

June 11, 2011

Vice President Meg Taylor
Compliance Advisor/Ombudsman
International Finance Corporation
2121 Pennsylvania Ave NW
Washington DC 20433 USA
Fax: +1 202 522-7400
Email: cao-compliance@ifc.org

Dear VP Taylor,

We, members of the *Machimar Adhikar Sangharsh Sangathan* (MASS – Association for the Struggle for Fishworkers’ Rights), representative organization of the affected people, submit our complaint against the Tata Ultra Mega - Coastal Gujarat Power Limited investment, with funding from the International Finance Corporation (Project number: 25797) and other international and national banks. Our complaint concerns the adverse social and environmental harms, including the livelihood and health impacts associated with the policy violations and ill-informed design and implementation of the project.

We request you to look into the non-compliance of polices, as well as seek immediate and comprehensive measures from the IFC and its client to redress the grievances, repair the damages, and mitigate, if not prevent, further harms resulting from the flawed development of the coal-based power plant.

This complaint letter is organized as follows:

- A. Summary of our concerns
- B. Elaboration of project harms and policy violations; and
- C. Our collective calls for accountability.

A. Summary of concerns

We represent members of the communities affected by the Tata Ultra Mega coal-fired power plant. The ill-informed design and implementation, and the violation of the mandatory standards for IFC financing of this project engenders further social, environmental and economic harms largely.

We also believe that relevant IFC Performance Standards, which are mandatory requirements of the IFC to its client before and after Board approval of the project loan, have been breached. They are outlined below.

One, violation of Performance Standard 1 (Social and Environmental Assessment and Management System) has been committed. In particular, the social impact assessment that was conducted for the project is significantly flawed. Fishing communities were excluded from the list of project affected people; because we have been deliberately excluded, the damage or loss of our livelihood was overlooked. As such, the social and environmental analysis and management system of the project:

- Fails to address the immediate threat of physical displacement of fisherfolks due to the setting up of projects on/near our *bander*;
- Fails to demonstrate a feasible plan to mitigate the long-term threat of decline in fish catch due to deteriorating marine ecology caused by industrial pollution, water discharge outlet of the project and environmental destruction, such as mangrove cutting;
- Does not address the loss of fisherfolks' right of way to the fishing harbor owing to the fencing of the project premises; affected fisherfolks are burdened with travel time from 7 to 14 kilometers to get to the *bander*;
- Does not address the loss of land or open spaces used mostly by women for sun-drying fish; this is further complicated by fly ashes that fall on fish drying areas which affect the quality and edibility of fish products sold to the market;
- Fails to provide alternative route for the open channels (used for the intake and discharge of condenser cooling sea water); these channels now block access roads for affected coastal residents and pose threats to the marine ecosystem with the discharge of project waste; and
- Fails to conduct a cumulative impact assessment, which then overlooks a wider range of agricultural, marine, and other economic harms that have been impinged by the existing power plants, manufacturing industries and the special economic zones;

Two, violation of Performance Standard 3 (Pollution Prevention and Abatement) and Performance Standard 4 (Community Health, Safety and Security) has been committed. Specifically, it fails to provide measures that avoid or minimize risks to and impacts on the health and safety of the local fishing communities during the project life cycle from both routine and non-routine circumstances. We believe that the desalinization activity in the project, the fly ashes that will be emitted, and the use of ground water result in the increasing water salinity that is consumed by the affected families, chest and other bodily pains, and reduction of water table.

Three, Performance Standard 6 (Biodiversity Conservation and Sustainable Natural Resource Management) has been violated. The project fails to provide measures to protect the natural habitat for marine lives and gives no alternatives to converting or degrading such habitat. Environmental and

livelihood costs (risks) appear to far outweigh the stated benefits. Feasible measures to offset losses and mitigate ecological harms are yet to be demonstrated. Some concrete examples include the following:

- As the Mundra port and the dedicated railway line associated with the project are in place, mangroves have also been destroyed while compensation to the direct users (fishworkers) has not been provided.
- The ongoing construction of the project's outfall channel is going to discharge wastes to three fishing grounds on which the fishermen from three different villages (Tragadi, Modhva and Kotda) do their livelihood activities. The channel will not only block the creek (which is 5.5 km. long and 2.15 km wide) but also affect the fishing activities and cause the destruction of 200-250 hectares of mangrove forest. The outfall channel has already disturbed the two sand dunes since it they are in low and medium erosion zones.

Four, violation of environmental clearance issued by the Ministry of Environment and Forests (MoEF) has also been committed. The company has verbally stated that it received a notice from MoEF making amendment to the environmental clearance, allowing it to construct the once-through cooling system. Our request for the copy of that amendment from the company and IFC India office received no response until now. Apart from this, the environmental clearance for intake channel for the project has not been conducted. The intake channel is common for the project and the adjacent Adani Power Project (4620MW located within the Mundra Special Economic Zone). There are no separate clearances conducted for the intake channel. If studies were conducted, there is no publicly available information available how this was carried out.

B. Elaboration of project harms and policy violations

Background of Tata Ultra Mega - Coastal Gujarat Power Limited (CGPL) Project

Based on the information released by the IFC, we know that the Tata Mundra Project is a 4,000-megawatt (5 units of 800 MW each) power plant that is being developed by Coastal Gujarat Power Limited (CGPL) at the port city of Mundra in India's Gujarat state. In our understanding, this is India's first supercritical technology thermal power plant, which is claimed to be the most energy-efficient, coal-based thermal power plant.

Drawn from published IFC documents, a consortium of Banks including multilateral agencies and Exim Banks invests in this project which costs US \$4.14billion. Financing comprises of equity of INR 42.50 billion, External Commercial Borrowings (ECB) of up to USD 1.8 billion and Rupee Loans of up to INR 55.50 billion. The ECBs include the International Finance Corporation, the Export-Import Bank of Korea, Korea Export Insurance Corporation, the Asian Development Bank and BNP Paribas. National financial institutions (FIs) involved are SBI, the India Infrastructure Finance Company Ltd., Housing and Urban Development Corporation Ltd., Oriental Bank of Commerce, Vijaya Bank, State Bank of Bikaner & Jaipur, State Bank of Hyderabad, State Bank of Travancore and State Bank of Indore.¹

¹ <http://www.tatapower.com/media-corner/pressrelease/08apr24.aspx>

For IFC's part, it invests a loan of US \$450 million which was approved in April, 2008. A Category A project, IFC's Environmental and Social Review Summary states that the client is required to comply with seven (7) out of eight (8) Performance Standards (i.e. PS 1, 2, 3, 4, 5, 6 and 8).

The Summary of Project Information (SPI) also states:

The power plant will require 11–13 million metric tons of coal per annum (MTPA) to be imported from sources such as Australia, Indonesia, and South Africa. Existing facilities at Mundra Port can handle only about 4 million MTPA of coal. Therefore, Mundra Port and Special Economic Zone Limited, the port owner, will construct a new berth and install mechanized coal-unloading facilities and a mechanized coal-stacking and reclaiming system specifically to meet the coal import requirements of the Project and the Adani Power Project. Coal will be transported from Mundra Port to the power plant by a MGR rail system with bottom-open, bottom-release wagons.

Situating the project

The project is located in the Tundawand Village of Taluka Mundra, in the southern region of Kutch district in the state of Gujarat. IFC's summary of project information (SPI) states that "the current project plan includes a dedicated railway system from Mundra port to transport coal to the plant and two open channels to the sea for intake and discharge of condenser cooling sea water, which will be approximately 6.5 km and 4.9 km in length respectively."

Set along a block of Mundra coast, which spans 72 kilometers covering 10 coastal settlements, the project is strategically located within the Mundra Port and Special Economic Zone (MPSEZ) that the Adani group established. The Tata Mundra Project is one of the thermal power plants being built in MPSEZ. Other thermal power plants are the 4620 MW Mundra Thermal Power Station being constructed by Adani Power Limited and the 300 MW coal based thermal power plant developed by OPG Power Gujarat Pvt Ltd.

The Mundra block has population of 83,010² of which 70,000 is rural population (Government of India, Census data 2011) and has 59 villages. The main sources of occupation are agriculture, horticulture and fishing. With the construction of the project, the life and existence of the 10,000 (approximately) fishermen has been jeopardized. The project is located on the coast which has for centuries been the fishing ground for "Wagher fishing community". The tragedy is the fact that we have lost our fishing ground and on top of that we have not even been recognized as the affected community. With our very existence in danger today, in this complaint we have mentioned the violations of our rights as well as the violation of the IFC's performance standards that are applicable to the project.

Breaches and risks

Performance Standard 1 (Social and Environmental Assessment and Management System) has been violated. In particular, the social impact assessment that was conducted for the project is significantly flawed.

² http://www.censusindia.gov.in/PopulationFinder/Sub_Districts_Master.aspx?state_code=24&district_code=01

Fishing communities were excluded from the list of project affected people; with our exclusion, the damage or loss of our livelihood was overlooked.

The project is located in the Kutch district of Gujarat. It is a coastal district adjoining the Arabian Sea. It is a gulf region which has rich fishing ground. The *Navinal/Kutadi Bander (harbour)* has annual fish catch is 646 MT with the value of INR 37.9 million while *Tragadi Bander (harbour)* has annual fish catch of 2010 MT with the value of INR 96.5 million. These are the two major harbours covered by the entire project area.

The main problem with the project's Social Impact Assessment is that it claims that the project area has no habitation and no settlement; hence, it does not require any major marine resource rehabilitation or resettlement.

Paragraph 18 of the Resettlement Plan prepared by Coastal Gujarat Power Limited (CGPL) in states:

*Although the fishing potential of the Gulf of Kutch is significant, there are no local fishing activities in the coastal waters directly fronting the project area which has vast intertidal mudflats. The nearest small fishing community is at Kotdi Creek bank located outside the project area about 2.8 km from Mudhwa creek. The discharge of spent cooling water will not affect the fishing activities in the Gulf, which takes place several kilometers into the waters. The provision of a culvert over the intake channel will ensure continued access of the fishing community to the fish drying areas on the coastline.*³

We have contested this report. Fishing communities have been living here for centuries; we live along the Mundra coast for almost 9 months every year. There are 10 fishing settlements on the Mundra coast itself. The project directly encroaches on two of these settlements (Tragadi and Kutadi). These facts were never mentioned in the report. (details outlined in Box 1)

Further, the Rapid Marine Environment Impact Assessment, as quoted by IFC, states:

*“that high tidal movements, uneven topography and unusually strong currents make trawling or gill-netting for fish difficult and risky in the creeks. **No large scale commercial fishing operations prevail in these shallow creeks except for minor shore based hand-net and gill-net operations.**”*
[emphasis added]

The “minor shore based hand net and gill net activities” that the assessment refers to cannot be underestimated. They may be classified as minor but they are a traditional form of fishing called *Pagadia Fishing* practice, which has been t the primary means of livelihood for the coastal families.

Said assessment also takes too lightly the implications of the project to the approximately 3,500 fishing families living along the Kutch coast, which accounts for the longest shoreline of Gujarat. Mundra in the southern region of Kutch is the smallest block with a 72 kilometer coastline that stretches across 10 coastal settlements. Annual production the Mundra coast alone is estimated to be **nearly 12,000 MT, valued at nearly INR 608 million** (US\$ 13.5 million). Each family should have substantial revenue were to directly to the market.

³ Resettlement Planning Document, Short Resettlement Plan, Prepared by Coastal Gujarat Power Limited, September 2008; Link http://www.adb.org/Documents/Resettlement_Plans/IND/41946/41946-IND-RP.pdf

Box 1: Background of the fishing communities long settled at the Mundra coast



The invisible: Women and children involved in drying and sorting fish; Pagadiya, a traditional fishing done by foot

The inter-tidal *pagadia* fishing is a major traditional occupation in the area. More than 1,000 families of the Mundra coastal area are involved in fishing by small boat or by foot. Besides high-sea fishing, a number of people are involved in direct vending, net making & repair. Over 5000 women are involved in processing of fish.

The entire family plays a major role in fishing. Women perform important role in this livelihood: we do the sorting, drying and packaging. Women are also involved in selling fish at the local markets and through house-to-house retailing..

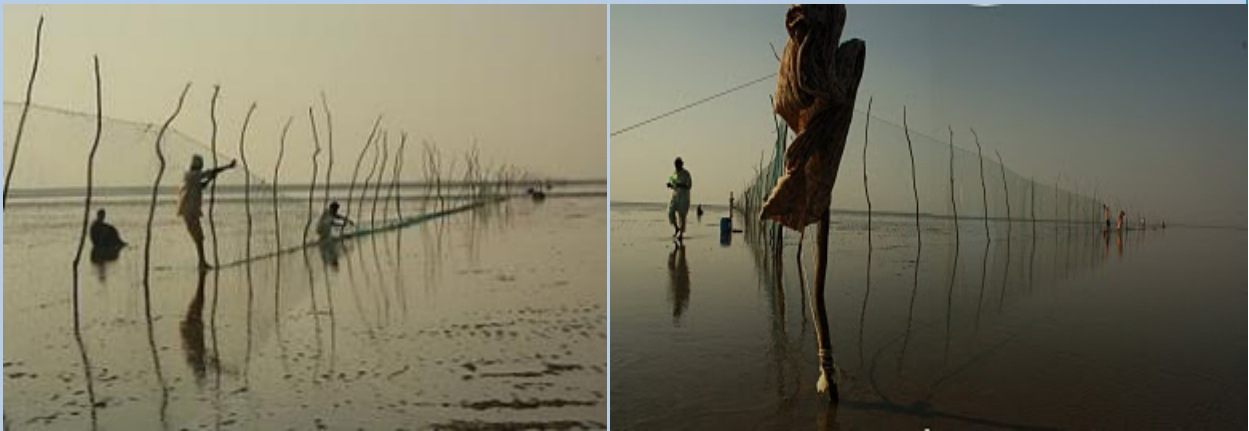
Our fish produce goes to as far as the markets in Mumbai, Assam (northeast India) and even exported to Sri Lanka, Bangladesh and Nepal.

Fisherfolks belong to the Wagher Community of Muslims. Wagher is derived from “Wah! Gher” in Kutchi, which is a commendation for the skilled fish trapping via net; it is believed to be a skill mastered by our ancestors who came from the Persian Gulf area. Our life is intricately linked with the sea and the

beach. We don't depend on anybody for our daily needs. Our people are self sufficient and independent.

Fisherfolks migrate from the main villages to the *banders* (fishing harbours), where we stay for 8-9 months in a year to do traditional fishing. There are two types of fishing – *pagadiya* (fishing on foot) and fishing by motorised boats. The *pagadiyas* (those who practice pagadiya fishing), catch fish in shallow waters. The main catch in the area is Bombay duck.

Pagadiya fishing is a basic economic affair. Fishermen walk far into the *bander* during low tide and erect nets upon sticks planted into the mud. As the high tide covers the *bander*, fish from the Arabian Sea swim onto the algae-rich area and feed there. As the water recedes during low tide, fish gets in the net. Fishermen then walk collect them.



Pagadiya fishing

This important livelihood has been threatened by the setting up of Mundra Port and SEZs owned by the Adani group (where the Tata Mundra Power plant including the imported coal, is located). This is further complicated by numerous power plants and industries being built and the implementation of the Water Front Development Plan, which contains the establishment of four major ports along the Mundra coast. **More than 1,000 fishermen families, residing in 10 fishing harbours are at risk of being directly affected, including our communities,** as we would be displaced from our fishing ground which also means the loss of our main livelihood. Women involved in drying and sorting of fish, along with men involved in fishing operations, are now being negatively impacted. When the inter-tidal zone is filled up. Also at risk is the livelihood of nearly 10,000 men, women and children whose families are engaged in net repair and fish vending. Our access to water and essential goods will also be affected.

Land Rights of Fishing Community

The *banders* are 80-kilometer away from main villages. Families from 3-4 villages settle on a *bander*. But the fisherfolks' legal right over this land is yet to be established although we have been fishing on these coasts for 200 years. There is plenty of evidence to prove that we have been fishing on these coasts for so many years. But, our right to land is yet to be legally recognized. The marine fishing settlements are transient fishing villages, which are inhabited by the fishing communities for 8-10 months in a year. The transient villages are on sand dunes or mudflats. After the fishing season the fishing communities return back to our formal villages, which are usually 40 to 50 kilometers away from these transient villages.

Usually, all the fishing households from a village migrate to a particular coastal settlement and stay together.



Picture of Juna bander near Mundra

The coastal settlements include:

No.	Harbour	Village	Taluka (Block)
1.	Randh	Bhadreshwar	Mundra
2.	Bavdi	Kukadsar	Mundra
3.	Juna	Shekhadia	Mundra
4.	Luni	Luni	Mundra
5.	Vira	Vira	Anjar
6.	Bharudiya	Bhadreshwar	Mundra
7.	Tragadi	Tragdi	Mandvi
8.	Shekhadia	Shekhadia	Mundra
9.	Zarapara	Zarapara	Mundra
10.	Navinal Kutadi	Navinal	Mundra
11.	Veera Pagadiya	Sangad and Vandi	Anjar

With the flawed social impact assessment (SIA), we now face both the imminent and present dangers.

First, the project has no safeguard plan to address the immediate threat of physical displacement due to the setting up of projects on/near our *bander*.

Second, it doesn't address the threat of long-term decline in fish catch owing to the deterioration of marine ecology caused by mangrove cutting and industrial wastes emitted by projects, including that of Tata Mundra Coal Project.

Third, the project safeguard document does not address the loss of our right of way to the fishing harbor. Earlier it was only a distance of 7 kilometers that we had to walk to reach the fishing harbor, now with the area being taken for the project we would have to travel a distance of around 14 kilometers to reach fishing harbor (*tragadi bander*). This additional distance would mean spending almost the double amount on commuting. Considering the fact that we live on the fishing harbour for almost 8 – 10 months we travel to the nearby villages often to get our necessities, this would mean a heavy burden on our pockets. With our right of way been taken away it is nearly impossible for us to continue using the fishing harbour.

Four, the project safeguard document does not address the loss of land used for drying fish. Women are involved in the work of drying fish at the settlements. The drying of fish requires large open areas with sufficient sunlight, so traditionally the fishing community has been drying fish at the fishing harbours. With the land been taken away from us for the project, we are not left with required space for dry fishing. Additionally, **fly ash from the project falling on dry fish and making it inedible for consumption.**

Fifth, the project safeguard document does not provide for alternatives. The outfall channel (250m wide) of the project will block the access road which has been used for ages for travelling. There is no alternative route being provided. The width of the outfall channel is almost that of a massive river making it impossible for the people to be able to cross it.

Sixth, the environmental assessment is deeply flawed as it has not examined the potential cumulative impacts. Performance standard 1 of IFC stipulates:

*Risks and impacts will be analyzed in the context of the project's area of influence. This area of influence encompasses, as appropriate: [...] (iii) **areas potentially impacted by cumulative impacts from further planned development of the project, any existing project or condition, and other project-related developments that are realistically** [emphasis added] defined at the time the Social and Environmental Assessment is undertaken.*

This key PS requirement is hardly taken into account. With almost 10 power plants (refer to Annex 2 for the list) operating in Kutch alone, the cumulative impacts on the environment is enormous but it is disturbing that there was no deliberate effort to assess, reflect and address the cumulative impacts before the IFC Board green-lighted the project loan. Box 2 elaborates on the need for cumulative impact assessment.

Box 2: Why cumulative impact assessment is critical?

It is highly important that an assessment of the potential and actual impacts should have been conducted because the sensitive marine ecology of the area has already been destroyed with the destruction of mangroves and coral reefs. There has been topographic change with the creeks being filled with sand to create land. Fishermen also witness that the fish production in the recent years has gone down drastically. Some of the endemic species of fish are no longer found in the area. Hazardous wastes and oil from the projects are being dumped near the coast. High saline discharge from desalination plants is being disposed into nearby shore. This has resulted in destruction of the marine ecology.

It should be understood that encroachment of the fishing settlement area and fishing ground by the industries has long been underway. The project is contributing to such encroachment but apparently, it is de-emphasized, if not avoided, in the environmental assessment. The entire 60-km inter-tidal zone in Mundra is being used by the industries, including the Tata Mundra. In addition to the existing Adani port, four new ports, backup facilities and shipyards are coming up in the Mundra coast. A multi-purpose SEZ is being established along with the port. Nearly 25,000 MW power will be generated by coal based power plants in the Mundra coast. Apart from these, industries are coming up near the National highway which passes through Mundra. See the list below.

Type of Industry ⁴	Pollution Severity	Investment (in millions) (INR)	Number of Industries
Infrastructure projects	High	1317020	7
Transportation		43210	2
Metallurgical industries	High	30740	9
Chemicals (other than fertilizer)	High	9690	4
Petrochemical & refinery	High	7910	3
Mechanical and Engineering industries	High	6860	7
Vegetable Oils And Vanaspati		1710	2
Plastics		68	3
Textile		630	1
Industrial instruments		310	1
Miscellaneous industries		160	1
Cement and gypsum products	High	150	2
Food processing		30	2
Total		1,419,090	44

List of power plants located in Kutch

No.	Project	Capacity (MW)	Location (Village, District)
1	Coastal Gujarat Power Limited	4000	Tundavad, Mundra, Kutch
2	Adani Power Limited	4620	Siraja, Mundra, Kutch
3	Kutch Power Generation Limited	3300	Bhadreshwar, Kutch

⁴ Source of data: Kutch District Industrial Cell

4	OPG Power Gujarat	300	Bhadreshwar, Kutch
5	OPG Power Gujarat	2300	Bhadreshwar, Kutch
6	CPL	1400	Tunavira, Kutch
7	Gujarat Government Under Plan	4000	Modva, Kutch
8	Nilkanth Concast	11	Mokha, Kutch
9	Philips Carbon Black Limited	20	Mokha, Kutch
10	Jindal Sopes	20	Samabhoga, Kutch
11	Adani CNG	2000	Mundra, Kutch

Considering the number of industries in the area, especially the coal based power projects, the direct and cumulative impacts are enormous. There are almost 11 thermal power projects, some operating and some under construction in the Kutch region. Four (4) of these big projects are in Mundra alone.

This is scenario on one side of the coast (on the Mundra region). Diagonally opposite to the Mundra port, where the power project is located is the Jamnagar Port (across the creek as marked in yellow in the map below).



Kutch Marine National Park and Sanctuary. (Source: Adapted from DOD-ICMAM Report, 2002)

Jamnagar district is the hub of petrochemical industries, set up in 1990s and include major chemical companies like Tata Chemicals Ltd., Reliance Petro chemicals Ltd, and Gujarat Fertilizers Ltd., among others. Oil spill and improper chemical discharge have been destroying the marine ecology in region. Now, with Mundra going the Jamnagar way and becoming the thermal power hub, the marine ecology of the gulf faces serious danger and destruction considering that the sea distance between Mundra and Jamnagar is just about 60 kilometers. Discharge from both the thermal and petrochemical industries are going into the sea.

A cumulative impact assessment is imperative in cases like these. Unfortunately, only a piecemeal impact assessment, limited to a particular project was carried out at a time, before giving clearance to the investment. This is farcical. In order to get a realistic and grounded estimate of the impacts of the projects, a cumulative impact assessment should have been carried out.

The environmental and social review summary states:

The company also conducted a cumulative air quality impact assessment of the project and the Adani Power Project (Phase I: 2 x 330MW) has been done, with the results showing that the resultant levels considering the two projects will be in compliance with the National Ambient Air Quality Standards. Adani Power Project (Phase II: 2 x 330MW+ 2 x 660MW = 1,980MW) is being proposed to start environmental assessment and the cumulative impacts of the same is likely to be reviewed by Ministry of Environment and Forests, GoI.⁵

Such finding is insufficient as it does not look into the project impact on marine ecology. Also, there are other thermal power plants in the area where their additionality to the impacts was not taken into account.

IFC also gave a go-ahead to the project that has open channels used for the intake and discharge of condenser cooling sea water. Once through cooling system technology is harmful to the marine ecology and has yet been accepted by IFC. Considering the fact that Mundra region is known for its sensitive marine ecology, it is difficult to understand that a technology which has been banned in coastal states like California in the US⁶ has been given a go head in this project.

The outfall channel (250m wide) will block a water flow from the river that passes through Mota Bhadiya village (in Mundra). This blocks the water from reaching its destination, which then increases the possibilities of flooding the village. These are serious environmental concerns that have not been taken into account.

Violation of Performance Standard 3 (Pollution Prevention and Abatement) and Performance Standard 4 (Community Health, Safety and Security)

PS 3 seeks “to avoid or minimize risks to and impacts on the health and safety of the local community during the project life cycle from both routine and non-routine circumstances”. **This very objective of PS 3 is hardly taken into account in the project design which now brings with it potential risks to the safety of community. For us, this is a violation of the Performance Standard.**

Health impacts: Owing to the increased pollution in the industrialized Mundra area, communities have faced serious health problems including chest diseases. With the **desalination of the Tata Mundra power plant, water salinity will increase which affects** community health.

⁵ IFC website

<http://www.ifc.org/ifcext/spiwebsite1.nsf/2bc34f011b50ff6e85256a550073ff1c/4fd3c63990a4cda3852576ba000e32f8?openDocument>

⁶ Issues and Environmental Impacts Associated with the Once-Through Cooling at California’s Coastal Power Plants, By California Energy Commission, June 2005. (Annex 3)

The outfall channel of the project is 250 meter wide and is located too close to the settlement. It makes the community prone to accident. Since, the fishing community has been excluded from the affected communities and our settlements not been recognized, the details of safety measures have not at all been taken into consideration. The fishworkers live with families at the settlements, which have a large number of population of children as well. The outfall channel being located there will mean threat to our lives.



Outfall Channel of the Project

The project, being very close to the bander (fishing harbours), will emit fly ash that will find its way in our food and fish kept in the open for drying. This would make food inedible.

Moreover, since our shelter is temporary (used for about 9 months in a year) fly ash will settle inside our shelter. Inhaling and exposure to flash ash pose threat to our health.

Performance Standard 6 (Biodiversity Conservation and Sustainable Natural Resource Management) has been violated.

PS 6 stipulates:

In areas of natural habitat, the client will not significantly convert or degrade such habitat, unless the following conditions are met:

- *There are no technically and financially feasible alternatives;*
- *The overall benefits of the project outweigh the costs, including those to the environment and biodiversity; and*
- *Any conversion or degradation is appropriately mitigated.*

It also states:

Mitigation measures will be designed to achieve no net loss of biodiversity where feasible, and may include a combination of actions, such as:

- *Post-operation restoration of habitats;*
- *Offset of losses through the creation of ecologically comparable area(s) that is managed for biodiversity; and*

- *Compensation to direct users of biodiversity.*

In addition, the Summary of Project Information (SPI) mentions:

As per the current project plan, coal will be transported from the port (approximately 25 km from plant) by rail. A dedicated railway line is proposed from the Mundra Port to the plant. The railway line has been considered an associated facility and an environment assessment has been carried out by the company. About 100 hectares of land will be acquired/leased from Mundra SEZ Limited, as the railway line alignment is expected to remain within MSEZ area.

Recent developments, however, show that there have been serious violations of environmental rules and regulations on the abovementioned Mundra Port, owned by the Adani group, which is used to transfer coal to the project. The Union Ministry of Environment and Forests has issued a show-cause notice to the Mundra Port and Special Economic Zone (MPSEZ) located in Mundra taluka (block) of Kutch district for violating the Coastal Regulation Zone (CZR) notification of 1991 and asked state authorities to raze constructions that flout CRZ norms.

The show-cause notice, dated 15th December 2010, was served on the following grounds:

- Large scale reclamation using dredged material is being carried out on mangrove area behind the West and North port site;
- A dredging disposal pipeline has been laid in the intertidal area carrying the dredged material to the landward side of the port to reclaim the land area on the West and North port side and which pipeline has been obstructing the tidal flow due to which the mangroves stretches on the western and northern port side have been seriously affected and at several places the mangroves have dried up; and
- At several places there has been large scale destruction of mangrove areas, especially at the northern port side abutting the dredge disposal pipeline; and
- The creeks systems and the natural flow of seawater is being obstructed by reclamations along the creeks, with destruction of mangroves being observed at several stretches.

As the Mundra Port and the dedicated railway line is associated facility of the project, the concern over violation of CZR and the destruction of mangroves needs to be taken in account. Mangroves, which are a natural habitat of marine lives have been destroyed. Compensation to the direct users (fishworkers) has not been provided. This is a very serious concern.

Box 3: The biodiversity profile of Mundra

Kutch is the largest district in India with a total area of 45,652 sq km. Nearly 30,000 sq km (or two-third) of Kutch is Rann (or salt desert) Kutch's population as per 2001 census was 15,83,225.

Kutch coast has its unique ecology teeming with biodiversity. It comprises of mangroves, coral reefs, mudflats, seaweeds, endemic and commercial fishes and other rare marine species. The mangroves of Kutch are the second largest after the Sunderbans in the mainland of India. A prominent feature of the Kutch Coast is the vast intertidal zone comprising a network of creeks, estuaries and mudflats. The Kutch coast provides a conducive environment for several sea based traditional occupations like fishing and

salt making.⁷

The coast is classified into four zones based on their intertidal and geographical characteristics. These are **Zone 1: Bhachau, Gandhidham; Zone 2: Anjar, Mundra** (within this zone is the Tata Mundra Ultra Mega power plant); **Zone 3: Mandvi, Abdasa; and Zone 4: Abdasa from Jakhau.**

Mundra: The fish workers lifeline

The 5 km long Anjar-Mundra intertidal zone also has several creeks with 2,096 hectares of mangroves. Mangroves support fish breeding and their early growth before migrating to the sea. The intertidal area has strategic locations where traditional fishing can be carried out. Ten years ago, scientists discovered patches of live corals off the Mundra coast. Because of the abundance of mangroves and associated biodiversity, scientists recommended that the Mundra coast be demarcated as a national marine park and sanctuary.

In the 1998 government statistics, the Mundra Taluk block had an estimated 600 hectares of mangroves but destruction mainly through forest clearance was drastic, the mangrove cover had shrunk to 300 hectares in 1999. By 2008, the mangrove cover was estimated to be at a meager of 25 hectares⁸. Mangrove clearance means destroying fish grounds, prawn shelter and other species dependent on it. It leads to declining fish catch and other marine resources. It is estimated that the total loss from the marine economy is to the tune of several million rupees a year. As mangroves serve as a buffer against tsunamis, cyclones, and other inter-tidal occasions, Mundra becomes vulnerable to natural disaster.

In the 1998 government statistics, the Mundra Taluk block had an estimated 600 hectares of mangroves but destruction mainly through forest clearance was drastic, the mangrove cover had shrunk to 300 hectares in 1999. By 2008, the mangrove cover was estimated to be at a meager of 25 hectares

An important feature of the Mundra Coast is its vast intertidal zone comprising of a network of creeks, estuaries and mudflats. The intertidal zone is unique and very important because the fishermen can land their boats on these creeks and also keep them there safe from strong winds and currents. The creeks also form a natural drainage system; if disrupted, unseasonal flooding could occur.

The Mundra-Anjar zone is also a major site for salt production; its 1,720 hectares of salt beds contribute roughly one tenth of the total production in Kutch. These are a major source of livelihood and employment for nearly 15,000 persons who produce around 600 thousand MT annually which is valued at close to INR 300 million.⁹

With such rare ecological diversity, a clear safeguard measure is imperative. The Performance Standard 6 states:

⁷ Geographical Information System for the Gulf of Kutch: Integrated Coastal and Marine Area Management, Department of Ocean Development, Government of India (May 2002)

⁸ http://mangroveactionproject.org/news/current_headlines/impacts-of-mpsezi-mundra-port-and-sez-limited-on-environment-and-people-of-gulf-of-kutch/

⁹ Based on data provided by Bhadreshwar Salt Association

In circumstances where a proposed project is located within a legally protected area, the client, in addition to the applicable requirements of paragraph 10 above, will meet the following requirements:

- *Act in a manner consistent with defined protected area management plans;*
- *Consult protected area sponsors and managers, local communities, and other key stakeholders on the proposed project; and*
- *Implement additional programs, as appropriate, to promote and enhance the conservation aims of the protected area.*

These mandatory requirements have been breached since the Coastal Regulations Zone Act of Govt of India¹⁰ have been flouted and clearances have not been taken.

The ongoing construction of the project's outfall channel is going to discharge wastes to three fishing grounds on which the fishermen from three different villages (Tragadi, Modhva and Kotda) do the livelihood activities. The width of the outfall channel is approximately 250 meters, which is almost the breadth of a river. The channel will block the creek (which is 5.5 km. long and 2.15 km wide). It will affect not only the fishing activities but also the 200-250 hectares of mangrove forest. The outfall channel has already disturbed the two sand dunes since it is low and medium erosion zone.

Paragraph 7 of Performance Standard 6 says that in:

...the areas of natural habitat, the client will not significantly convert or degrade such habitat, unless there are no technically and financially feasible alternatives or the overall benefits of the project outweigh the costs, including those to the environment and biodiversity or any conversion or degradation is appropriately mitigated.

There are workable alternatives that could have been considered but apparently, they were not carefully taken into account. This is being violated. As such, the natural habitat has been destroyed (cleared) and converted into a dumping ground of wastes.

The environmental clearance issued by the Ministry of Environment and Forests has also been violated.

The construction of an open cooling channel that is being constructed at Mundra for the project is a clear violation of the environmental clearance given by Ministry of Environment and Forests (MoEF). The permission was on condition that requires them to “install a Closed Cycle Cooling System with cooling towers” (Annexure 1)¹¹.

The IFC website mentions “The project envisages a once through sea water cooling system with designed seawater intake capacity of 620,000 m3/hr (including the amount required for desalination plant) and 594,200 m3/hr of thermal discharge with elevated temperature.”¹²

¹⁰ <http://envfor.nic.in/legis/crz/crznew.html>

¹¹ “(xviii) Closed Cycle Cooling System with cooling towers shall be adopted. The treated effluents shall conform to the prescribed standards before discharge”, Environmental Clearance, Ministry of Environment and Forests

¹²

<http://www.ifc.org/ifcext/spiwebsite1.nsf/2bc34f011b50ff6e85256a550073ff1c/4fd3c63990a4cda3852576ba000e32f8?opendocument>

The company has verbally stated that it received a notice from MoEF making amendment to the earlier environmental clearance, allowing it to construct the once-through open cooling system. Our request for the copy of that amendment from the company and IFC India office (who informed us about the amendment) received no response until now.

It appears to us that there is contradiction between the environmental clearance and the SPI in IFC website in terms of the technology being used. The technology (once through cooling system) is outdated and harmful to the marine ecology as it has been in many countries. Yet, the IFC did not reconsider its use. Many researches show the negative impact of this technology on marine life. A study conducted by the California Energy Commission on environmental impacts associated with this technology in California's coastal power plants found that 'once-through cooling is affordable and effective, but it kills marine life' (Annexure 3).

Some of the specific harmful impacts of closed cycle cooling system cited in the study include:

Once-through systems cause a double damage impact to the water source they draw upon. Marine life taken into the system is likely to be killed by the water pump impellers or when passing through the heat exchange system. The discharged water is significantly hotter than the source water, causing "hot spots" in that body of water. These "hot spots" fluctuate depending on the cooling system's demand (including elimination of the hot spot during plant shutdowns) and represent an anomaly to the natural balance of the body of water¹³

Apart from this, the environmental clearance for intake channel for the project has not been conducted. The intake channel is common for the project and the adjacent Adani Power Project (4620MW located within the Mundra Special economic Zone). There are no separate clearances conducted for the intake channel. If studies were conducted, there is no publicly available information available how this was carried out.

C. Our collective calls for accountability

We submit this complaint to CAO as formal expression of our collective struggle with the project's flawed development goal, design, implementation and the risks it poses to our people, community, livelihood and our ecology. We are seeking for independent investigation into the violations of Performance Standards.

We demand:

- That our concerns over the loss of our livelihood and adverse impacts to our health and environment be redressed;
- That punitive measures be adopted towards the violators of the Performance Standards;
- That direct, adequate compensation and proper livelihood restoration plan be presented and to and agreed upon by us in light of the loss of our livelihood, other properties and the destruction of our economic and environmental resources. That during the course of investigation, the project work should be put to a halt, minimize further impacts. Letting the work continue

¹³ http://www.ehow.com/list_6828398_pros-once_through-cooling-water-systems.html#ixzz1E0Xcdqzt

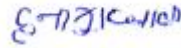
without addressing the serious issues raised above would further the irreversible damage that has been cause to our environment and our livelihood.

We look forward for your timely action.

Signed:




Aminaben Arun Gadh
Vice President, Machimar Adhikar Sangharsh
Sangathan
Village: Vandi, Taluka: Anjar



Hanifiaben Juma Reliya
Vilalge Luni, Taluka, Mundra



Jaffar Allaiya Manjaliya
Village: Vandi, Taluka: Anjar



Harun Salemamad Kara
Village: Badreshwar, Taluka: Mundra