

**Accelerating the Mainstreaming of Climate Change in National Policy
Development using Environmental Impact Assessment (EIA) Processes**

An NGO Forum on ADB Initiative

Study of the Sipat Thermal Power Plant, Chattisgarh, India

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1. Background

Climate change is today regarded as an urgent issue to be dealt at the international, national and local levels. India has also recognized the need to take urgent measures to deal with the issue and several efforts in developing technologies and market mechanisms are ongoing.

However, climate change concerns are rarely if not ever considered in the environmental decision making process especially during the process of evaluating and grant of approval to range of projects. On an average over a year 800 projects related to mining, power projects and other infrastructure projects are approved by the Ministry of Environment and Forests and in none of the approvals are climate concerns even find a mention. Therefore there is not much to say anything about mitigation.

This assumes significance in view of India's path to achieve a high growth rate is heavily dependent on use of fossil fuels. This will be dependent on development and expansion of extractive industries. Patently Climate 'unfriendly' projects in the form of coal and gas fired thermal power plants exponentially increasing emissions the ever expanding coal, bauxite and iron ore mining into the forest rich and last remaining forests of the Western Ghats, central and eastern India virtually undermines all other national efforts in sequestration. Valuable natural forests have been lost (over 25,000 Sq Km of dense forest in last two years FSI report of 2005) due to hydropower projects as well as mining.

The project aims at mainstreaming climate change concerns in environmental decision-making process in India by focusing on the Environmental Impact Assessment process (and soon to be implemented Social Impact Assessment process). The EIA process is being focused in view of the following reasons:

- The EIA is a mandatory procedure for a range of activities in order to assess in advance the environmental and social impact of a proposed project and therefore intended to guide the decision makers to make an objective decision.
- The EIA consultant is required to incorporate the real impact of the project. Unfortunately, an honest assessment rarely takes place and climate concerns and especially how the project will led to emission of Green House Gases and contribute to climate change are never accounted for.
- The EIA process allows concerned citizens, communities and others concerned groups to raise issues of concern at the time of public hearing;

- Faulty approvals can be challenged before authorities such as the National Environmental Appellate Authority and therefore a judicial forum exists for redressal of grievances.
- A National Green Tribunal Act has been passed by the Parliament and notification of establishment has been issued.

The Sipat Thermal Power Plant partly financed by the Asian Development Bank is chosen as an example. The Sipat Thermal Power project is particularly important as it was a part of the first loan syndication deal for an Indian Corporate under the Asian Development Bank's Complementary Finance Scheme and is a Multitanche Financing Facility¹. This is a new instrument of the Bank wherein a Loan agreement of US \$ 300 Million (approximately Rs 13.15 Billion) drawn with the Corporate – National Thermal Power Corporation. Since ADB's finance scheme directly benefits a corporate, the sovereign immunity of the Bank's action would not be applicable. This provides a window for redressal of grievances and to set right the record and ensure that environmental, social and climate safeguards are actually in place and delivering the commensurate benefits to the affected communities. The following specific tasks that have been undertaken are:

1. Mapping the Current Impact Zone

The project has acquired certain amount of land but the impact zone is much wider depending upon the actual situation of ground level concentrations of pollutants in the region and other socio-economic linkages. This exercise was essential in order to scope and quantify the impacts.

2. Evaluating the dimensions of impact

There are various elements of the project impacting the community and the environment in various dimensions. These have to be identified and scale and quantum of impacts have to be evaluated.

3. Elaboration of Climate Change Implications

Climate impacts are often not directly visible and these need to be elaborate in order to establish a basis and quantify the implications. Some parameters may not be quantifiable and appropriate qualitative values have to be evolved.

4. Identifying Violations within the EIA regulations and guidelines

¹ See Appendix I

In the study process we may come across several violations either of the law or the guidelines which enhance the level of impact. These have to be identified and will form the kernel of information for future follow-up as well as estimating the benefits of good governance

5. Evaluating the Project within the ADB safeguard framework

The results of the analysis have to be compared with the safeguard norms to identify areas of advocacy and input to the process of monitoring funds for Environmental and Climate Compliance.

2. Power Sector in India

India has the fifth largest generation capacity in the world with an installed capacity of 152 GW as on 30 September 2009, which is about 4 percent of global power generation. The top four countries, viz., US, Japan, China and Russia together consume about 49 percent of the total power generated globally. The average per capita consumption of electricity in India is estimated to be 704 kWh during 2008-09. However, this is fairly low when compared to that of some of the developed and emerging nations such as US (~15,000 kWh) and China (~1,800 kWh). The world average stands at 2,300 kWh. The Indian government has set ambitious goals in the 11th plan for power sector owing to which the power sector is poised for significant expansion. In order to provide availability of over 1000 units of per capita electricity by year 2012, it has been estimated that need-based capacity addition of more than 100,000 MW would be required. This has resulted in massive addition plans being proposed in the sub-sectors of Generation Transmission and Distribution².

Power Generation Sources - India		
Source	Installed Capacity (MW)	Percentage
Coal	85,193.38	53.3
Gas	17,055.85	10.5
Oil	1,199.75	0.9
Total Thermal	103448.98	64.6
Hydro (Renewable)	36,913.40	24.7
Nuclear	4,560.00	2.9
RES** (MNRE)	16,429.42	7.7
Total	1,61,351.80	100
Renewable Energy Sources(RES) include SHP, BG, BP, U&I and Wind Energy. The installed capacity figures are reconciled and indicates latest upration/deration capacity Source: Central Electricity Authority as of 31.05.2010		

Such an analysis and enhancement of power generation capacity has been challenged by a number of professionals³ as merely adding generation capacity without looking at a whole range of alternatives locks us into a highly polluting form of energy generation.

² http://www.in.kpmg.com/TL_Files/Pictures/PowerSector_2010.pdf

³ See Shankar Sharma et al, Prayas Pune

Further the per capita availability does neither reflect upon the 42 per cent of the poor households which do not have power nor address the inefficiencies within the current system. Demand side management through choice of industrial technologies and products and end-use efficiency improvements have been continuously neglected.

3. SIPAT Thermal Power Plant of NTPC

- Location – Sipat, Tehsil Masturi, District Bilaspur, Chhattisgarh
- Coordinates of Plant Site - 22° 7'52.36"N, 82°17'30.59"E
- Stage I – 3*660 MW (1980 MW) using super critical technology
- Stage II – 2*500MW (1000 MW) using conventional boilers or sub critical technology
- Techno-economic clearances were also provided by Central Electricity Authority for Sipat in January 2000
- Environmental clearance for stage I granted on 13 January 1998 and stage II granted 8 June 2004
- No objection certificate granted by the Chhattisgarh State Pollution Control Board (SPCB) on 6 January 2004
- Villages – Rank, Devri, Kaudia, Janji, Sipat, Masturi & 2 others
- Project Affected Families – 3106



The Project site is located near Sipat village, Bilaspur District, Chhattisgarh about 15 km northeast of Bilaspur city and is reached via the Bilaspur–Baloda state highway, which passes through Sipat. The site covers 1,773 ha (4,382 acres) and consists of the main plant and

switchyard (621 ha), ash dykes (632 ha), reservoirs and a township (256 ha), and a merry-go-rounds (MGR) coal transport system (243 ha).

Construction of Sipat stages I and II began in late 2003 and substantial work has been completed. Stage II (2 x 500 MW units) has been completed before stage I - the Second 500 MW Unit of Stage-II, has been successfully coal fired 10-11-2008, after its synchronization, the project has attained full capacity of 1000 MW under Stage-II. The first 500 MW Unit of Stage-II is already under commercial operation since June 2008.

The ultimate approved capacity of the Sipat is 2980 MW which includes 3 Units of 660 MW super critical boilers in Stage-I and 2 Units of 500 MW in Stage-II. All the 3 Units of 660 MW are under various stages of implementation. The beneficiaries of this project are Western Region States namely Chhattisgarh, Madhya Pradesh, Maharashtra, Gujarat, Goa, Daman & Diu and Dadar Nagar Haveli.

The NTPC is having disputes with foreign equipment supply contractors for its Sipat-1 mega power projects. In an attempt to revive its 1,980MW Sipat project in Chhattisgarh by resolving a contractual dispute with Russia's Power Machines, state-run utility



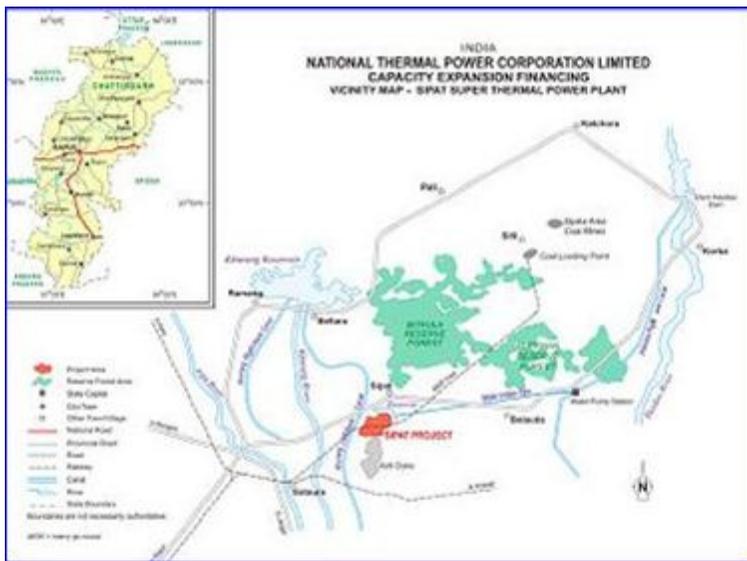
NTPC Ltd plans to approach the Central Vigilance Commission, (CVC), seeking approval for making additional payments as demanded by the Russian firm, which is seeking more time to deliver the equipment and an upward revision in price to the tune of around Rs11 Billion⁴, citing rising input costs.

⁴ <http://www.livemint.com/2009/09/29211529/NTPC-ready-to-pay-more-for-Sip.html>

4. Current Impact Zone

The impact area is beyond the plant site itself as it involves air and water regimes near the plant site enlarging the Local Area of Impact. Further there are upstream impacts such as Coal Mining Areas for Supply of Coal, Transportation of Coal through MGR, Hasdeo Dam Area providing Water.

These elements are very difficult to quantify as they provide inputs to multiple downstream activities, and apportioning impacts specific to the supply to Sipat could always be prone to debate. However this most critical inference is that while individual projects must have detailed environmental assessment in such regions it would be prudent to consider the synergistic impact of all the projects and all elements of each project.



Mining: The coal for the plant is to come from the Dipka Mines near Korba. In order to meet the expanded needs of Sipat, an area of nearly 10 sq km is being proposed for mining in the Dipka mining block in the process of is expansion to 25 MT/Y. The Mineable Reserves and volume of Overburden Removal is estimated as 617.00 M T and 615.00 Mcum. The life of the mine is estimated to be 25 years.

Land Acquired for Dipka Block Mine Expansion		
PARTICULARS	AREA	% OF TOTAL AREA
Forest area	18600	38.12
Irrigated Agricultural Land	545	1.12
Un irrigated Agricultural Land	20912	42.85
Culturable waste land	5084	10.42
Area not available for cultivation	3658	7.50
Total area	48799	100
Source: Pre-Feasibility Report		

It is clear from the above table that nearly 80-90 percent of the land is productive and intricately linked to the livelihoods of the local community.

120 MCM of water is to be abstracted from the Hasdeo Barrage, which is estimated to provide irrigation atleast to 60000 ha of farm land. Given such a huge proportion of unirrigated agricultural lands, this is indeed significant loss to the local communities. No wonder that there is a growing dissension between the State Government and the Company over the continued use of water from the Hasdeo Barrage.⁵

Air quality modelling using the industrial source complex version (ISCST3)" for atmospheric dispersion of stack emissions was undertaken to assess the decline in air quality from the combined stage I and II plant.

This modelling, run for the worst meteorological conditions for atmospheric dispersion, predicted ground level concentrations (GLCs) of SPM, SO₂ and NO_x over a 20 km by 20 km area centred on the plant.

Thus if we add the areas impacted by the plant it would be over a thousand square kilometres.

⁵ <http://www.nerve.in/news:253500137094>

In his letter to Prime Minister Manmohan Singh, the chief minister accused the National Thermal Power Corporation (NTPC) for not taking any step to provide employment to 3,106 project affected families, including 691 families that lost more than an acre of land.. 'It's most unfortunate that NTPC did not make any serious effort so far for offering jobs to displaced families that has created wide resentment among project oustees,' Raman Singh wrote

'Chhattisgarh can ensure water availability to Sipat project from Hasdeo Bango dam only for a temporary period of two-three years and the NTPC should use the time to lay pipeline to Mahanadi river from plant site that can easily feed water to the plant throughout the year,' the chief minister has written.

5. Dimensions of Impact

1. Land Acquisition

1173 hectares of land [35% for main plant and switchyard; 36% under ash dykes indicates the waste proportion of 6.4 million tones/annum; 15% for reservoirs and township; 14% for merry-go-around for coal transport from Dipika mines] acquired for the project directly impacts 3106 families. About 35% of the land belonged to local people with good agricultural potential. The proportion of land subject to industrial and ancillary uses definitely takes away the direct land use practices and also inclines in direction from productivity potential to pollution potential. We need to consider also the impacts of land acquisition in the mining area. The number of affected land oustees involved in the project is 3427. The number of families involved in the project is 3350 including approximately 1660 families in additional minetake area. Thus in all about 6000 – 7000 families are directly affected by mining.

Village	Area of village (in hectares)	Number of households	Total population Persons	Total population Males	Total population Females	SC Population Persons	ST Population Persons
	I	II	III	IV	V	VI	VII
Janji	538	498	2,323	1,157	1,166	1,053	69
Rank	654	406	2,046	1,043	1,003	643	0
Kaudia	866	479	2559	1262	1297	264	282
Devri	488	371	1975	1021	954	885	21
Masturi	617	950	5033	2618	2415	1329	236
Sipat	1603	1197	6205	3206	2999	2804	313
Total	4766	3901	20,141	10,307	9,834	6,978	921

Source:

One of the recent trends in land acquisition for mines and power plants in India has been to exclude small areas exclusively used for settlements. Thus by excluding pockets, the promoters claim that physical displacement has been avoided. However when all livelihood sources have been taken away and the area made unfit for any cultivation it is eventually forces people to migrate out of the area. It is unfortunate that the NTPC as a public sector has also adopted such a mechanism for its acquisition.

2. Air and Water Pollution

The total coal consumption of the plant will be 2,122 t/hr (18.59 million t/annum). The coal has a low gross calorific value of 3,300 Kcal/kg, a **high ash content of 36-45%**, and a low sulfur content of about 0.36%. The total SO₂ emissions from the plant will be **366.9**

t/day (235.6 t/day for stage I, 131.3 t/day for stage II), **19 t/day** or **5.5% higher than the World Bank limit of 348 t/day** calculated for this **2,980 MW** plant.

6. Climate Footprint

Sipat STPP sources its coal from the Dipika Coalfields located 40 kms NE from the plant site and water is sourced from Hasdeo Reservoir flowing southwards and would require 13400 KL water per hour. Sipat STPP builds up on two technological aspects, one being 1000 MW (500 MW*2) based on sub critical technology whereas the remaining 1980 MW (660MW*3) is based on super critical technology which is expected to be more efficient than the former technology. As a rule of thumb, the super critical technology (SCT) tends to enhance the efficiency by 0.69% to 1.64% and is more tolerant to coal configuration changes or quality changes. It also tends to reduce the emissions between 1.79% to 4.24% broadly. EDPC Japan suggested SCT for NTPC power generation and suggested some key parameters.

NTPC's Sipat thermal power plant (phase I) is built using super critical technology with each of the three units of 660MW. The super critical technology tends to operate at a higher pressure and temperature thereby improves the efficiency. NTPC is sourcing 'F' grade coal from Korba Coalfields which has a high ash content of 35-46% and a calorific value of around 3300 kCal/Kg. Even though the technological interventions could prove to bring down the carbon footprint to a marginal lower level [improved efficiency] but it cannot address the issue of emissions unless and until the linked elements like improved coal after processing in washery – which can provide a low ash content coal – is factored into the overall budgeting of the project and climate emissions accounted for. Also the Super Critical Technology pretends to be efficient but the coal grades, which have high ash content, again lead to greater ash production, which in turn is toxic in nature and indirectly should form part of the larger emission reduction strategy which is not addressed comprehensively in the whole chain of product and by product cycle. Ash analysis of Korba STPP indicates high percentage of silica [SiO_2 – 61.30%] and [Al_2O_3 – 27.42 %].

Development financing by banks like ADB has always looked at limited 'risks' through its safeguard policy but it has never taken responsibility of acknowledging in open that whether the financier look at the larger responsibility of unforeseen but predictable impacts of climate change and whether the investments are climate proof or tend to reduce the carbon footprint. The changes in ambient environment of the region are likely to be more or less natural if considered with 'no project' situation and need to be closely monitored as a 2980 MW thermal power plant's gas and particulate emissions are bound to change the environmental conditions. By way of promoting the first super critical technology at Sipat which would mean more power production [no cross comparison is provided on the differential emissions in case of power generation from sub critical units, say six units of 500 MW each] and higher coal requirements has a bearing on the region [as per CEA, the improvement in efficiency is of the order of 1.96% at given boiler pressure and steam temperature] but there are no efforts in the Comprehensive EIA document on the estimation of carbon emissions.

The ultimate total coal consumption of the plant is 2,122 t/hr (18.59 million t/annum). Considering the emissions from Korba STPP which is also operated by NTPC [three units of 500MW and three units of 200 MW] the specific emissions arrived at by CEA in 2005-06 is 0.97

tCO₂/MW. It is also noteworthy to state here that the operating heat rate of stations deteriorated by 11.92% [read -11.92%] for the eastern region during an assessment carried out by CEA for 2007-2008. Efficiency gain of approximately 2%⁶ is envisaged due to higher unit proposed. As per CEA's methodology of arriving at emissions, if we consider the average emissions i.e. 0.81 tCO₂/MWh the broad emissions from Sipat would amount to in the following manner:

660MW * 7000 hours operation * 3 units = 13.86 million MWh
Using the emission factor as per Combined Margin⁷ = 0.80 tCO₂/MWh
Total emission load = 0.80*13.86 = 11 million t CO₂ per annum
500 MW * 7000 hours operation * 2 units = 7 million MWh
assuming the emission factor as per simple operating margin (OM) = 1 tCO₂/MWh
Total emission load = 1*7 = 7 million t CO₂ per annum
Gross total Emissions = 18 million t CO₂ per annum

Estimates of 74400 tCOE/Million⁸ Tonne of coal means about 1.5 Million Tonnes of emissions from the coal mining for the plant at Dipika Mines. Another factor which contributes to GHG is methane from coal mining and post mining gas emissions for which the emission factors have been suggested by IPCC (2006) report depending on the depth of mine, the emission factors range from 10m³ – 25 m³/tonne of coal production. Estimating for the 20 Million Tonnes of Coal at the lower end works out to 2.86 tCOE⁹.

Thus the total emission from the mine and the thermal power plant would be 18 Million + 1.5 Million + 2.86 Million = 22.36 Million Tonnes of CO₂.

Green belt development around the plant boundary is a failure as only sparsely grown trees are visible depicting the counter impact measures suggested by the proponent in the EIA report.

⁶ Table 3 – Efficiency Improvement for higher parameters, page 18 - Committee To Recommend The Next Higher Unit Size For Coal Fired Thermal Power Stations

⁷ Weighted average of the simple operating margin and the build margin

⁸ <http://www.oricaminingservices.com/Section.aspx?SectionID=290&CultureID=3>

⁹ www.epa.gov/gasstar/documents/ogj_article110707.pdf

7. Safeguards Assessment

- ADB's financing¹⁰ is being applied to the first super critical technology project being implemented in India. With 3106 PAFs due to the construction of Sipat STTP and 691 families loosing more than 1 acre of land, the efforts required careful physical, economic and social rehabilitation. Even when no homestead land is acquired, the socio economic rehabilitation becomes prime as in the rural set-up farm land economics work closely with the homestead land and attains significance in terms of security, social well being and community arrangements. Employment assurance to 692 persons was given by the project authorities which has failed miserably and points towards a very weakly drawn out policy and lack of proactive measures required during the project cycle. Only 124 jobs (18% of the total promised) have been provided till the last month and there is no proactive information dissemination to the villagers on the remaining persons eligible for jobs. In anticipation that each member of the affected family would get employment has left people confused as the timeline to take decision over this issue has overrun time and again and there has been no definite decision taken up by the management of the company. As a result, people have not been able to take up any gainful employment opportunity either.

Land was acquired¹¹ under the Land Acquisition Act of 1894 whereas the NTPC policy itself states negotiations¹² as the preferable route. It is no surprise that the 'market valuation' under the LA Act does not factor the prevailing market price of land and thereby forcing people to file cases for enhanced compensation which has multiple implications. Gauchar lands have been acquired by NTPC along the highway passing through Sipat Village, which again poses question of rights of people in the gauchar land and post facto situation of FRA 2006.

- VDAC which is formed as per the NTPC policy has been formed of people nominated by people in the villages like the head of village, farmers loosing large chunks of land etc. VDAC meetings are quite irregular and follow up actions are not shared with the villagers. District administration and NTPC have an interface but the villagers complain of not sharing of decisions and the follow up action to be taken for the affected.

¹⁰ The proposed ADB loan exposure of \$75 million to NTPC will be ADB's 19th nonsovereign investment in India, and the first loan to a state-owned enterprise in India without sovereign guarantee under the Pilot Financing Instruments and Modalities

¹¹ Land acquisition of 1,510 hectares was completed between 1997 and 1999, 55% of which was barren Government-owned land. The land required (243 hectares) for the coal transport system was acquired in 2003 and 2004.

¹² whereas as an essential safeguard, negotiated settlement is listed as one of the elements of 'involuntary resettlement' safeguard policy

- Public Information Centre is meant for promoting transparency and informed decision making as per the NTPC policy. The PIC is located near NTPC plant whereas the distance of villages from this PIC is almost 5-6 kms with no public transport available. There is no substantial pro-active disclosure on the pending promises and future actions to the affected.

Safeguard Element	Brief Details of Tasks and Requirement	Actual Practice
<p>ENVIRONMENT</p> <p>Proper Environmental Assessment</p>	<p>Identify potential direct, indirect, cumulative and induced environmental impacts and determine their significance and scope, in consultation with stakeholders, including affected people and concerned NGOs [EIA report]</p> <p>The information must be current and accurate description of the project and its impacts. The baseline must contain environmental and social information s well a on the Occupational Health and Safety aspects.</p> <p>Cumulative Impacts of the Project and the Region needs to be</p>	<p>Neither all the direct impacts nor the indirect impacts have been assessed. The ADB's EIA statement is much generalised without any meaning to the specific communities affected and is extremely poor in quality even as compared with the EIA report by the EIA consultant.</p> <p>No public hearing was held for stage I as it was not a Government of India requirement at the time of project clearance. [EIA notification 1994]. There has been no consultation with the stakeholders during the expansion and the unfortunate trick played on the communities has been the so-called public hearing was a meeting of the member who are state panel members.</p> <p>The information is inaccurate as it goes by the census figures instead of undertaking a census of the people to be affected on the day of acquisition.</p> <p>No Health Impact Assessment has been undertaken.</p> <p>ADB is assuming that the mine and the mine are different because of the different corporate entities involved. However considering the fact that</p>

Safeguard Element	Brief Details of Tasks and Requirement	Actual Practice
	<p>addressed.</p> <p>Air pollution including GHGs</p> <p>Disadvantaged Communities</p>	<p>around 19 MTPA of coal has to come from a mine which can produce 25MTPA the Dipka Coal Mines are almost captive to this plant.</p> <p>While some information is provided on air pollution the GHG emissions and carbon foot printing has not undertaken. Simply by stating super critical technology will automatically reduce does not obviate the need to look into the quality of coal which is going to high almost 50% filled with ash. The attempt is clearly to predict that it would be within acceptable limits.</p> <p>Since it has not conducted any census the system does not have any information about disadvantaged communities such as women, disabled, children, elderly, Scheduled Castes and Tribes</p> <p>Similarly it does not inform about the impacts to the farmers from whose quota the 120MCM of water is going to be diverted fro Hasdeo-Banga Barrage.</p>
Environment Planning & Management	<p>Monetary compensation in lieu of offset is acceptable in exceptional circumstances, provided that compensation is used to provide Environmental Benefits of the same nature and is commensurate with projects residual impact.</p> <p>At times, a third party's involvement will influence implementation of the EMP. A third party may be, inter alia, a government agency, a contractor, or an operator of an associated facility. When the third-party risk is high and the borrower/client has control or influence over the actions and behavior of the third party, the borrower/client will collaborate with the third party to achieve the</p>	<p>There is no attempt at all either to compensate them or to ensure that the environmental benefits of the same nature accrues to the people.</p>

Safeguard Element	Brief Details of Tasks and Requirement	Actual Practice
	outcome consistent with the requirements for the borrower/client. Specific actions will be determined on a case-by-case basis.	
Information Disclosure	The borrower/client will submit to ADB the following documents for disclosure on ADB's website: A full draft EIA Final EIA Environmental Monitoring Reports.	Probably the plea is taken that neither Prevailing Public Communications Policy (PCP) nor safeguard policies of ADB during the time did not require posting of such EIAs on the web, only to be made available on request.
Consultation & Participation	Meaningful Consultation: (basically FPIC) Begins early in the project preparation Stage and is carried out on an ongoing basis throughout the project cycle— Timely disclosure of relevant and adequate information. Which is understandable and readily accessible to affected people (PIC) – No intimidation [check the FIR against 2 people on trespassing] – Gender inclusive and tailored to the needs of vulnerable [disadvantaged]—	No meaningful consultation has ever taken place. Stage II public hearing which was held on 23.12.2003, only three village representatives were present as per SEIA document. The authorities outnumbered them as other 7 representatives from state government departments.
GRM	Affected people will be appropriately informed about the mechanism Whether same as KOL	Grievances of the people even those who were promised jobs have not be adequately addressed.
Monitoring & Reporting	EMP progress/implementation Any NGO involved Any reflections to improve or suggest corrective action plan Monitoring reports – at least semi annual reports during construction and annual basis during operation	No institution seems to be involved as the villagers are not aware of any institution supporting the implementation of the environmental management plan.
Unanticipated Environmental Impacts	Whether any such impacts mentioned in EIA	Impacts likely to be caused by the ash pond from which during summer months heavy dust loads are in the atmosphere Impacts on People whose water is being diverted where not
Biodiversity Conservation and Natural	Identify major threats to biodiversity Modified habitats/natural habitats (conditional/whether alternatives	

Safeguard Element	Brief Details of Tasks and Requirement	Actual Practice
Resource Management	Considered)/Critical habitats/legally protected areas etc.	
Pollution Prevention & Abatement	GHGs (others also)	The technology per se does not reflect the final pollutants completely, the housekeeping is poor and local people complain of enormous dust from the ash pond during summer months
Health & Safety	OHS Community health & Safety	There is no visible effort outside the plant site.
Physical and Cultural Resources	Whether any such resources were impacted due to siting of project at this location Whether any consultation took place on this & any mitigation measures ¹³	There is no assessment reflecting the existence or effort.
INVOLUNTARY RESETTLEMENT		
Compensation, Assistance and Benefits for Displaced Persons	How/whether people of different categories have been/ are left out?	The company acquires agricultural and grazing lands for the plant excluding their homestead and thus claiming no displacement. This makes it easier for the company to get away from any attempt to address issues of resettlement. On the contrary, the agricultural lands so acquired have impacted their livelihoods and socio-cultural fabric of the society.
Social Impact Assessments	Whether the cut-off date given by govt. / borrower? Inventory details in this report? Disadvantaged groups – targeted measures	A large part of the affected are not even considered, an example being the farmers whose water is diverted for the plant.
Resettlement Planning	Base on SIA Meaningful consultation with affected persons Three essential things to figure out: i) informed abt. Their options & entitlements pertaining to comp., relocation & rehabilitation ii) consulted on resettlement options & choices iii) provided with resettlement alternatives	No sincere dialogue let alone meaningful or any consultation on post acquisition future of those families

¹³ Point 49 of safeguards always provide the proponent or borrower to remove any physical cultural resources which might have more value than mere economic value

Safeguard Element	Brief Details of Tasks and Requirement	Actual Practice
	To ensure timely availability of required resources, land acquisition and resettlement costs <i>may be</i> considered for inclusion in ADB financing [<i>interesting would be to know whether such safeguards work on ground</i>]	
Negotiated LA	Safeguard Requirement 2 doesn't apply to negotiated settlements Meaningful consultation [engage external party to document the negotiation and settlement processes]	Land Acquisition Act used for securing land
Information Disclosure	Draft RP endorsed by borrower/client before project appraisal Final RP after census of affected persons is complete New RP, during implementation (if any) RP monitoring reports	Not required under the presented circumstances
Consultation & Participation	Meaningful consultation used time and again!!!! Host communities/civil society/gender inclusion/disadvantaged groups	Totally Ignored in the Process
GRM	Whether different from one in Environment SP	
Monitoring & Reporting	Of RP Essentials: external experts to advise on safeguard compliance issues, corrective action plan. Semiannual monitoring reports.	
Unanticipated Impacts	If found conduct SIA and update RP	
Special considerations for indigenous peoples	Any indigenous people displaced If avoidance is impossible, in consultation with ADB, a combined Indigenous Peoples plan and resettlement plan could be formulated to address both involuntary resettlement and Indigenous Peoples issues. Such a combined plan will also meet all	

Safeguard Element	Brief Details of Tasks and Requirement	Actual Practice
	relevant requirements specified under Safeguard Requirements ³ .	
<i>INDIGENOUS PEOPLES</i>		
Consultation & Participation		

8. Inferences

1. ADB has sought to overlook a variety of aspects probably as the fund is supposedly for specific activity and perhaps knowingly avoids taking responsibility for the environmental and social impacts of the project.
2. The project authorities by excluding only the homesteads have maintained that there is no displacement and hence many of the safeguard features become inapplicable. ADB has been oblivious to this immense dishonesty.
3. ADB has not even provided a semblance of opportunity to the local communities to participate in any of the decision making processes leading to the grant of the loan. By listing the panel members as the participants in a project that affects people across a huge region, the ADB has clearly demonstrated the hallowness of its safeguard policies in action.
4. ADB remains silent on issues of communities who were promised employment in lieu of land acquired from them. Their grievances are not heard despite several attempts by the local communities.
5. ADB has fallen prey to looking at the project narrowly from a warped Power Sector development perspective, rather than of a Bank willing to lead Environmental, Economic and Social Stewardship which should be the real basis for a Multilateral Bank.

9. Way Ahead...

The study has revealed that there are several aspects on which the Asian Development Bank needs to clarify to the community.

We propose that at the following activities may be considered for follow-up action:

At the level of the project

1. We take these findings back to the Community and draw up a charter of demands based on the ADB safeguards in close consultation with the communities.
2. We enable a local workshop bringing together people from the mine site, dam site and other affected by transport lines etc and explore further actions at the local and regional level.

At the level of ADB involvement in Power Sector

3. Seek immediate response on the specific issues raised in this report.
4. We compile the details of the projects and the Sector level perspectives for their future entry must be clarified
5. A strong demand on reviewing the Environmental and Social due diligence of the projects funded.
6. Demand a critical assessment of its carbon footprint and means to mitigate the impacts

At the National Level

7. Prepare ground for challenging the environmental compliance at the Green Tribunal
8. Demand the assessment of carbon footprint as a part of the EIA document.



Environics Trust is a not for profit research and community development organisation and an enabling institution. Environics conducts participatory research on issues of environment and human behavior and uses these outcomes for innovative community development programmes. Environics anchors several networks and partnerships and is currently the Secretariat for The Access Initiative Coalition (TAI) and the Occupational and Environmental Health Network of India (OEHNI). Environics is a co-founder and promoter of the mines minerals and PEOPLE alliance (mm&P), the Indian Network on Ethics and Climate Change (INECC), the EIA Resource and Response Centre (eRc). Environics promotes and mentors environmentally sound enterprises and among these is the Biodiversity Conservation India Limited (BCIL), the largest Sustainable Built environment enterprise in India. Environics provides research and evaluatory services to International, National, State and Local Institutions and directly works with marginalised communities such as those in the mountain regions, tribals and communities adversely affected by mining and industrialisation. Environics is an observer member of UNFCCC; Founder Members of the Editorial Board of the worlds largest community and mining portal www.minesandcommunities.org and a member of the Asian TNC Research Network

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