

**The Sasan Coal-Fired Power Plant, in India
A Clean Development Mechanism project supporting
human rights, environment, and labor violations**

A report by Carbon Market Watch

December, 2014

1. Executive Summary

In close collaboration with the Sierra Club, 350.org, Pacific Environment and Friends of the Earth U.S. Carbon Market Watch prepared this fact finding report on the Sasan Ultra Mega Power Project (UMPP) in India. Part of this report is the presentation of findings of field visits that have been undertaken in January and May 2014.

The Sasan project is one of six coal power projects registered under the Clean Development Mechanism (CDM). The power plant is one of nine Ultra Mega Power Projects (UMPP) being pursued by the Indian government with a capacity to produce 4000 MW. The Sasan power project is controlled by Sasan Power Limited, which is a subsidiary of Reliance Industries and located in Singrauli, a district emerging as India's energy capital. The total installed capital of all thermal power plants in this area is around 10% of the total installed capacity in India. Claiming to employ more efficient super critical coal technology, the project was registered under the CDM in 2010 (project number 3690).

The CDM is a project based flexible offsetting mechanism that allows crediting of emission reductions from greenhouse gas (GHG) emission abatement projects in developing countries. Following a dual purpose, the CDM was designed to bring sustainable development to developing countries and to enable industrialized countries to achieve emission reductions in the most cost effective way. Emission reductions are awarded in the form of carbon credits, called Certified Emission Reductions (CERs). These offset credits can be purchased by companies and governments in Annex I countries to comply with their legally binding or voluntary emission reduction obligations. One carbon credit is equivalent to one tonne of carbon dioxide (CO₂). To date, more than 7300 CDM projects are registered, most of them implemented in China and India.

The U.S. Export-Import Bank (Ex-Im Bank) has approved over \$ 900 million in financing for the Sasan coal power project in October 2010.

As the Ex-Im Bank is a major funder of this CDM project, a report titled 'The U.S. Export and Import Bank's Dirty Dollars. U.S. tax dollars are supporting human rights, environment, and labor violations at the Sasan Coal Fired Power Plant and Mine, in India' has been sent out the bank in October 2014, since only little information has been provided by the agency about Sasan's compliance with Ex-Im environmental, social, human rights and corruption policies.

To outline the involvement of Sasan's major funder, the Ex-Im bank, safeguards are analyzed in this report, including the Bank's commitments under the Equator Principlesⁱ and the International Finance Corporation (IFC) Performance Standards,ⁱⁱ the agency's environmental, social, human rights and corruption policies, as well as whether or not the project has lived up to the expectations laid out in the Environmental and Social Impact Assessment (ESIA) documents for the mine and the power plant. An apparent lack of oversight prompted the NGOs involved in this report to conduct this independent investigation.

The Fact Finding Team has uncovered numerous cases of corruption and human rights and labor violations associated with the Sasan coal project, all of which have largely been ignored by the Ex-Im Bank and do not correspond to the respective sustainable development benefits that have been claimed in the Project Design Document of the CDM project.

2.Methodology

The fact-finding team interviewed affected community members and were provided with various documents demonstrating the validity of the community members' claims. Reliance Energy and its subsidiary refused requests to meet during these fact-finding trips, although the fact finding team was able to meet with two Corporate Social Responsibility officials who followed the participants during the field visits. Our team reviewed available literature and documents procured under India's Right to Information Act (RTI), met with medical doctors, trade union leaders, lawyers and media professionals to gather additional facts. This process uncovered evidence of multiple violations of Ex-Im Bank environmental, social, human rights and anti-corruption policies, the IFC Performance Standards, and the Equator Principles, as well as broken promises from the ESIA. Moreover, the interviews conducted and facts collected show that the Sasan coal power plant did not live up to the sustainable development promises made at the project design stage of the CDM project.

2.1 Additionality

The CDM requires every project to be additional. This means that the CDM should only provide carbon credits to projects that could not have been built without the extra financial support of the CDM. Therefore, a project can be considered as additional, if it was implemented only because of the incentive created by the CDM. Assuring that a project is additional is fundamental to the environmental integrity of the CDM. If a project would have happened anyway and therefore does not go beyond business-as-usual, it should not get carbon credits as such a project generates credits that are not based on actual emission reductions.

Put plainly, non-additional CDM projects activities increase global emissions because the offset buyer keeps emitting under the assumption that emissions reductions happen elsewhere while in reality they would have happened anyway.

However, the coal power projects that have come forward to date are all 'non-additional' because super-efficient technology is actually business-as-usual and often required by the host country. These projects will therefore generate carbon credits that do not represent real emission reductions undermining the environmental integrity of the CDM and locking in billions of tons of CO₂ emissions over decades to come instead of investing in renewable energies and a low carbon development path.

2.2 Crediting

In addition to the outlined problem of non-additionality, coal power projects are awarded with carbon credits based on flawed CDM crediting rules that allow significant over-crediting. The number of credits each plant can receive is calculated according to the rules specified in the coal methodology (ACM0013), significantly overstating the efficiency benefits of switching from subcritical to supercritical technologies.

Despite evidence presented by its own Methodology Panel that current CDM crediting rules create significant over-crediting, the CDM Executive Board which is the supervising body of the CDM, did not suspend coal methodology ACM0013. The Panel showed that current rules allow plant operators to use outdated information to determine baseline emissions that ignores the efficiency improvements of new fossil fuel-fired power plants over time.

The problem of non-additionality is made worse in this case as none of the credits the Sasan project and other coal power projects earn represent real emission reductions that are calculated on inflated baseline emissions, allowing it to earn more credits than if the baseline was calculated correctly.

As for HFC23 projects, carbon credits have also been awarded on a flawed methodology (AM0001). In this case, the Executive Board requested the Methodology Panel to revise the method, not allowing using this method for baseline determination any longer. The knowingly flawed coal methodology, however, is still used for crediting coal power projects in CDM, causing significant over-crediting.

2.3 Project Design Document

At the design stage of each project, project developers specify how the CDM project will contribute to the sustainable development of the host country. The contribution to sustainable development is displayed in the Project Design Document (PDD), which is the key document in the validation and registration process of a CDM project. In India, this must further be specified in the sustainable development action plan, outlining the exact actions that will be implemented to achieve the respective sustainable development benefits.

Every host country defines its own sustainable development criteria that have to be met by the CDM project activity. In India, these are:

India's Sustainable Development Indicators (www.cdmindia.gov.in)

1.Social well being: The CDM project activity should lead to alleviation of poverty by generating additional employment, removal of social disparities and contribution to provision of basic amenities to people leading to improvement in quality of life of people.

2.Economic well being: The CDM project activity should bring in additional investment consistent with the needs of the people.

3.Environmental well being: This should include a discussion of impact of the project activity on resource sustainability and resource degradation, if any, due to proposed activity; bio-diversity friendliness; impact on human health; reduction of levels of pollution in general;

4.Technological well being: The CDM project activity should lead to transfer of environmentally safe and sound technologies that are comparable to best practices in order to assist in up-gradation of the technological base. The transfer of technology can be within the country as well from other developing countries also.

In the Project Design Document of the Sasan project, it is outlined what sustainable development benefits the project will create in the Singrauli area. It is specified how the Sasan coal power project will generate these benefits ranging from social to environmental as well as economic and technological well-being. In a sustainable development action plan, these positive effects as well as programs implemented are further specified.

Sustainable development benefit promises by the project owner include empowering of economically weaker sections of the society, improvement of the livelihood situation of the region including construction of medical infrastructure and school and further highlights the positive effects for the environment in emission reductions.

2.4 Local stakeholder consultation

Local stakeholder consultation (LSC) is a key requirement in the CDM process cycle and necessary for the registration of a CDM project. The CDM modalities and procedures determine the consultation processes during the design and validation stage of the project. Within the process, stakeholders relevant for the proposed CDM project must be informed of the planned activity and be invited to make comments. Stakeholders thereby include the public, individuals as well as groups or communities affected or likely to be affected by a proposed CDM project.

The outcomes of the LSC must be documented in the project design document (PDD). Designated Operational Entities (DOEs), which are hired as independent third-party validators, need to confirm by means of document review and interviews with local stakeholders that the consultation was carried out through appropriate means and that comments from local stakeholders have been appropriately taken into account.

Current modalities and procedures leave room for much malpractice on the side of project developers. Poor definition, regulation and documentation of CDM rules allow them to find their own way on how to structure and hold LSC and are therefore often not implemented in a proper manner. Reports show that CDM projects have been registered despite insufficient stakeholder participation, strong local opposition and evidence that the projects cause harm to the local populations and/or ecosystem. This is also true for the Sasan CDM project.

3. Project Background

3.1 Singrauli area

The Sasan project is located in the Singrauli District, which straddles states of Uttar Pradesh and Madhya Pradesh. The dense forests Singrauli was once famous for have been almost completely leveled to make way for large, industrial projects. Today, Singrauli is rapidly emerging as India's energy capital, and the total installed capacity of all thermal power plants in the district amounts to around 10 percent of the total installed capacity in India. At present, there are 17 large power projects in the works, resulting in large scale displacements of local communities. However, Singrauli lacks a proper channel and implementing agency to facilitate the resettlement and rehabilitation of locals, leaving people exposed to irregularities and corruption. Many residents have faced multiple resettlements since energy development began in the 1960s.ⁱⁱⁱ

Over the last 50 years the character of the area has changed drastically, starting with the construction of the Rihand Dam, from a well forested, 'Adivaasi' (tribal/ indigenous people) inhabited far-off region in east-central India to a hub of coal mining and electric power production. Large scale losses to the forest lands took place, which were diverted for all these mega projects. Along with this, due to the extremely polluting nature of the coal industries, Singrauli also had the infamous tag of being one of the most critically polluted areas in India, taking its toll on the residents. Associated with this drastic and rapid transformation are many social and economic strains and stresses.

When the Rihand dam on the Rihand river created the huge Govind Ballabh Pant Sagar reservoir in the 1950s, many villages, farmlands and homes got submerged and the displaced people were suppressed

from the nearby areas, often without sufficient compensation or any provision of rehabilitation. Large amounts of forest lands also got alienated from these people. It was assured that this reservoir will provide irrigation water to a large area in the vicinity, transforming the local economy and the fortune of farmers to one of the “temples of modern India”. This expression was used by the Prime Minister of India at that time- Jawaharlal Nehru.

When extensive deposits of coal were discovered in the area not far from the reservoir and new coal mines were started by the Northern Coalfields Limited (NCL), which is a subsidiary of the state owned Coal India Limited (CIL), many of these already displaced people were uprooted from their places of settlements for the second time. The amount of forest land taken and destroyed for constructing mines and thermal power plants and thus pushing the forest dependent people further into poverty, has kept on increasing ever since.

Environmental degradation is so great that in 2009 the Environment Ministry imposed a moratorium on clearances in the district’s coalfields. The moratorium was lifted in 2011 after Uttar Pradesh and Madhya Pradesh developed action plans for improving environmental quality, but as of September 2013, Singrauli's Comprehensive Environmental Pollution Index remained critically high.^{iv} A 2011 study of contamination from just two of the many thermal projects in Singrauli -- the Anpara and Renusgar coal-fired power plants -- found that concentration of metals in drinking water were higher than the maximum acceptable limits set by the World Health Organization.^v

Given the history of the district, it is not surprising that NGOs began reporting corruption, human rights, and labor violations early in the construction of Sasan, including a smokestack collapse that reportedly killed 30 workers and the disappearance of community members who protested forced relocations.^{vi} Foreshadowing the “coal gate scandal” that would rock Indian politics and force former Prime Minister Manmohan Singh to defend himself before parliament,^{vii} the Fact Finding Team learned that a former official with the Indian state-owned coal company did not follow the proper process when allotting the Moher Basin to Reliance Energy for Sasan's coal mine. Afterwards, the official took a job at the power project.^{viii}

UMPPs are a series of power projects planned by the Government of India, each with a capacity of 4,000-megawatts or higher. Of the six initial sites proposed, only two projects are currently functioning - - Tata Mundra and Sasan -- and both have raised serious human rights and environmental concerns. In late 2012, India’s Comptroller Auditor General's office (CAG) released an audit report on the UMPPs, condemning the government for letting project developers dictate the terms of construction. Instead of providing oversight, the government has been simply tracking the projects’ progress, allowing large scale violations to continue unchecked. In addition to discrepancies in land use, the CAG’s report also found that a lack of transparency and fair play has dogged the projects from start to finish.^{ix}

3.2 Ex-Im Bank involvement

Early in the Obama Administration, NGOs became concerned that, despite pledges from the Administration to phase out fossil fuel subsidies, the Ex-Im Bank was embarking on a new, billion dollar fossil fuel binge.^x The outdated, heavily polluting projects receiving Ex-Im Bank support cause significant harm to the environment and to local communities and will contribute to global climate disruption.

In particular, NGOs became concerned about Ex-Im Bank financing for the Sasan UMPP, Reliance Energy's 3,960-megawatt coal-fired power plant and associated mine in Madhya Pradesh, after Indian-based organizations and affected communities reached out to U.S. groups with reports of human rights and environmental abuses. U.S. based NGOs met with Ex-Im Bank before and after the project's approval to discuss the controversies surrounding Sasan, including how affected people had already been displaced multiple times for other projects, and the fact that Sasan is located in a district already suffering from severe pollution.^{xi}

After initially rejecting the Sasan coal project due to violations of the Bank's carbon policy, Ex-Im Bank reversed its decision and approved \$900 million in financing for the project in August 2010, despite the lack of adequate impact assessments and mitigation plans. In order to secure the financing, Reliance promised to generate 250-megawatts of clean energy as a part of an offset provision, a fraction of the proposed 4,000-megawatts of coal generation the project created.^{xii}

Under pressure over reports of violations, Ex-Im Bank arranged to meet with Reliance in Singrauli. However, despite initially promising to meet with the affected community members represented by Srijan Lokhit Samiti (Committee for the Development of Peoples' Welfare), the local people's movement in Singrauli, Ex-Im Bank reversed course and instead insisted that community members travel to the hotel where its representatives were staying. Most of the affected community members did not have reliable access to transportation, and they feared that the hotel, which caters mostly to coal company officials, was not a safe place for them to speak about their concerns with the project. While communities await justice, even greater harm could be on the way; Reliance has proposed expanding the already massive Sasan project.

Ex-Im Bank's refusal to meet with people in their communities made it impossible for the Bank to gain a full understanding of what was happening on the ground. This report is an attempt by NGOs working with local communities in Singrauli to give voice to affected people and develop a more complete picture of the project's effects.

4. Key findings of the field visit

Reported wide-ranging effects related to resettlement including:

- Residents who protested the forced relocations were abducted and never found.
- Houses were demolished in the middle of the night while families were still living in them.
- Residents were not compensated or were compensated at levels below the legal requirement.
- Housing at resettlement colonies was not made available to all people facing removals.
- Colonies lacked basic amenities, including those that villagers previously had access to, such as water pumps and schools.
- Displaced persons did not receive priority in hiring and training, contradicting the ESIA, and locals financially affected by the project were denied jobs in favor of contract workers from other states.
- Elderly residents have not received the pensions promised in the ESIA's.
- Children promised education stipends in the ESIA's have not received them, and some been actively blocked from attending school.

- A meaningful grievance process has not been created or utilized, leaving complaints levied against the project unaddressed and allowing human rights violations to continue.

Disregard for labor standards and safety including:

- There were reported irregularities in worker time stamps, where workers were clocked in after their shifts, allowing injuries and deaths at the project to be recorded as having taken place outside of the site.
- Workers handling toxic materials such as coal ash have reported skin diseases, suggesting necessary safety precautions are not taken.
- A meaningful grievance process has not been created, leaving complaints levied against the project unaddressed and allowing labor violations to continue.
- The hiring of contract workers from other of states has made it easy to cover up accidents, as families do not reach Singrauli to look for lost love ones until long after these incidents occur.

Mistreatment of indigenous residents and rights including:

- Free, prior, and informed consent was not practiced with the indigenous people moved for the project.
- The ESIA states that affected indigenous families do not rely on forest land cleared for the mine, but community members return daily to the area where they used to live to collect traditional plants, forest produce and other means of sustenance, despite massive boulders rolling down from the overburden above.
- Relocated families were often not compensated or were compensated at levels below the legal requirement for indigenous people.
- Many families are still waiting in temporary housing, and have not been moved to relocation colonies.
- Some families either refused to leave or returned to the edge of the project site because they could not maintain their way of life at the resettlement colonies.
- Children were denied access to schools in violation of laws protecting indigenous people.
- A meaningful grievance process has not been created or utilized, leaving complaints levied against the project unaddressed and allowing violations of indigenous rights to continue.

Direct environmental contamination including:

- A thick layer of coal dust covered plants near the conveyor belt carrying coal from the mine to the power plant.
- Residents reported being overwhelmed by coal dust and ash blowing in the wind, affecting their health.
- Locals complain that material from ash ponds is seeping into ground water, making drinking water unfit for consumption.

Withhold information and a lack of oversight:

Ex-Im Bank failed to make documents -- including environmental and social management plans, supplemental environmental reports, and related monitoring reports – publicly available despite

legislative and agency policy requirements that it do so.^{xiii xiv} Despite numerous attempts by NGOs to document violations of Ex-Im Bank policies, the Bank's unwillingness to supply these documents makes it impossible to fully catalogue the harm done. With regards to environmental contamination specifically, without the reporting documents or independent testing there is no way to assess pollution levels, although our observations and reports from local residents suggest severe contamination.

The clear evidence of human rights, labor, and environmental violations we found speaks to a lack of meaningful oversight at Ex-Im Bank and underlines the need for mandatory monitoring processes in the CDM regulations.

4.1 Resettlement

Under IFC Performance Standard 5, any project supported by Ex-Im Bank is required to provide compensation for losses incurred by people facing involuntary resettlement, as well as compensation for people losing their livelihoods, regardless of resettlement. It also provides for the improvement or, at the very least, the restoration of livelihoods and living standards for displaced persons, and improved living conditions among displaced persons. IFC Performance Standard 4 ensures the safeguarding of property and the investigation of unlawful or abusive acts against affected people, while IFC Performance Standards 1 and 5, as well as the 6th Equator Principle, require the creation of a grievance mechanism where affected people can raise concerns and have them resolved in an impartial manner. The Equator Principles also make it clear that all local laws regarding resettlement will be applied (Principle 3). The Project ESIA's also provided for old age pensions for the elderly^{xv} and education stipends for children.^{xvi}

In the PDD, it was stated that resettle colonies will be provided for replaced people and communities, meeting their needs and not decreasing their living standard and also providing sufficient compensations for the land that is needed for the construction of the Sasan coal power plant. It was outlined that the project proponent considers local community development an integral part of project activity, working towards poverty alleviation and social harmony among the local community and granting appropriate resettlement areas for dislocated people.

The Fact Finding Team documented reports from local villagers that Reliance failed to compensate residents facing involuntary resettlement, sometimes by not meeting the level required by Indian law and sometimes by not compensating people at all. These villagers said that many displaced persons also did not receive housing in resettlement colonies.

"They acquired my land, asked us all to vacate the place, and made the boundary wall for Reliance Company's Sasan plant. For the past four years they are just moving us from one place to another. They took away all my land and my house. We even approached the High Court and filed our petition regarding the displacement, compensation, rehabilitation, and jobs. The High Court passed an order in our favor. Yet, neither the company nor the government officials listen to our demands. Recently, I went to the District Magistrate (DM) (Mr. Selvendran) to submit a petition on this issue whereas he just threatened me and asked me to keep my mouth shut. I had two and a half acres of land out of which the government compensated only for one acre and said the rest one and a half acres comes under public property and hence could not be compensated for."

- Ramdheen s/o Devnoorak, Gidda Khaani village, residing in Siddhi

“They displaced us and built an ash dike in our land. They destroyed our father’s house which was an ancestral property. It is almost five to six years now, they promised to give us two houses and some agricultural land. Nothing is given so far and we lost hope now.”

- Ram Kailash Shah S/o Kuber Shah, Ghidda Khaani village, residing at Siddhi Khurd

“They have given us rehabilitation cards, but have not rehabilitated us in so many years. What is the purpose of giving this card?” (Rehabilitation cards are given to displaced people entitled to rehabilitation.)

- Raju Lal, Ghidda Khaani village, Residing at Siddhi Kot

Instead of investigating abuses against those who resisted resettlement, threats and even violence were routinely employed.

“My husband, Sudarshan Rajak, went missing in May 2009 after he was picked up from our place by the Tehsildar Babulal Tiwari. Our house was inside the Sasan plant’s compound wall and we refused to move out as we did not receive proper remuneration or rehabilitation. The company goons as well as the government officials came several times to threaten us. Once they wanted to speak to my husband in private wherein our family denied and said they cannot take him to the station alone if they want they can arrest the entire family. And, in two to three days, he went absconding. We searched everywhere and found him nowhere. We went to file a complaint in the local police station and they neither accepted the complaint nor did they file an FIR (First Information Report). When we asked why they did not want to file an FIR the reply that the police officials gave to me is, “You must have been a disrespectful wife that is why your husband ran away from you, you wouldn’t have done your duties properly,” and I responded saying, “If that was the case he would have eloped when we were young and not in his old age.” The irony is now they are telling us that they have deposited Rs.7,00,000 (Rupees) in my husband’s account as compensation, but the bank account is not operational as it is in my husband’s name.”

- Sagarmathi Rajak

“Around nine of us had houses very close to the SUMPP’s (Sasan Ultra Mega Power Project) gate; the others moved when the company threatened them to and built houses elsewhere. Owing to my economic condition, I refused to move until the company pays remuneration and provides job for me. Then, the company said they will compensate but the amount offered was not according to the High Court’s decision. When I was resisting, the company strongly, the company goons and police threatened me. They even arrested my son and kept him in custody for several days until I agreed to accept the compensation amount. My son was given a job in the Reliance mine, and he died in an accident there. Our family is in great distress now.”

- Krishna Ram, Ghidda Khaani village, residing in Siddhi Kot

Those who were displaced report that they have also found their standard of living greatly reduced. Children no longer have access to schools, and critical infrastructure -- such as roads and water pumps are lacking at rehabilitation sites. Meanwhile, some people are unable to get replacement housing in the rehabilitation sites at all. Elderly residents promised old age pensions in the EISA are also being denied.

“Education for our children and water are the two main issues. The school informed us that they will register our kid’s name in the school only if we vacate from our current house and settle down in a house near the school, but the company said that they will provide facilities like school and water for us in our rehabilitation colony or the settlement site. It has been two years and we

are walking to the company and school since then, nothing really moved. Also, they took a long time to allocate us a house in the rehabilitation site and our old house almost got flooded ... We are three brothers but they have given only one displacement card for all of us. We are peaceful people and they give the card & facilities only to people who protest and fight.”

- Ram Naresh Prajapati, Ghidda Khaani village, residing in Siddhi Khurd

“We moved of our house because they forced us to take the plot offered and they also gave Rs. 15,000 as compensation. They have not kept their promises neither did they give jobs to us nor are they admitting our kids in the schools. We are running behind the company and the government for the past two years for the admission of our children in schools.”

- Hira Moti Saket, Ghidda Khaani village, residing in Siddhikot

“Leave alone the big promises for remuneration, rehabilitation, and jobs the company did not even fulfill the basic promises of hand pumps to the villages who got rehabilitated and proper road facilities connecting the rehabilitation sites.”

- Kasi Ram S/o Dadai Ram, Ghidda Khaani village, residing at Siddhikot

“Our family had agricultural fields and we planted potatoes. 1 quintal of potatoes got spoiled just because of lack of water. The pipes were destroyed while they were building the plant. We were in huge loss and they also came and demolished our house. Till today we haven’t got compensation or any kind of support or help. We are living in Surya vihar slum now”

- Wife of Ramkumar, Ghidda Khaani village, residing at Siddhikot

“They promised us, the old people, and pension amount of Rs. 7,000/month. Now, neither did they give us land, house, or facilities nor that pension amount as promised. The company failed in keeping up to its promises and we are totally disappointed. We, old people do not have any strength to fight.”^{xvii}

- Ram Saroral Pandey, Ghidda Khaani village, residing at Siddhi Khurd

In the PDD, it was stated that technical consultants and construction contractors associated with project activity would be economically benefited during the construction and operations phase of the project activity. Moreover, it was set out that the project participant is undertaking several measures including re-skilling of the local community both in technical and non-technical areas and therefore and therefore enables villagers to have steady streams of income thus addressing improving livelihood and reducing urban migration. However, the company has shown a preference for hiring outside workers, adding additional hurdles for local residents applying for positions and threatening those who persist.

“I have met the DM (District Magistrate) several times and submitted petitions to provide us with jobs in the plant. But, they do not listen to us at all. I built a house of my own as I still have not received any support or compensation for the same. Nobody responds to our queries and nobody really listens to our demands. We are now in a state where we have lost our lands and livelihood standing at the mercy of the companies for jobs.”

- Ram Krishna Soni, Ghidda Khaani village, residing currently in Siddhi

“The people who do not have the PAP (Project Affected People) card get their jobs easily inside the plant whereas, people who actually have the PAP cards need to go through a painful procedure to get collector’s approval letter and walk several times to the company gate and wait

patiently. In the past five years we have seen so many people getting charged under section 307 (section 307 of the Indian Penal Code defines attempted murder^{xviii}) and hence we all feel patience is the only option we have."

- Ram Pyaare Saag, Ghidda Khaani village, residing at Siddhi Kot

With complete disregard for requirement to safeguard the property of affected people, Reliance began dismantling homes in villages like Harrahaawa before the land acquisition was even complete.

"No notice was given to us before our house was broken down. At night when we were sleeping a huge portion of our house was razed. When I opened the door of my house in morning, an entire portion of the house was demolished. We have nowhere to go except for that rehabilitation colony which has no facilities and is far away from our source of employment."

- Krishna Das Saha, Harrahaawa village

4.2 Labor

IFC Performance Standard 2 provides for the safety, protection, and health of workers, the recognition of collective bargaining units, and an impartial grievance mechanism.

However, those employed in the Sasan power project and the mine complained of numerous accidents, health concerns, and deaths, many of which were avoidable with the use of proper safety equipment and protection. Furthermore, the workers outlined how the company underreported and in some cases even covered up these incidents by taking workers time cards and only filling them out after the employee left the facility, allowing any accidents to be reported as taking place off the premises and not on work time. Local workers were also more likely to have family nearby who would quickly notice their absence, while it took much longer for loved ones connected to contract workers from other states to become aware of a disappearance and to travel to Singrauli. It was suggested by community members that this played into the practice of rejecting applications from local residents. Additionally, those who protest unsafe working conditions were subject to violence and false charges.

"Accidents are a frequent thing inside the plant. When someone dies in an accident the company people take them out of the plant saying that the person is alive and needs to be hospitalized but throw the dead body in a dump yard which would be found after a day or two. When people get agitated and protest against it outside the factory gates, they file false cases against them. In some cases the person is kidnapped like in the case of Sudarshan Rajak. The coal mines are so close and hence the place is always filled with coal dust. The effects of coal dust are disastrous."

- Ram Pyaare Saag, Ghidda Khaani village, residing at Siddhi Kot

"I work inside the Sasan plant and today they sent us all home as there was an accident in boiler no. 5 at around 11 a.m. A man fell off from a 24 foot high boiler. We work in a sariya (ron girder) setting. They told us the worker who fell off is still alive and they rushed him to the hospital. The IOT contractor (Iotech company contractor handling the iron girder work) brought in this worker and hence they have sent off all the workers who came in through IOT contractor in order to prevent any kind of agitation. When some of us try to protest or go on a strike against the company we will be having many false cases and will be arrested. They will file us under section

307. *The person who fell down today is from Jharkhand and hence there won't be much agitation as he would have only 2-3 friends from his same town with him who cannot raise their voices. We do not have safety belts and safety equipment and most of them are migrant workers and hence if they die nobody really cares. We do not even know if their dead bodies are handed over to the family. Today only civil work is going on inside the plant rest of us are sent home.*"

- Shivlal, Ghidda Khaani village, residing at Siddhi Kot

"There was this day when I went inside the plant for duty and there was an accident. Gauri Shankar, a local resident of Ghidda Khaani fell down inside the boiler tank and he was taken to hospital and has since been missing. It has been two years now and who ever protested against this injustice are having criminal cases under section 307 filed against them. Fourteen of us were booked under various different cases. The tehsildar, Vikas Singh asked us to vacate our houses. I spent around Rs.40,000 for the bail and the case is still on. Some government people took around Rs.60,000 saying that they will get us jobs, new houses, hand pumps and school admissions in Harhava School and we paid them too. Until today nothing really happened. When one raises their voice against such repressions, one has to face Police violence as well as false cases & trials."

- Kanhaiyalal Sahu, Ghidda Khaani village, residing at Siddhi Khurd

"When we asked for jobs they took us for the jobs of making bricks from the ash pond material, which is the reason for a rare kind of skin disease (showing his hand). Around 30-40 of us work in the brick plant near fly ash pond from this village (both men and women). We work for around 12 hours a day and earn around Rs. 150/day (about \$2.50)."

- Ramadin Pandu, Baiga Basti

"My son got a job in the company and went to work in the dumping site at 5 a.m. .one day and died the same day. We filed a complaint in the company for justice and compensation and there is absolute no action taken against the company so far. Many such accidents happen and goes unnoticed or not punished."

- Ramji Basur, Moher, Krishna Vihar rehabilitation colony

4.3 Indigenous Peoples

The Singrauli area has a large percentage of Adivaasi (tribal/indigenous people) population, consisting of Baigas, Gondhs and other communities. There are specific protections for indigenous peoples under IFC Performance Standard 7. In addition to the same safeguards outlined for displaced persons, the borrower is required to respect and preserve the culture, knowledge, and practices of indigenous peoples, as well as foster an ongoing and culturally appropriate relationship with these communities based on the principle of free, prior, and informed consent. However, Baiga members --members of one of the Scheduled Tribes in India -- face particularly harsh effects from the Sasan coal project. The ESIA for the mine stated, "The Scheduled Tribes (ST) population residing in the area have minimum dependence on the Minor Forest Produce for their sustenance,"^{xix} but the Fact Finding Team found the opposite to be true. Even after relocation, tribal people made the long trek to the mine on foot, through the clear-cut forests and past their destroyed homes, in order to collect traditional plants.

Once again, facilities at relocation centers failed to fully serve affected persons and lacked critical resources like schools and water. Several families displaced by the Sasan power project have since

returned to the border of the project because they could not maintain their way of life at the relocation facilities.

Additionally, many Baiga members did not receive the required compensation, and there is evidence of corruption surrounding payments -- including coercion of local people to agree to lower compensation, the company "losing" checks, and the collection of PAP cards, which were never returned. Elderly residents report that they have not received their promised pensions, and those who complain face violence and intimidation.

"When Reliance came in for the first time inside our Basti, they said they will provide us water, jobs, and other facilities. When we go now to them demanding these things, they literally shoo us away. They displaced every one of us from our village which was inside the forest. Around 95 of us got displaced out of which only five people had pattas (title to land) for the land. They gave us a compensation of 7 lakh (700,000) for 14 acres which is worth much more ... We used to be farmers but the land is gone completely. The compensation money which we got mostly was spent in treating my mother in law who died because of cancer. Reliance promised to give us a package with facilities like land, water, education, occupation, medical and pension scheme and they never spoke about it after displacing us. Ram Beeran one of the officials collected all our PAP cards and never returned it back to us."

- Ramadin Pandu, Baiga Basti

"The Reliance Company acquired around 63 dismil (0.63 acres) land from us to build the conveyor belt and have not compensated us yet. Company agents took around 60-70 lakhs (the 6,000,000-7,000,000 rupees or USD \$99,000-\$115,000, all the displaced tribal member were supposed to receive) and when we go and demand our compensation they always respond to us in an irresponsible manner. They said to me that the check that was in my name got lost."

- Sobha Sahu, Moher, Krishna Vihar rehabilitation colony

"Our plot was in the main road and we demanded a plot in the main road when they rehabilitated us, but they forced us saying we need to take an inside plot otherwise they won't give compensation at all. They did not provide us any of the promised facilities."

- Satyavathi, Moher, Krishna Vihar rehabilitation colony

"They did not provide us fair compensation and the house that they have given in the name of rehabilitation is not having water and other facilities. All of a sudden we got bills in our name and they are now asking us to pay tax for the house as well as electricity bills. We do not have our land and they never gave us employment, how do they expect us to pay such huge amounts of bill?"

- Ramadevi, Moher, Krishna Vihar rehabilitation colony

"I lived in Amlori village and then got rehabilitated to Krishna vihar rehabilitation colony. My patta numbers are 131/1,136/8 where the current dumping site of Reliance is located. The company cheated us big time, looted our land and never gave us the facilities that they promised."

- Ramji Basur, Moher, Krishna Vihar rehabilitation colony

Reliance and the administration have done greatest injustice to us. They could better shoot us down rather than making us live a life like this and suffer. We get beaten up by the police and

the company goondas (thugs) for demanding our rights and dignity. They made a compensation plan and a package. In the compensation plan it is mentioned that agricultural field with tube well facility should be paid a compensation of Rs. 60,000 (around USD \$990), we spent around Rs. 62,000 (around USD \$1025) for the same, where as we got Rs. 9,000 (around USD \$150) as actual compensation for the same.

- Athmaram Bayas, Baiga Basti

"Police people always harass us when we go on a protest demanding our right. Baigas are the most affected community in this village. They have compensated them poorly. Ra. 1 crore (around USD \$165,000) worth land is compensated worth Rs. 15,000 (around USD \$250), which is gross injustice. They never show the copy of government compensation scheme."

- Mahendra Singh, Moher, Krishna Vihar rehabilitation colony

"I am very old and also lost my eyesight. They promised to provide me an old age pension for which we are struggling in the past few years. I do not have the energy to work anymore and I don't even have my land anymore. I am living in extreme poverty out here with no help or support."

- Phuljharia, Basore Basti, Moher, Krishna Vihar rehabilitation colony

"They promised me a widow pension and a good compensation. But all that they gave as compensation is just Rs. 50,000 (around USD \$830). I have five sons who are now working in daily jobs leaving their education."

Jhuniya, Moher, Krishna Vihar rehabilitation colony

4.4 Environmental Contamination



The Fact Finding Team's efforts to catalogue environmental contamination were hampered by Ex-Im Bank's refusal to release the reporting documents it receives from Reliance, despite the agency's legal obligation to do so. With regards to the IFC Performance Standards, pollution abatement (Standard 3) and the requirement to protect communities from exposure to hazardous materials (Standard 4) were the most difficult to evaluate. Without access to the measured pollution levels near Sasan, we relied on visual observations and reports by local residents, which suggest severe contamination.

For example, the ESIA for the mine states: "Coal from mines will be transported to plant through overland conveyor route. Fugitive emission will not take place due to closed conveyor system."^{xx} We do not have access to the reports on air quality near the conveyor belt, but we did find a thick coat of coal dust covering nearby plants (pictured). Displaced residents also reported that coal dust

and other contaminants affected their health and livelihoods.

In the PDD, the environmental benefits listed for the Singrauli area are manifold. It was outlined that the Sasan project would not only reduce CO₂ emissions, but also other major air pollutants such as suspended particulate matter, SO_x and NO_x. Furthermore, the project would contribute to preserve

natural terrain and would only remove minimal vegetation for the construction of the plant. Moreover, a green- belt would be developed not only to meet mandatory environmental requirements, but also to introduce silvi-culture practices in area of project activity, also promising villagers to be imparted training in soil-working, species selection, planting material, fertilization, protection and post-planting management.

This is the situation on the ground:

"First they displaced us and now they want us to get sick. When the wind velocity increases, you can see our houses filled with coal ash. Many of the villagers died because of the coal ash and health of children is far more devastated. They need to relocate and rehabilitate us as well as give us jobs. Elections are the only time politicians even meet us. For example, you people are listening to our stories, in a while Reliance people will come in a car to offer you money and you will no more listen to us. This is what happens usually and many journalists are bought by Reliance people that they don't write about us anymore. Around 80 percent of the people in this village do not have hand pump and hence have to go a long distance to fetch water."

- Ram Pyaare Saag, Ghidda Khaani village, residing at Siddhi Kot

"My mother died in sickness because of all the coal dust. We spent all the compensation they gave to treat her."

- Ram Naresh Prajapati, Ghidda Khaani village, residing in Siddhi Khurd

While the CDM has a dual mandate to deliver climate mitigation and sustainability benefits, the Sasan coal project fails to generate sustainable development. In India, the sustainable development criteria cover social, environmental, technological, and economic well-being. How a project will contribute to these categories and the exact actions that will be implemented to achieve the sustainable development benefits must be outlined in the sustainable development action plan.

However, there is no international sustainability assessment process under the CDM system. As it stands, to receive carbon credits under the CDM, only GHG emissions are monitored and measured. Also, there is no mandatory monitoring or reporting process. Projects therefore lack incentives to fulfil the promised sustainable development benefits.

Finally, there is no grievance mechanism in place to address negative impacts from a CDM project. This means there is no way to bring forward complaints against previously registered and implemented CDM projects, even though some projects, such as Sasan, cause significant harm to local populations and the environment.

4.5 Local stakeholder consultation

According to the information given in the PDD, stakeholders were identified by the project proponent and invited to a LSC meeting that was announced in a local Hindi language daily newspaper. The LSC was scheduled for 28 April 2008 in a community hall in the Singrauli area. Separate requests and invitations for participation were also sent out to selected stakeholders including contractors, environmental consultants, officials of the district magistrate and the media. As recorded in the PDD, the LSC meeting started with a circulation of the proposed agenda that was prepared by the project proponent and the selection of a chairman for the public hearing to ensure transparency and orderly conduct. The agenda included the presentation of the project activity, a detailed presentation on the CDM covering the CDM

project cycle, GHG emissions, the Kyoto Protocol as well as the project activity and the CDM relevance. Moreover, a question and answer session was provided, closing remark given and minutes of the meeting prepared.

The comments received have been incorporated in the PDD. The summary of the comments demonstrates a positive perception of the stakeholders on the project. The comments received were submitted by employees, local community villagers, teachers of local schools, media and press, contractors and environmental consultants. In the PDD it is stated that the comments submitted were taken into account and answered in a detailed manner, as requested. The stakeholders show a keen interest in the construction of the Sasan project and also request another such project conducted by Reliance Power due to the promised environmental benefits and opportunities to create several livelihoods.

However, taking into account that the LSC was the only means to involve and inform local residents, it is important to note that the majority of local people living in the Singrauli area are illiterate. A newspaper announcement without further orally submitted announcements thus limits the outreach to the local population affected by the project activity. Moreover, the local newspaper chosen to publicize the date and venue of the consultation has a small circulation. Therefore areas directly affected by the project activity did not receive the information about a LSC. Many interviewed locals reported that they have neither been aware about a public hearing nor about the Sasan coal power project itself before the construction has started. At the beginning of construction, locals have merely been informed that their residential and farming land is needed for a new coal power plant and have been asked to sell it to the project owner under the promise of secure employment opportunities as well as high compensation rates.

Additional invitations to the stakeholder consultation were sent out to selected people by the project owner. This might possibly have led to the positive outcome of the public hearing, as people selected by the project owner might be those in favour of the project activity or those with less opponent opinions and this may have resulted in more affirmative comments. This shows that the results of the LSC might be questionable. Even the sufficiency of a LSC in general, without further regulations which specify how to conduct such a consultation, may be open to discussion, especially considering the major impacts this project has on the local population.

In several reported cases, construction works started without any consultation of the affected population. Houses have been bulldozed and streets and community property destroyed before clearance and acquisition was completed. Without permission of the locals, personal belongings were demolished and affected people forcibly displaced to rehabilitation areas.

4.6 Secrecy and Lack of Oversight

The secrecy surrounding the coal project has hampered efforts to investigate Sasan's compliance with Ex-Im Bank's policies and the effect on local communities, particularly in relation to pollution levels, the use of pollution control technology, safety measures, labor practices, and mitigation. There are numerous documents Reliance is required to submit to Ex-Im Bank during construction and operation of Sasan, which the Bank's Environmental and Social Due Diligence Procedures and legislation require be made available on request.^{xxi} This includes environmental and social management plans, supplemental environmental reports, and related monitoring reports. Pacific Environment first requested these documents in the months after the project was approved in 2010, and the Sierra Club reinitiated the

request in March 2014. As of September 2014, the only documents supplied by Ex-Im Bank are the Greenhouse Gas Studies for the mine and power project, the ESIA for the power project, and a partial ESIA for the mine.

However, it is clear from the evidence we have collected that serious violations are taking place at the Sasan UMPP. These violations are either covered up in the reporting documents, in which case Ex-Im Bank is failing in its own due diligence to hold Reliance Energy to the Bank's standards, or Ex-Im Bank knows the violations are taking place and the Bank is failing to act. Either way, it is clear that there is a critical lack of oversight at Ex-Im.

5. Recommendations

The findings of the fact finding team clearly show that the Sasan coal power project not only failed to live up to sustainable development benefits claimed in the PDD, but that it had major impacts on the local population and the environment. This project underlines severe shortcomings of the CDM in relation to monitoring sustainable development, providing grievance mechanism in case negative impact of CDM projects occur as well as local stakeholder consultation processes.

Therefore, it is of utmost importance to implement monitoring systems in the CDM as it is impossible to follow up with individual sustainable development goals of CDM projects that have been claimed in the PDDs. The missing monitoring processes in the current CDM regulations also do not give any incentive to project owners to fulfill their promised sustainable development benefits.

Moreover, as evident from the Sasan case, CDM projects can have negative impacts on the local population and the environment. This project underlines the need for a grievance mechanism, as no system is available for individuals and affected communities when human rights are abused. Currently, there is no opportunity for civil society to raise concerns while a project is operational. It is essential that project-affected people, communities and civil society groups have the right to appeal decisions by the CDM Executive Board and more broadly the right to seek recourse when CDM project activities cause harm to communities and the environment at any point during the project cycle.

Robust grievance mechanisms both, at international as well as national and local level must be put in place to ensure that those who may be negatively impacted by CDM project activities can raise their concerns and have them addressed in a timely manner.

Furthermore, this project demonstrates that coal power project registered under the CDM cannot deliver sustainable development benefits. These projects have overall human and ecological effect. Coal is the world's most carbon intensive fossil fuel and its negative human health and environmental effects are staggering. Ongoing support for coal could lock in emissions for generations to come. Offset credits from such projects do not represent real emission reductions, as new coal power plants built under the CDM are implemented to minimize fuel costs, regardless the support of the CDM. Therefore, coal power projects are non-additional, and do not represent real emission reductions, resulting in a net increase in global GHG emissions.

Therefore, coal power projects have to be excluded from the CDM with immediate effect.

Lastly, the rules and procedures for local stakeholder consultation need to be strengthened. Although the stakeholder consultation process is a key requirement in the CDM process cycle, it has so far been treated as a mere formality. Often communities impacted by CDM projects are not informed

about CDM projects or not given an accurate account of expected impacts. In many reported cases, the local stakeholder consultation process outlined in the PDDs does not reflect the actual conduction of the consultation on the ground. Meaningful participation of local stakeholders in the project cycle is fundamental for precluding tensions that may lead to deterioration of local livelihoods.

As the Sasan project has severe impacts on the local population and the environment, it must be reviewed. We welcome the Ex-Im Bank Office of Inspector General's inspection of the Sasan UMPP. This investigation must include meetings with affected people within their own communities. Ultimately, Ex-Im Bank must use its influence to discourage any planned expansion of the project. Ex-Im Bank is responsible for working with the borrower to bring the project into compliance with the IFC Performance Standards, the Equator Principles, and the agency's environmental, social, human rights and anti-corruption policies. Should this prove impossible, it is imperative that Ex-Im Bank withdraw its support of Sasan. To do less calls into question the legitimacy of the institution and its ability to effectively monitor the use of U.S. taxpayer dollars abroad.

6. Conclusion

Reliance made many promises to communities in the ESIA documents and the PDD for the mine and power project, including providing homes with toilets, kitchens, smokeless stoves, and electricity, as well as resettlement colonies with schools, market places, and libraries.^{xxii} The Sasan coal project was supposed to improve local infrastructure and provide a reliable source of electricity.^{xxiii} The Ex-Im Bank's involvement was supposed to make the project better by requiring that environmental and social indicators be monitored and made publicly available.^{xxiv}

Instead, local residents and indigenous people, both those displaced and those affected but not relocated, have found themselves scraping by. Perversely, most of the people facing the severe effects of the Sasan UMPP cannot even access the electricity produced by the project. Meanwhile, Ex-Im Bank is withholding the monitoring documents that legislation, the agency's own policies and even the ESIA require be made publicly available. These documents could provide a starting point for addressing the needs of these communities.

Violence, disappearances, and intimidation has left local residents afraid, and by refusing to meet in the communities when conducting its minimal investigation into Sasan, Ex-Im Bank ensured that these complaints were not aired, further abdicating its responsibility.

This projects shows that a CDM project implemented without due regard for rights can be counterproductive and will not deliver its sustainable benefits. Not only did the Sasan project fail to slive up to the sustainable development benefits promised in the PDD, but also had negative impacts on the local community and the environment. It furthermore 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.

Sources:

- ⁱ "Members and Reporting," Equator Principles website: Accessed June 12, 2014. <http://www.equator-principles.com/index.php/members-reporting>
- ⁱⁱ "Guidelines for Private Sector Category A Projects," U.S. Export-Import Bank website: Accessed June 12, 2014. <http://www.exim.gov/generalbankpolicies/environment/guidelines-for-private-sector-category-a-projects.cfm>
- ⁱⁱⁱ Munshi, Anuradha, "Sasan Ultra Mega Power Project, Singrauli, Madhya Pradesh: A Brief Report," Bank Information Center Trust, Srijan Lokhit Samiti, September 2013: Page 1 to 4, Accessed June 6, 2014.
- ^{iv} Munshi, Anuradha, "Sasan Ultra Mega Power Project, Singrauli, Madhya Pradesh: A Brief Report," Bank Information Center Trust, Srijan Lokhit Samiti, September 2013: Page 3 to 4, Accessed June 6, 2014. <http://lokhitsamiti.files.wordpress.com/2013/10/sasan-report-final-dec2013.pdf>
- ^v Prashant Agrawala, Anugya Mittala, Rajiv Prakashb, Manoj Kumara & S. K. Tripathia, "Contamination of Drinking Water Due to Coal-Based Thermal Power Plants in India," <http://www.tandfonline.com/doi/abs/10.1080/15275922.2011.547437#.U-GNauNdW1g> : accessed 5 August 2014.
- ^{vi} Ghio, Nicole, "Sierra Club India Trip - Part 3 of More Perspectives," Sierra Club, April 14, 2011: Accessed June 6, 2014. <http://sierraclub.typepad.com/compass/2011/04/sierra-club-india-trip-part-3-of-more-perspectives.html>
- ^{vii} "Coalgate: CAG reports slam UPA government, BJP demands PM's resignation," Times of India, August 17, 2012: Accessed June 6, 2014. <http://timesofindia.indiatimes.com/india/Coalgate-CAG-reports-slam-UPA-government-BJP-demands-PMs-resignation/articleshow/15531616.cms>
- ^{viii} Ghio, "Sierra Club India Trip."
- ^{ix} Chakravarty, Anupam, "CAG slams government over ultra mega power projects," Down to Earth: 18 August 2012, accessed 5 August 2014. <http://www.downtoearth.org.in/content/cag-slams-government-over-ultra-mega-power-projects>
- ^x "Ex-Im Bank Fossil Fuel Financing Pushing the Past and Losing the Clean Energy Race," Pacific Environment: Accessed June 12, 2014. http://pacificenvironment.org/downloads/Ex%20Im%20Bank%20Fossil%20Fuel%20Financing%20briefing%20_10_FINAL_.pdf
- ^{xi} "Indian Sasan Coal Fired Power Project Factsheet," Pacific Environment: Accessed June 12, 2014. <http://pacificenvironment.org/downloads/Sasan%20Power%20Project%20FactsheetFinal.pdf>
- ^{xii} "Indian Sasan Coal Fired Power Project Factsheet," Pacific Environment: Accessed June 6, 2014. <http://pacificenvironment.org/downloads/Sasan%20Power%20Project%20FactsheetFinal.pdf>
- , Section 18, Environmental Matters
onmental-and-Social-Due-Diligence-Procedures-and-Guidelines.cfm
- ^{xv} ESIA Power Project: Page 16.
- ^{xvi} ESIA Power Project: Page 9-24.
- ^{xvii} The ESIA states: "Every displaced person above 60 years of age will be given pension of Rs. 1000/month. This pension will be separate from the govt. pension." ESIA Power Project: Page 16.
- ^{xviii} http://www.vakilno1.com/bareacts/indianpenalcode/indianpenalcode.html#Section_307_Attempt_to_murder
- ^{xix} "Environment & Social Impact Assessment Study: Moher & Moher Amlohri Extension Captive Coal Blocks for Sasan Ultra Mega Power Project," GIS Enabled Environment and Neo-Graphic Centre, July 2010: Page 6-21.
- ^{xx} ESIA Captive Coal Blocks: Page E-12.
- ^{xxi} "Environmental and Social Due Diligence Procedures and Guidelines June 27, 2013 as revised, December 12, 2013," U.S. Export-Import Bank: Accessed June 10, 2014. <http://www.exim.gov/generalbankpolicies/environment/Environmental-and-Social-Due-Diligence-Procedures-and-Guidelines.cfm>
- ^{xxii} ESIA Power Project: Page 16.
- ^{xxiii} ESIA Power Project: Page 9-43.
- ^{xxiv} ESIA Power Project: Page 5-6.