

Say no to Coal in CDM!

Sustainable Development – Promises Vs. Reality

A Report comparing Adani Thermal Power Plant's Project Development Design with the Ground Reality

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2014



Adani Thermal Power Plant in Mundra: the first coal project to receive carbon credits under CDM

Adani's thermal power plant project is located in the state of Gujarat, India. This Ultra Mega Power Project is a 1320 megawatt power project and provides for the port and associated industrial park that, spanning over 100 square kilometers, is the largest economic development zone in India. It was the **first supercritical coal power project that was registered under the CDM**¹(project ref#: 2716) on 16 December 2009.

As the first coal power project to receive carbon credits, the Mundra project has received about 600.000 carbon credits for the period February 2011 to March 2012. Although the French energy giant EDF Trading has informally stated that they are no longer involved in the project, they remain listed as the buyer on the UNFCCC CDM website.

The Clean Development Mechanism (CDM) was designed to bring clean and sustainable development to poor countries while enabling rich countries to achieve their emissions reductions cost efficiently. However, Adani's thermal power coal project is a shining example of CDM project that misses its original targets.



Surroundings of Adani Power Plant

This reports offers to take a look to the harsh reality, totally opposite to the promises originally made. It will first examine the false promises. It will then show how Adani's project conflicts with the CDM's sustainability objectives by inflicting toxic burdens on local populations and ecosystems and how it doesn't comply with national laws.

¹<http://cdm.unfccc.int/Projects/DB/DNV-CUK1245932980.89>

I. A short study of the Project Design Document (PDD)- Environmental Impact Assessment, mitigation measures and consultation of the stakeholders

The Project Design Document² (PDD) describes the project activity in detail and forms the basis for all future planning and administrative procedures. It contains an estimate of the volume of emission reductions achieved by the project and **is supposed to document how the project contributes to sustainable development.**

➤ ***Environmental Impact Assessment, mitigation measures***

According to its PDD, Adani's thermal power coal power project was supposed to have a limited impact on the environment. It distinguishes two stages: *"the construction phase and operational phase."*³ :

Impacts during construction phase: the impacts due to the construction of the project activity are very negligible as it would be only for a period of three years as compared to the lifetime of the power plant (25 years). Associated activities would cause air pollution which would be short-term and would cease to exist beyond the construction phase.

Impacts during operational phase: [...]The environmental impacts would occur as a result of coal consumption which would release gaseous emissions into the atmosphere. [...] All possible environmental aspects for the proposed project activity have been identified and discussed for their impacts [...]

Adani Power Limited (APL), the manufacturer in charge of implementing the project then proposes a table where *"a summary of the mitigation measures taken to reduce/ minimize negative impacts if any and enhance the positive impacts."*⁴ These measures include, among others: *"green belt development, continuous monitoring of soil quality, no impact on local drainage and irrigation system, adequate alternative water supply & continuous monitoring, health inspection and vaccination, a proper hospital facility for the workers."*

²<http://cdm.unfccc.int/filestorage/t/p/9WJXIL3CTZKQ0MV2A5POY1RUBNFG8H.pdf/PDD.pdf?t=Y2F8bm45MmpufDCsDiooByi1J85F8WqcV3aN>

³ All quotes were taken from the PDD available on the web site of the UNFCCC.

⁴ See Annex 1 for the full table

➤ **Public consultation and benefits to the local population**

CDM projects are required to provide evidence that the project's activities will not adversely impact local populations and other relevant stakeholders. The developer must inform all relevant stakeholders about the project through appropriate channels. The developer must respond to all stakeholder comments, and describe a course of action to minimize negative impacts. The outcomes of the stakeholder consultations must be documented in the PDD.

According to Adani's thermal power coal power project's PDD, the stakeholders were identified for the project as under:

- Employees of APL
- Local populace
- Ministry of Environment & Forests, India
- Consultants
- Equipment Suppliers

The document further states:

The local stakeholders were invited for a presentation between 3.10.2007 and 21.10.2007, which was conducted as a part of the Environment & Social Impact Assessment (this environmental and social impact assessment report has formed the basis for issuance of Environmental clearance (EC) certificate and the Consent to Establish for the project activity by the Ministry of Environment and Forest of India). Stakeholders' comments were also invited for the project activity particularly for feedback on the environmental friendly nature of the proposed project activity. Stakeholders' comments were also invited for the project activity particularly for feedback on the environment friendly nature of the proposed project activity. The stakeholders have appreciated the initiative taken by Adani Power Ltd.

The proposed project activity has therefore not caused any adverse social impacts on local population but has rather helped in improving their quality of life. APL has communicated to the relevant stakeholders about the project".

Moreover, Adani Power Limited related that both its employees and the local population was very pleased with the consultation process:

The employees of APL have appreciated the initiative and have ensured their full support for the same.

The local people residing in the area around the location of the plant have acknowledged the initiative undertaken by the project proponent who will help in employment generation and electrification of parts of Gujarat.

II. False promises lead to harsh reality

Considering the PDD, Adani's power plant was encouraging. But it turned out differently. The PDD seems to have been conducted on the basis of an erroneous social and environmental impact assessment. Somehow, Adani Group have managed to lure the UNFCCC with their beautiful promises.

Their public consultation didn't acknowledge fishing communities, salt-pan workers and pastoralists as potentially affected stakeholders. Moreover, no relevant information has been made accessible in the local languages.

Regarding the environment, the consequences were worrying. The Indian State gave its agreement to the project. However, in 2013, a report commissioned by a committee appointed by the Indian Ministry of Environment and Forest highlighted that the project violates national environmental legislation.

In this second part, we will go into details on the environmental and social consequences of Adani's thermal power coal power project, which are now a threat to the livelihood of the local population.

➤ **Report of the Committee for inspection on Adani Port and Special Economic Zone**

Following the implementation of Adani Power Plant in Mundra, the Indian Ministry of Environment and Forests (MoEF) has received number of complaints. In response, the Ministry has set up a five member [committee](#), composed of environmentalists and officials, to investigate the case. Their [conclusions](#) were without appeal: the Adani power plant is accountable for massive adverse ecological impacts. Not only did APL not respect its commitment towards the UNFCCC, it also violated the conditions that were given to grant clearance for the 3 phases. The project has violated Indian environment laws on a number of points.



Kotdi creek Blocked by Adani Power Intek Chanel and Road

○ Diversion and blocking of the Creek: effects on Mangroves and other Vegetation

The PDD specifies that there would be no damage done to the ground quality: *"there will be no impact on local drainage and irrigation system"*. Yet, Prof Nikhil Desai, director of Gujarat Ecological Education and Research (GEER) Foundation and quoted in the report, stated that *"in 2006, the company has built many bunds in the inter-tidal area and blocked many creeks feeding water to the mangrove patches"*. Moreover, the committee observed bad practices such as using dredged material on the mangrove area behind the west and north port sites, laying down of a pipeline in the inter-tidal zone obstructing the tidal flow which is affecting mangroves, large scale destruction of mangroves especially at the north port site and obstruction of creek systems and natural flow of seawater.

Furthermore, the report by the Minister publishes: *“In the north of Bocha Island and in the Baradi Mata Creek Mouth, changes have been noticed. The Baradi Mata Creek mouth opening shifted and got constricted. As for the north of Bocha Island, the branches have completely disappeared over the years having an impact on the mangrove vegetation in the area in addition to the change in the hydrological regime.”*

The project proponent declared in the PDD that the construction site was carefully selected in order to avoid the disruption of the existing vegetation. What it actually achieved is *“rampant destruction of mangroves by Adani Group”*, a GCZMA sub-committee headed by Prof Nikhil Desai, director of GEER, reported in May 2006.



Damaged Indian Date(Kachchi Kharek) by Adani Power

- Non compliance of the consultation process

Despite the declarations in the PDD, the consultation process was not rightly conducted. It has even been invalidated by the investigating committee. APL should have held a public hearing where all the population and communities concerned by the project could express themselves and have a say. Far from being inclusive, the consultation didn't acknowledge fishing communities, salt-pan workers and pastoralists as potentially affected stakeholders. Moreover, no relevant information has been made accessible in the local languages.

The project implementation was divided in 3 phases. The report from the Minister affirms that *“during phase III, public hearing was held and it was noted that it also should have been held during phase II but the MoEF exempted them.”* This decision, however, has been recognized as not valid by the Committee.

- Fly ash utilization and disposal

The PDD stated that fly ash would properly be used and an ash utilization plan would be set up in order to avoid soil degradation as well as air and water pollution. However, findings repeatedly showed that mitigation measures promised by the power plant failed to serve their purpose.

As the report puts it, *“during a Gujarat Pollution Control Board (GPCB) inspection in 2011, it was indicated that fly ash generated from the plant was being collected in a fly ash silo. Regarding the utilization of fly ash, it was observed that about 17 per cent of the total fly ash generated (7,512 MT of 43,639 MT fly ash generated) was being sent to cement manufacturing industries.”*

Moreover, *“the GPCB inspection also revealed that about 27,127 MT of fly ash were found to be disposed off in low-lying areas of MPSEZ between APL and West port. The disposal of fly ash in the low-lying areas was done using open dumpers. Fugitive emissions were observed due to the moving of fly ash loaded dumpers and other heavy vehicle s during the GPCB site visit.”*



Fly Ash dumping on open ground

- Salinity ingress and impact on agriculture



Kachcha water pond Adani Power

On the matter, PDD declares that *“seawater will be the source of water for the power plant. So, there will be no impact on groundwater system”,*

However, according to the Report, *“the findings of the Gujarat Pollution Control Board during a site inspection are quite different. It was noted that the company has provided an open unlined (kachcha) channel and kachcha reservoir for storage of seawater. The Board had received representations from surrounding villagers regarding an increase of salinity in the groundwater. Therefore, the*

Board issued directions on April 18, 2011 to the company to carry out a detailed assessment of underground water quality, including salinity ingress.”

The finding is rather shocking.

“A total of 36 bore well water samples were drawn from 18 locations in two seasons during 2011 and tested at M/s SGS India Pvt Ltd in Ahmedabad. It has been reported that except for two samples, all other samples were found to be unfit for drinking water as per IS: 10500 specifications because of different reasons ranging from taste, to high dissolved solids and coliform.”

➤ ***View from the Ground-effects on Local People***

The most affected by this situation are the ones best placed to judge this situation on the ground-level. In their Project Development Design, APL stated that the project *“will be beneficial to the local rural community by providing substantial employment opportunities and reinforcing social infrastructure in the region.”* Fishermen in the area would probably disagree. In 2008, the latter expressed concerns about inconvenience in fishing operations due to limited or no access to fishermen in the area.



Mangrove Destruction

The changes in the landscape were massive. The disappearance of grazing land and of mangrove has impoverished the poor. The fishermen hardly get access to the sea but were offered fish nets as compensation by the Adani Foundation! Some have worked in this part of Gujarat coast for generations, basing themselves close to the sea for many months of the year. Their only source of income has been taken away.

One of them declared to THE TIMES OF INDIA: *“We believe that our livelihood is being adversely affected and we fear the conditions to only become grimmer due to the rapid, haphazard and environmentally unsustainable industrialisation that is taking place along the coast of Mundra taluka.”*⁵

Farmers, cattle-breeders and salt-pan workers living along the coast are also concerned as their way of life has been disrupted.

Lands were also stolen from the local population. Adani was even condemned, as newspaper TEHELKA reports: *“On 11 February, responding to a PIL by Mundra’s farmers, the Gujarat High Court gave notice to Adani’s Special Economic Zone and the Gujarat government for illegally taking 231 acres of Navinal village pastures for the Mundra SEZ. Navinal is just one of 23 villages whose sarpanches sold off grazing land keeping the Gram Sabha in the dark.”*⁶

⁵ <http://lite.epaper.timesofindia.com/mobile.aspx?article=yes&pageid=6&edlabel=AMIR&mydateHid=05-08-2011&pubname=&edname=&articleid=Ar00600&format=&publabel=MM>

⁶ http://archive.tehelka.com/story_main48.asp?filename=Ne260211DEVELOPMENT_CONFLICTS.asp

Interviewed by a journalist from TEHELKA, one high school graduate of Dhrab village said: *“Our sarpanch was a plumber; he now has a Rs. 6 crore company. First they sent guards to stop us from using our land, now they send the police and BSF. When we approach the company for a job, they send us away.”*⁷

People rose up. Protest against Adani were conducted with slogans such as “Drive away Adani to save mangroves”. But without results so far.

III. Conclusion

Adani Power Limited made many promises to communities in PDD, including “green belt development, continuous monitoring of soil quality, no impact on local drainage and irrigation system, adequate alternative water supply & continuous monitoring, health inspection and vaccination, a proper hospital facility for the workers.”

Instead, local residents and indigenous people have found themselves scraping by. Not only did the Adani Mundra power plant project fail to live up to the sustainable development benefits promised in the PDD, but it also had negative impacts on the local community and the environment.

Adani Mundra is yet another project that underlines that the modalities of the CDM need to be reformed with special regard to local stakeholder consultation processes and the implementation of monitoring systems and grievance mechanism.

⁷Ibid

ANNEX 1

The following table presents a summary of proposed project activity's local and environmental impacts and the mitigation measures taken by APL to reduce/ minimize negative impacts.

Possible impacts	Mitigation during construction	Mitigation during operation
<i>Air Impact</i>	<ul style="list-style-type: none"> ➤ Spray water on dry surface generating dust particles ➤ Regulate vehicle emission 	<ul style="list-style-type: none"> ➤ Implementation of ESP and bag filters ➤ Provide proper ash utilization Plan ➤ Green belt development ➤ Space Provision for FGD
<i>Soil quality degradation</i>	<ul style="list-style-type: none"> ➤ Removing top soil for construction, turfing and plantation after civil works 	<ul style="list-style-type: none"> ➤ Continuous monitoring of soil quality ➤ Green belt development ➤ Proper ash utilization
<i>Drainage and irrigation</i>	<ul style="list-style-type: none"> ➤ Seawater will be the source of water for the power plant. So, there will be no impact on local drainage and irrigation system 	
<i>Groundwater depletion & quality degradation</i>	<ul style="list-style-type: none"> ➤ Seawater will be the source of water for the power plant. So, there will be no impact on groundwater system 	
<i>Surface water pollution</i>	<ul style="list-style-type: none"> ➤ Discharge of effluent will be based on the study done by National Institute of Oceanography 	
<i>Terrestrial ecosystem (disruption to flora and fauna)</i>	<ul style="list-style-type: none"> ➤ Suitable site selection avoiding unnecessary disruption of existing Vegetation 	<ul style="list-style-type: none"> ➤ Green belt development conserve local biota
<i>Disruption of road traffic</i>	<ul style="list-style-type: none"> ➤ Practice caution in use of vehicles 	<ul style="list-style-type: none"> ➤ Monitoring road trafficking situation
<i>Disturbance to water supply</i>	<ul style="list-style-type: none"> ➤ Establish adequate alternative water supply 	<ul style="list-style-type: none"> ➤ Establish adequate water supply & Continuous monitoring
<i>Occupational health hazard</i>	<ul style="list-style-type: none"> ➤ Providing health inspection and vaccination ➤ Organizing proper disposal procedure of waste ➤ Providing adequate sanitary facilities to personnel and workers 	<ul style="list-style-type: none"> ➤ Providing health inspection and vaccination ➤ Periodic health check-up
<i>Safety of workers</i>	<ul style="list-style-type: none"> ➤ Adopt appropriate safety measures ➤ Provide first aid services 	<ul style="list-style-type: none"> ➤ Workers would be provided with hand gloves ear muffs,

	<ul style="list-style-type: none"> ➤ <i>Make workers aware of risks and how to avoid these</i> 	<i>safety boots, safety goggles, helmets etc</i> <ul style="list-style-type: none"> ➤ <i>Workers should be trained to follow safe working practices</i> ➤ <i>Proper hospital facility would be provided</i>
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