locked-in due to unanticipated delays in the project.

FIGURE 7.3: SHARE PRICE PERFORMANCE OF POSCO STEEL. (2008-12)

Source: Yahoo Finance available at - http://finance.yahoo.com/q/bc?t=5y&s=PKX&l =on&z=l&q=l&c=SENSEX.BO%2C+&ql=1

Roadblocks for the Project

The MoU between Posco and the State Government of Odisha was signed in 2005 and the progress in construction has been dawdling since then. This is because of the following reasons.

- Environmental clearance was received with delay in 2007
- Forest clearance from Forest Conservation Act was received in 2009
- Lease for mining was received very late as it was caught in legal issues
- The biggest opposition to the project was from the Posco Pratirodh Sangram Samiti. Eight villages that would have been impacted by the port construction protested against the project.
- In 2010, the Odisha High Court struck down the clearance that the State had earlier provided for mining, and asked the State government to scrutinize all the applications for mining once again

Current Status

The Government of Odisha had permitted Posco to start construction work within the 2000 acres land that has already been acquired. In March 2012, the National Green Tribunal suspended the environmental clearance acquired by Posco and ordered a fresh review. This was yet another blow to the face of Posco.

After repeated deliberations between the State Government of Odisha and Posco, it was finally decided in July 2013, that the steel giant would commence construction work in a few months after the Government transfers the remaining 1000acres of land to it. The company plans to complete the first phase of the steel plant by 2016-17 and commence operations thereafter. This decision has brought closure to a seven year long struggle of the steel company to set up its plant in Jagatsinghpur, Odisha.

Case study 8

Vedanta Aluminum

Odisha is one of the most natural resource rich States in the country. Estimates show that the State has the world's fourth largest bauxite reserves; but ironically no new alumina refinery has been set up in the State since 1980. Sterlite's bauxite mining and refinery project in the Kalahandi district was an effort to encourage private investments in the State and to pump investments in one of the most backward districts of Odisha.

Project Name	Alumina refinery at Lanjigarh and bauxite mining at Niyamgiri (integrated Aluminum project)
Project Proponent	Sterlite Industries India Limited (SIIL) through its subsidiary Vedanta Alumina Limited (VAL)
Project Location	Odisha
Project Cost	Rs. 4,000 Crores
Project Duration	Started in 2004 (3years for refinery & 1 year for mining)
Project Delay	Six years up until now (project is still not completed)

Project Background

Sterlite Industries India Limited (SIIL) signed a Memorandum of Understanding (MoU) with the Government of Odisha in 2003 for setting up of an integrated "Alumina and Aluminum complex" at Lanjigarh in Kalahandi district of western Odisha. The project cost was estimated at Rs.4000 Crores and it included an alumina plant (capacity one million tonnes per annum (mtpa)) and a 75 Megawatt (MW) coal powered captive power plant. Vedanta Alumina Limited (in the following text the company is referred to as 'Vedanta'), a subsidiary of SIIL was the promoter of the project.

The MoU also ensured supplies of 150 million tonnes of bauxite for Vedanta's alumina refinery at Lanjigarh. Bauxite mines at Niyamgiri were identified as one of the sources for the refinery. In order to ensure control over supplies of bauxite from Niyamgiri, Vedanta signed an agreement with the Odisha Mining Corporation Limited (OMCL) and became joint owner of mined bauxite from the Niyamgiri mines.

Project Progress

After the initial understanding between Sterlite industries and OMC in 1997, the former carried out studies for project development and in 2003 a no-objection certificate

(NOC) from the local people of Lanjigarh was sought, followed by an application to the Ministry of Environment and Forests (MoEF) for environmental clearance for setting up of alumina refinery. In the same year a MoU between the State Government and Sterlite industries was signed for setting up of the alumina refinery. In 2004 the Supreme Court accepted a Public interest litigation (PIL) application and formed a committee (Centrally Empowered Committee) to carry out field inspections in Kalahandi district. Based on the recommendations of the CEC, the Supreme Court directed the MoEF to form a special team for investigating the effects of the project on the local ecology. After hearing all the parties, the Supreme Court in 2008 passed final order and cleared the project with approval of diversion of 660 hectares of forest land for bauxite mining in Niyamgiri hills[29].

The Vedanta Alumina refinery at Lanjigarh became operational in 2007, with a refining capacity of one mpta[30]. Further in 2007, the company applied for an expansion of the Lanjigarh refinery from one mpta to six mpta and this also required expansion of the captive power generation capacity from 75MWs to 300 MWs[31].

Environmental and Social Impacts

The Vedanta mining and refinery projects could never emerge clear on the allegations of environmental destruction and community rights violation. Protests by civil society and media coverage always maintained pressure on the project. Amidst rising allegations against Vedanta, the MoEF appointed the Saxena Committee (comprising of four members) in July 2010 to investigate the ground realities and impacts of Vedanta's projects. The report looked into details of the project planning and implementation and concluded that the project had grossly violated the law of the land. The key findings of the report are mentioned in the following sections[32].

Niyamgiri Mining

The Niyamgiri mining project had serious environmental implications. The mining project was to result in the cutting of 1.2 lakh trees, loss of vegetation and could seriously affect

29 Vedanta Aluminium, Available at - http://lanjigarhproject.vedantaaluminium.com/lanjigarh-project.htm, accessed December 2012

30 Vedanta Aluminium, Available at - http://lanjigarhproject.vedantaaluminium.com/lanjigarh-project.htm, accessed December 2012

31 The Telegraph, Vedanta Aluminium Limited, 11th January, 2011, Available at http://www.telegraphindia.com/1110111/jsp/orissa/story_13419195.jsp, accessed December 2012

32 Sanhati, Vedanta Aluminium Limited, 27th September, 2010, Available at - http://sanhati.com/excerpted/2754/, accessed December 2012

the rivers that get their water from the Niyamgiri catchment (Vam-sadhara and Nagavalli are perennial rivers that draw their water from the Niyamgiri hills)[33].

The project violated the forest laws and provisions that protect the tribal community. The committee commented on the social impact of the project by noting that the area falling under the mining zone is protected under the Forest Rights Act (2006) and schedule (V) applied to the entire Niyamgiri hill region. The committee noted that at least 20% of the tribal population residing in the region would be directly affected by the project (one of the affected tribe is categorized as an endangered tribe). The committee noted that although no land can be acquired in these regions without the expressed consent of the tribal community, this law was grossly violated by the project promoters[34].

Most importantly, the Environmental Impact Assessment (EIA) study that was sponsored by Vedanta Alumina was grossly inadequate. The report did not appreciate the ecological importance of the Niyamgiri hills and also failed to quantify the social and ecological damage from mining[35].

Lanjigarh Alumina Plant

The Saxena committee report noted that the Vedanta refinery illegally encroached upon 26 hectares of forest land in violation of the Environment Protection Act (EPA). Further, the company had applied for the capacity enhancement of the refinery from the existing one mtpa to six mtpa in 2006. However, it had already started expansion work on the refinery plant without acquiring permission. The report also noted that the Lanjigarh refinery was sourcing part of its bauxite from mines that didn't have environment clearance[36].

Financial Repercussions

The problems with the Niyamgiri mines resulted in a decline in alumina production at the Lanjigarh plant. The plant produced 171,000 tonnes in 2009-10[37], down by 10% from

33 Sanhati, Vedanta Aluminium Limited, 27th September, 2010, Available at - http://sanhati.com/excerpted/2754/, accessed December 2012

34 Sanhati, Vedanta Aluminium Limited, 27th September, 2010, Available at - http://sanhati.com/excerpted/2754/, accessed December 2012

35 Sanhati, Vedanta Aluminium Limited, 27th September, 2010, Available at - http://sanhati.com/excerpted/2754/, accessed December 2012

36 Sanhati, Vedanta Aluminium Limited, 27th September, 2010, Available at - http://sanhati.com/excerpted/2754/, accessed December 2012

37 DnaIndia, Vedanta Aluminium Limited, 8th October, 2010, Available at - http://www.dnaindia.com/money/1449218/report-vedanta-defers-rs36000-crore-lanjigarh-expansion, accessed December 2012

the previous year, but this didn't have any effect on the overall aluminum production by the company.

Further, the stay on the on-going expansion work of the Lanjigarh refinery and power plant has resulted in blocking of Rs. 10,000 Crores of financial resources, of which Rs. 5,000 Crores has already been invested, whereas the remaining Rs. 5,000 Crores is stuck in the pipeline[38].

The impacts of the mis-managed project were not limited to Vedanta Alumina, but Sterlite and Vedanta Resources (Vedanta Resources is the mother company of Vedanta Mining Limited and Sterlite Industries) too had to face the heat. Brand Vedanta took a beating with widespread criticism from environmentalists, civil society and the media. The Norwegian Government's pension fund was the first high-profile withdrawal of investments, selling its $13 million stake in Vedanta in 2007[39]. In July 2008, acting on reports of environmental and human rights violation, Martin Currie Scottish Trust Fund withdrew their investments of £2.37million from Vedanta. In another incident, Vedanta came under further pressure over ethics issues as Britain's Church of England sold its shares in the company, worth around £3.8 million[40]. A fourth European investor Joseph Rowntree Charitable Trust sold its multi-million pound stake in the company, citing serious concerns about Vedanta's approach to human rights and the environment. The decision of the United Kingdom-based Joseph Rowntree Charitable Trust to sell a £2.2 million stake (along with other investors Marlborough Ethical Fund and Millfield House Foundation who follow its ethical policy) in Vedanta followed the Church of England's decision to sell its stake. In an effort to increase the awareness among the financial institutions, especially those who invested in Vedanta's operations, Amnesty International, Urgewald and Bank Track jointly conducted a workshop and dialogue session on Vedanta in London on September 22nd, 2009. The goal of the workshop was to present concrete evidence and documents that will enable the financial institutions to fully assess the reputational and other risks of doing business with Vedanta Resources[41].

38 The Telegraph, Vedanta Aluminium Limited, 11th January, 2011, Available at http://www.telegraphindia.com/1110111/jsp/orissa/story_13419195.jsp, accessed December 2012

39 The Hindu, Vedanta Aluminium Limited, 19th February, 2010, Available at - http://www.thehindu.com/news/national/article109251.ece, accessed December 2012

40 Business Line, Vedanta Aluminium Limited, 6th February, 2010, Available at - http://www.thehindubusinessline.com/todays-paper/church-of-england-exits-vedanta-over-ethics/article983203.ece?ref=archive, accessed December 2012

41 Banktrack, Available at - http://www.banktrack.org/download/invitation_to_vedanta_workshop_london_090922/090821_letter_to_banks_attached_to_heffa_s_mail_invitation.pdf, accessed January 2013

The delay in mining from the Niyamgiri hills affected the profitability of the company. The Vedanta alumina refinery plant that is operational in Lanjigarh since 2006 runs on bauxite that is bought from 14 different mines spread in the states of Gujarat, Jharkhand and Chattisgarh. This is an expensive alternative for the plant that was conceptualized to operate on bauxite lying just three kms from the plant[42].

The Lanjhigarh controversy also resulted in the dragging of other projects of the company. The company had committed capital expenditure plans of Rs. 36,000 Crores for the growth of projects in Odisha. Since the company does not have bauxite mining clearance and given the tight supply environment, the company has deferred initiation of 1.6 mpta smelter in Lanjigarh, 1.25 mpta smelter in Jharsuguda (Odisha) and 25,000 tonne smelter in Korba (Chattisgarh)[43]. Most importantly, the Lanjigarh refinery expansion (from current 1.4 mpta to 6 mpta) project has been scrapped by the Government.

Current Status

In 2010, the MoEF denied permission for any mining activity by Vedanta at the Niyamgiri hills. The Saxena committee report became the basis for this denial. The report had concluded that the company had violated the Forest Conservation Act (FCA), Environment Protection Act (EPA) and Forest Rights Act (FRA)[44]. The flouting of the environmental laws resulted in MoEF halting the expansion plans of the Lanjigarh alumina refinery. The Ministry, in Oct 2010, withdrew the environmental clearance for the expansion of the refinery along with the power plant (the company had planned the capacity enhancement of the power plant from 75MWs to 300 MWs)[45]. With no mining allowed and expansion of the refinery on hold, the company is left with the Lanjigarh one mtpa refinery, which is dependent on bauxite imported from other States.

In 2011, the Odisha Mining Corporation Limited challenged the MoEF's decision in the Supreme Court. It claimed that the apex court had already cleared the project in two consecutive judgments in 2007 and 2008 and had considered all the alleged violations pertaining to the EPA and the FCA. Since the implementation of the FRA began after the

42 NDTV, 24th August, 2010, Available at - http://www.ndtv.com/article/india/jairam-says-no-to-vedanta-mining-project-in-orissa-46736, accessed January 2013

43 DnaIndia, Vedanta Aluminium Limited, 8th October, 2010, Available at - http://www.dnaindia.com/money/1449218/report-vedanta-defers-rs36000-crore-lanjigarh-expansion, accessed December 2012

44 IndiaToday, 28th August, 2010, Available at - http://indiatoday.intoday.in/story/vedanta-seeks-alternative-bauxite-mines-from-orissa-government/1/110665.html, accessed January 2013

45 The Telegraph, Vedanta Aluminium Limited, 11th January, 2011, Available at http://www.telegraphindia.com/1110111/jsp/orissa/story_13419195.jsp, accessed December 2012

2008 judgment, OMCL and Vedanta insisted their case be heard with respect to the alleged violations of the FRA.[46]

In a landmark judgment in April 2013, the Supreme Court directed the gram sabhas, the smallest units of local governance, to use their powers and take a decision within three months on whether the Vedanta group's bauxite mining project in Odisha's Niyamgiri hills can go forward or not. Once the gram sabhas have made their decision, the Court gave the MoEF another two months to take a final decision on granting a forest clearance for the bauxite mining project.[47]

46 DownToEarth, 20th February, 2013, Available at - http://www.downtoearth.org.in/content/has-government-weakened-its-case-against-vedanta, accessed February 2013

47 The Hindu, 18th April, 2013, Available at - http://www.thehindu.com/news/national/other-states/court-directs-gram-sabhas-to-take-a-call-on-vedantas-mining-project/article4629659.ece, accessed April 2013

Case Study 9

Allain Duhangan Hydroelectric Project

Allain Duhangan power project is an example of the project promoters actively engaging in creating a win-win situation, balancing the company's business concerns with that of the community's welfare. This case also reflects on the proactive involvement of the financing agency in ensuring the conformation of the project to acceptable environmental and social guidelines.

Project Name	Allain Duhangan Hydroelectric Project
Project Proponent	Rajasthan Spinning and Weaving Mills Limited
Project Location	Himachal Pradesh
Project Cost	Rs. 900 Crores
Project Duration	Started in 2005 with planned completion in June 2009
Delay in Completion	One year

Project Background

Allain Duhangan Hydro Power Limited (ADHPL) was incorporated as a 100% subsidiary of Malana Power Corporation Limited (MPCL) in the year 2003 to operate the 192 MW Allain Duhangan hydroelectric power project,,[48] which in turn is a joint venture between Bhilwara Energy Limited (BEL) and Norway's Statkraft Norfund Power[49].

The proposal included a run of the river project on the Allain and Duhangan rivers, which are tributaries of river Beas in the Kullu district of Himachal Pradesh, and a 185 Km long high voltage power transmission line to connect the project to the national grid[50].

Construction of Allain Duhangan hydropower plant was commenced in January 2005. Commercial operation started in June 2010 for Allain and in February 2012 for Duhangan. The project has been granted carbon credits under the Clean Development Mechanism (CDM) and is among the largest hydropower projects to be registered under the CDM,

48 Allain Duhangan Hydro Power Ltd., Available at - http://www.adhydropower.com/, accessed October 2013

49 Himachal Live, 23rd July, 2010, Available at - http://www.himachallive.com/first-phase-of-allain-duhangan-hydro-project-commissioned.html, accessed October 2012

50 Himachal Live, 23rd July, 2010, Available at - http://www.himachallive.com/first-phase-of-allain-duhangan-hydro-project-commissioned.html, accessed October 2012

UNFCCC[51]. Once the plant becomes operational, it is approved for generation of Certified Emissions Reductions (CERs)[52].

Project Progress

The Allain Duhangan power project got environmental clearance in December 2000 based on the Environmental Impact Assessment that was carried out in 1993[53].

TABLE 9.1: PROJECT TIMELINE

MoU was signed	Implementation agreement signed with Govt. of Himachal Pradesh	Project Initiated	Financial closure achieved	Project is awarded CDM	Original deadline	Actual Completion
1993	2001	2005	2005	2007	2009	2010

Source: Several web sources and www.adhydropower.com

Project Financing

The Malana Power Company, with 90% equity ownership in the Allain Duhangan Hydro Power Ltd., invested Rs. 282 Crores in the project. International Finance Corporation (IFC-Washington) contributed another Rs. 184 Crores as equity partnership for the Rs. 900 Crores project. With IFC and Malana Power as the equity partners contributing Rs. 466 Crores to the project, the remaining money came in the form of debt from Oriental Bank of Commerce, Punjab and Sind Bank, Jammu & Kashmir Bank and IDBI Bank. Since IFC was the biggest financer for the project, ADHPL did not opt for a consortium approach of financing; rather it entered into separate financial agreements with every financial entity.

51 The United Nations Framework Convention on Climate Change (UNFCCC or FCCC) is an international environmental treaty produced at the United Nations Conference on Environment and Development (UNCED), informally known as the Earth Summit whose objective is to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic activities with the climate system

52 SNPower, Available at - http://www.snpower.com/projects-and-plants/plants-in-operation/allain-duhangan/, accessed October 2012

53 Power Technology, Available at - http://www.power-technology.com/projects/allaindunhangan/, accessed October 2012

TABLE 9.2: EQUITY AND DEBT CONTRIBUTION BY FINANCIAL INSTITUTIONS

Equity partners	Malana Power Company	RS. 282 Crores
	International Finance Corporation	Rs. 184 Crores
Debt providers	Oriental Bank of Commerce	Rs. 100 Crores
	Punjab and Sind Bank	Rs. 50 Crores
	Jammu & Kashimr Bank	Rs. 50 Crores
	IDBI Bank	Rs. 155 Crores

Source: ADHP website available at www.adhydropower.com and other web sources

Environmental and Social Impacts

The project was under controversy as it faced opposition from the locals of village Hirni. The villagers claimed that the power lines laid to transfer power produced at the dam site were passing through their houses and fields. The company neither sought the consent of land owners before laying the wires, nor was any compensation offered. The locals also alleged that the power lines were an environmental hazard[54].

In addition, there were grave concerns over the problems arising from diversion of the rivers (Allain and Duhangan) as this would affect the water flow, thus seriously affecting the livelihood activities and the aquatic life[55].

Conflict Resolution Mechanism

The project was funded by IFC, the financial arm of the World Bank Group. As part of its mandate, the Bank has to respond to any negative social/environmental implications of a project through its Compliance Advisor Ombudsman (CAO)[56]. Based on the reports received from the people residing in areas affected by the project, the CAO carried out field investigations in 2006 and recommended measures to reduce friction between the project and the local community.

54 Power Technology, Available at - http://www.power-technology.com/projects/allaindunhangan/, accessed October 2012

55 Compliance Advisor Ombudsman, Compliance Conclusion Report, March 2008, Available at - http://www.cao-ombudsman.org/cases/document-links/documents/AllainDuhangan-Conclusionreport_and_Agreement5May07.pdf, accessed October 2012

56 The Compliance Advisor Ombudsman (CAO) is the independent recourse mechanism for the International Finance Corporation (IFC) and Multilateral Investment Guarantee Agency (MIGA). The CAO responds to complaints from project-affected communities with the goal of enhancing social and environmental outcomes on the ground.

The CAO ensured that an effective and systematic approach of dispute-resolution and problem solving is adopted by both the community and the ADHPL. The conflict management technique of CAO ensured that the project implementation was least delayed by the affected community[57].

Furthermore, the company solved conflicts with the locals amicably and by adequately compensating the people. All the issues were resolved with direct dialogues between the company and the villagers. For example, the damage quantified by the villagers due to the power line was duly compensated by the company by paying four times the amount of the damage[58].

As part of fulfilling its social responsibility, the company has initiated several means of social inclusion by providing employment for one member of each family from which it acquired private land, setting up a hospital in Pirni, distributing free medicines, etc.

In September 2012, the Chief Minister of Himachal Pradesh dedicated the 192 MW hydropower plant to the nation providing massive earnings as royalty to the State as free electricity.

Environmental and Financial Benefits

The timely completion of the project was necessary to get the benefits from CDM (given the fact that there was no clarity on CDM projects post 2012). The project became the biggest hydroelectric project that has received approval for selling carbon credits from electricity generation. Estimates showed that the project would generate about 500,000 carbon emission reduction credits every year. Parts of the credits have already been sold to the Italian Carbon Fund[59].

57 Consensus Building Institute, Available at - http://cbuilding.org/publication/case/allain-duhangan-hydropower-project-addressing-corporate-and-community-conflict-india, accessed November 2012

58 Power Technology, Available at - http://www.power-technology.com/projects/allaindunhangan/, accessed October 2012

59 HydroWorld, 25th June, 2007, Available at - http://www.hydroworld.com/articles/2007/06/indias-192-mw-allain-duhangan-largest-hydro-to-win-cdm-approval.html, accessed November 2012

Case Study 10

Sarshatali Coal Mining Project

Sarshatali coal mine is the first privately operated coal mine in India, although that's not the only thing that makes the project unique. The mine is located in West Bengal, a State that has not attracted a lot of private investments in the last few decades. Being financed by the World Bank group, the project displayed unprecedented conformation with social and environmental guidelines to insure itself against any backlash from local communities or the government.

Project Name	Sarshatali Coal Mining Project
Project Proponent	Integrated Coal Mining Limited (ICML)
Project Location	West Bengal
Project Cost	Rs. 770 Crores[62]
Project Duration	1999-2001
Delay in Completion	One year

Project Background

The Calcutta Electric Supply Corporation (CESC) required private help in operations to enjoy control over coal supplies for its coal fired power plants. The Budge Budge thermal power plant, owned by CESC, was to get coal from the mines in Sarshatali. The Sarshatali mines are part of the Ranigunj coal belt, which is spread over three districts namely Burdwan, Birbhum and Behar. The six square kilometer area of the Ranigunj coal belt was leased to the CESC in 1993 by the Ministry of Coal to help the company meet its captive coal requirements. CESC raised a company called Integrated Coal Mining Limited (ICML) to manage the extraction and supply of coal for its power plants, with Sarshatali Coal Mines as one of its subsidiary. Sarshatali coal mine was the first mine owned and operated by private equity, and ironically the project came up in an Indian State that's famous for its non-liberal economic policies

Project Financing

The International Finance Corporation (IFC) of the World Bank was the principal financer for the project with an approved investment of Rs.206.78 Crores. The initial project cost

60 An exchange rate of 1USD = INR 59.08 has been used to convert all figures quoted in USD

was estimated at Rs.708.96 Crores. IFC entered the project through a combination of equity and loan totalling Rs.206.78 Crores. At the final stages of financial negotiations, BHP Billiton Limited (Australian mining major) opted out of the project. As a result, the project size had to be reduced and the revised project cost was estimated to be Rs. 129.97 Crores. CESC was to finance 51%, IFC 30% and the remaining 39% was to be financed by other foreign and Indian stakeholders in a syndicate to be arranged by ICICI bank.

Environmental and Social Impacts

The project was expected to result in the displacement of rural settlements and change in land-use patterns from agricultural and forest practices to mining activities. Some forest land was expected to be lost due to this initiative, along with loss of farm produce, increased pressure on the remaining forest resources and loss of public and private infrastructure.

Mitigation Approach and Strategy

Sarshatali being the first major private sector mine in West Bengal, required special attention by the promoter and the financer to ensure smooth implementation of the project.

Coal mines and the communities they affect often have an uneasy relationship. This decision to excavate a mine near the village of Sarshatali in West Bengal created positive expectations of new jobs, but raised fears about resettlement of families and other disruptions to life.

ICML decided to adopt a tri-sector partnering approach where organizations drawn from across three sectors of the society viz. business, government and civil society pool their complementary resources, knowledge and skills to jointly address complex social problems.

The Environmental and Social Impact Assessment (ESIA) study commissioned by ICML raised the expectations of the community. The cost of rehabilitation and resettlement of the communities that were to be affected by the mining projects were high, and so were the communities' expectations. The rehabilitation plan was also expected to drag the process of financial closure. Since ICML was not into coal business, but into electricity generation, the delays in mining projects were affecting the financial performance of the parent company.

To avoid cost and delays, the company decided on the unique tri-sector partnering model to design and implement the rehabilitation and resettlement plan of the affected communities. The company followed this approach not only for addressing social issues, but also for carrying out afforestation work in order to compensate the damage to the tree cover in the mining area.

Results and Lessons Learned

ICML's approach to mitigating the negative environmental and social impacts of the project helped it in reducing delays. The company not only addressed the issues that were raised in the ESIA, but executed them without stretching its resources by partnering with appropriate government and voluntary agencies. This helped the company secure financial aid from IFC.

Even though the ESIA increased the project cost it helped control the political and social resistance that the project would have otherwise faced.

Current Status

ICML had implemented a systematic and planned mining process integrating business and social interests. The Sarshatali coal mine achieved its target of three million tonnes of coal production in seven years, and in the subsequent years has even exceeded its targets. This is a clear case of a mutually beneficial corporate initiative for both the company and the society as the former was fully prepared to follow a multipronged approach to ensure sustainable development.

Conclusion

The acts and regulations governing the environmental and social aspects of project finance deals in India are elaborate and clear. However, based on the case studies it is evident that the implementation of these rules is the major concern. All the eight case studies where the projects have been temporarily or permanently stalled due to adverse environmental and social impacts fall into one of the following two categories: a) insufficient clearances or legal loopholes that allow for easy clearances and/or bypassing of legislations; and b) lack of authenticity and credibility of EIA reports, and lack of transparency in public consultation.

Addressing these issues through the legal and regulatory system is a long and cumbersome process that is influenced by both political systems and vested interest groups. It is, however, in the financial interest of Indian banks and FIs to incorporate these risks in their investment decisions. It is clear from the case studies that the projects experienced delays and cost overruns on account of adverse environmental and social impacts emanating from the project activities. Repayment money usually comes from the projects and if the financial institution has to put in more money, it increases the leverage on the project and the riskiness of the project. These projects are often leveraged to the hilt and have minimal equity, so FIs are usually not keen to increase exposure on account of cost overruns. Also, cost overruns could threaten the very viability of the project, if the project in the end is not able to generate enough revenues to repay the enhanced debt.

There could be several approaches to addressing environmental and social risks faced by Indian FIs. They might choose to sign on to one of the international protocols such as the Equator Principles, the UNEP FI; alternatively another set of guidelines can be prepared which will be more specific to the Indian context. The two positive case studies that have been documented in this report demonstrate the benefits of proactively adhering to established environmental and social guidelines in project financing.

In fact, most of the rules and amendments that are now being put in place in India to recognize and protect indigenous people's rights on land and forest areas are already part of internationally accepted standards. In the last six months, for example, there have been two major decisions in India around the protection of indigenous people's rights. One of them is reflected in the case study on Vedanta Aluminum where the Supreme Court gave the tribal communities in the Niyamgiri hills of Odisha the final say on Vedanta's plans

to mine bauxite on their traditional lands. The second one was a set of amendments proposed by the National Advisory Council (NAC) to the Panchayat (Extension to Scheduled Areas) Act, 1996 (PESA) late last year. As per NAC's recommendations, the free prior and informed consent (FPIC) of affected indigenous communities have to be mandatorily obtained before the government acquires any land for development projects, or decides on rehabilitation packages. Although these events represent a marked shift in the way India has regarded the rights of indigenous people over their land, FPIC is not only an internationally accepted standard that has been affirmed by a number of international human rights treaty bodies (including the UN Committee on Economic, Social and Cultural Rights, and the UN Committee on the Elimination of All Forms of Racial Discrimination), but also is increasingly being accepted as a requirement by industry. The World Bank's International Finance Corporation (and by extension the Equator Banks) has included this as part of the 2012 performance standards[61].

Another approach to integrating environmental and social risks in project financing would be to develop an environmental and social risk score card that could be used by FIs to make investment decisions. This would be a market based approach, akin to the financial ratings offered by various rating agencies.

The purpose of this report, however, is not to make recommendations. Any workable solution would require a more detailed understanding of the present practices on risk management processes in Indian FIs and assessing their present level of preparedness. It would require a more bottom-up approach and a concerted effort on the part of FIs and other key stakeholders. This report is meant to encourage banks and FIs to take a step in that direction by helping them recognize and understand the need for integrating environmental and social risks in their core banking operations.

61 Livemint, 15th July, 2013, Available at http://www.livemint.com/Opinion/d5q0MD1tKT4c417hJxN0FJ/Development-and-Adivasi-rights.html, accessed July 2013

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