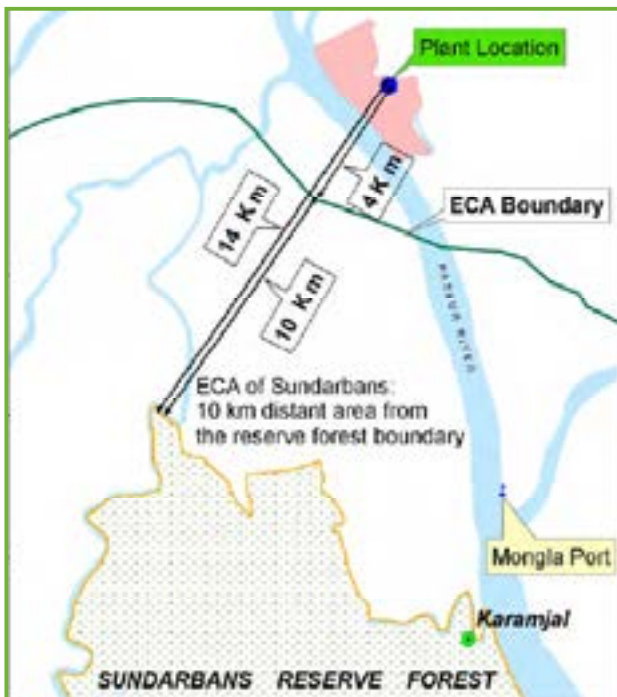


Why Sundarban needs local, national and global action against projects of mass destruction?

How Sundarban is under big attack by corporate greed?

Why we need to raise voice against Rampal and Orion coal fired power plants to save Sundrabans?



Distance of Rampal power Plant from Sundarban is 14 km but according to the EIA guideline of Indian Ministry of environment and forest, 2010: Locations of thermal power stations are avoided within 25 km of the outer periphery of the ecologically sensitive areas.

- Sundarban means the largest mangrove forest.
- Sundarban means the World Heritage Site.
- Sundarban means livelihood of a million poor people.
- Sundarban means a natural protection for 40 million people against natural disaster.
- Sundarban means a big shelter against climate change.

BUT

In the name of power generation Bangladesh Government allowed Indian NTPC, and Bangladesh Orion to build big coal fired power plants and inviting more commercial projects.

Those are going to destroy Sundarban

WE KNOW

There are many alternatives for power generation but there is no alternative to Sundarban

Therefore we demand:

- Cancel NTPC and Orion power plant.
- Stop all projects harmful for Sundarban

Join Resistance
Protest from Everywhere

Features of Rampal Coal Based Thermal Power Plant

- BPDB (Bangladesh) and NTPC (India) signed Joint Venture Agreement on 29 January 2012 and formed Bangladesh-India Friendship Power Company Ltd(BIFPCL).
- Cost: Tk 145.84 billion (US\$1.82 billion)
- PDB 15%, NTPC 15%, Loan 70%
- 1834 Acre Land acquisition order on 27 December 2010
- EIA approved on 05.08.2013.
- Tender floated on 12.04.2015
- Bharat Heavy Electricals Limited (BHEL) has been selected as the engineering, procurement and construction (EPC) contractor.

Impacts During Construction Stage

- Generation of Dust from land filled area and the area under land development process.
- Solid waste and waste water discharged to the river would cause water pollution.
- Navigational activities for transporting construction materials through the Sundarbans and dredging activities would create disturbance to fish migration.
- Generation of Noise from Dredgers and sand carrying vessels involved in land filling activities and from Excavator and other machineries involved in land development.
- Generation of Greenhouse gases, SO_x, NO_x from Generators, dredgers, sand carrying vessels.

Impacts during Operational stage-1

- Impacts of Toxic Sulfur and Nitrogen Gases: Emission of 52,000 tons of SO₂ and 31,000 tons of NO₂ per year.
- Fayette Power Plant emission has been 30,000 tons of SO₂ per year.

Result: Plant community of 48 km stretch of Highway 21 of Texas, USA, devastated.

* Source: http://www.huffingtonpost.com/2010/12/28/farmers-pecan-growers-say_n_801945.html

Impacts during Operational stage-2

○ Water withdrawal from River Passur:

- Water will be drawn at the rate of 9,150 m³/hour and discharged at a rate of 5,150 m³/hour. The impact of this withdrawal and discharge on hydrological characteristics of the river like salinity front, salinity level, sedimentation pattern, flooding, tidal behavior.



○ **Noise Pollution:**

- From Coal power plant itself
- From transportation, loading and unloading of coal

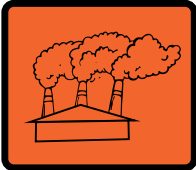


Noise pollution will endanger wild life

○ **Pollution from Ash:**

- Annually, around 0.94 million tons of ash will be generated from the plant of which 80% shall be dry fly ash and the rest 20% shall be bottom ash.

Toxic ash and smoke from burnt coal will pollute the air and endanger plant and wild life



- This ash will contain many heavy metals, including arsenic, lead, mercury, nickel, vanadium, beryllium, barium, cadmium, chromium, selenium and, radium, which are dangerous if released into environment.



Land filling with toxic ash will contaminate water and degrade soil fertility which will destroy the forest



Impacts during Operational stage-3

- Location of a 25 Acre Ash pond beside River Passur is a major concern.

Recent Disasters Related to Ash Pond

- Duke Energy Dan River Coal Ash Spill, Feb 2012: 50,000 to 82,000 tons of coal ash, with 27 million gallons of contaminated water released into the Dan River near Eden, North Carolina
source: <http://www.northcarolinahealthnews.org/dan-river-coal-ash-spill-timeline>
- Kingston Fossil Plant coal fly ash slurry spill, Dec, 2008: 1.1 billion US gallons (4,200,000 m3) of coal fly ash slurry released in to Emory River and Clinch River
source: <https://www.scienceleadership.org/media/open/6998>



Impacts during Operational stage-4

- Different types of wastes like the residue of the coal, ballast water, bilge water, oil, lubricant, garbage, domestic waste, food and kitchen waste, slurry of sea water, sewage, etc produced from ships will be discharged to the river system.
- Noise from operation of coal carrying vessels, coal unloading and handling system.
- Water column may be polluted due to oil spillage, coal spillage, waste discharge, discharge of ballast and bilge water etc.
- Wave from coal carrying vessels, plying along the Passur will cause shore erosion
- Ship-to-ship transfer activities, shipping and barging activities at Akram point will generate noise and discharge coal dust to environment

Image: Dust generation due to coal load-unload



Cumulative Impacts of "Development" Projects

- Land grabbing increased in and around Sundarbans Area.
- Private entrepreneurs setting up ship yards, RMG and other industries.
- Orion Power has acquired 200 acres of land near Sundarbans to build a 565 MW coal based thermal power plant.



Image: land grab





565 MW Orion Coal Power Plant

- 2*282.5=565 MW IPP
- Land- 200 acre
- Land filled without EIA
- Distance from Sundarbans is less than 12 km

Pollution from 565 MW Orion Power Plant

- | | |
|--|---|
| ○ 22,000 tons of SO ₂ per year | ○ 252 pounds of Arsenic each year |
| ○ 13,000 tons of NO _x per year | ○ 128 pounds of lead and other toxic heavy metals |
| ○ 556 tons of small airborne particles each year | ○ 3,21,000 tons of fly Ash |
| ○ 188 pounds of mercury each year | ○ 85,600 tons of bottom ash |



Combined Pollution from 1320 MW Rampal & 565 MW Orion Power Plant

- | | |
|---|---|
| ○ 74,000 tons of SO ₂ per year | ○ 842 pounds of Arsenic each year |
| ○ 44,000 tons of NO _x per year | ○ 428 pounds of lead and other toxic heavy metals |
| ○ 1856 tons of small airborne particles each year | ○ 11,00,000 tons of fly Ash |
| ○ 628 pounds of mercury each year | ○ 3,00,000 tons of bottom ash |

Recently BD government has allocated fund for land filling for another 1320 MW power plant. There will be more pollution, if 2640 MW power plant is built at Rampal instead of 1320 MW.

UNESCO's concern on Rampal Power Plant and its impact on the Sundarbans

- On 22 May 2013, the UNESCO World Heritage Centre wrote a letter to Bangladesh expressing concern about Rampal Power plant.
- On 12 December 2013, UNESCO sent its response on EIA to Bangladesh Govt.
- The World Heritage Centre sent a letter to Bangladesh on 11 April 2014 expressing concern on "an additional coal-fired power plant(i.e Orion Coal Power Plant) in the same location".
- UNESCO in its 38th session- Notes with concern that the indirect impacts on the property of the construction of a coal fired power plant at Khulna do not appear to have been assessed, considers that increased navigation on the Pashur River and the required dredging are likely to have a significant adverse impact on the property's Outstanding Universal Value (OUV).
- Lastly UNESCO in its 39th Session-
 - Notes with concern that the indirect impacts on the property of the construction of a coal fired power plant at Khulna do not appear to have been assessed, considers that increased navigation on the Pashur River and the required dredging are likely to have a significant adverse impact on the property's Outstanding Universal Value (OUV)...
 - Also notes with concern the reports of further infrastructure and industrial development downstream of the power plant, and of plans for the construction of an additional coal fired power plant in the same location, and also requests the State Party to undertake a comprehensive Strategic Environmental Assessment (SEA) to ensure that cumulative impacts of developments in the Sundarbans are adequately assessed, including in relation to the OUV of the property;
 - Requests furthermore the State Party to invite a joint World Heritage Centre/IUCN Reactive Monitoring mission to the property to review the state of conservation of the property, and the potential impacts of the thermal power plant development and dredging of Pashur River.

Source: <http://whc.unesco.org/en/soc/3235>

Letter from the Ramsar Secretariat

A letter from the secretariat of the Ramsar Convention on Wetlands was sent to the Department of Environment and Forests of Bangladesh on the 22nd of June 2011. The Letter expressed deep concerns and seek explanation of the following three matters:

- Regarding the coal power-plant near Sundarbans
- Regarding the loading and unloading of coal at Akram point in the Sundarbans
- Regarding building a ship-yard and silos within the Sundarbans conservation area.

Objection of the Department of Forests:

The chief conservationist Ishtiaque Uddin Khan, in a letter dated the 29th of September, 2011, told the Ministry of Forests:

"The chief conservationist expresses the opinion that if a coal-based power-plant is constructed near the Sundarbans area of Khulna it will harm the biodiversity of the Sundarbans. The Ministry is thus requested to reconsider the construction a coal-based power plant on account of the importance of preserving the biodiversity of the Sundarbans Ramsar Site (World Heritage Site)."



Early symptom of the upcoming disaster-1

- Oil spill incident on 9 Dec 2014 in Shella River inside sundarbans and subsequent spreading of oil to 350 sq km of sundarbans shows the danger of carrying coal for Rampal Coal power plant through Sundarbans.
- Vessel traffic in waterways through Sundarbans only banned temporarily which resumed on 7 Jan with condition that no oil carrying vessel will be allowed
- Permission of oil tanker granted again on 24 April 2015.
- A Cargo vessel, carrying 670 tones of fertilizers, sank in River Bhola, inside Sundarbans on 3 May 2015
- Same story repeated: No containment, No Rescue, No coordination.

Early symptom of the upcoming disaster-2

Installing water spraying system and fences to control dusts, use efficient machineries to control noise and reduce generation of SOX and NOX were not done as required by Environmental and Social Management System Action Plan.

As a result, conventional dredgers used in land filling were producing huge noise and black smoke was noticed from the sand carrying vessels.

These observations have been taken from Annual Monitoring Report prepared for Bangladesh-India Friendship Power Company Ltd by CEGIS.

Sundarbans may not be destroyed for these relatively minor pollutions during construction phase, but these are early symptoms of what actually would happen to Sundarbans if the Power Plant becomes operational.

Why we are concerned about Ruppur Nuclear Power plant as well?

- ⚠ High density of population in the area.
- ⚠ Total dependence on foreign company.
- ⚠ Adverse impact on Padma, lifeline of Bangladesh, already affected by Farakka barrage.
- ⚠ Poor preparation of Nuclear waste management.
- ⚠ Poor infrastructure and ability to ensure safety and security.
- ⚠ Lack of transparency in the contract, financing and high dependence on loan.

RESTRUCTURING ENERGY SECTOR: OUR DEMANDS

We demand to cancel all costly, environmentally disastrous, corrupt projects in power sector and implement 7 point demands to solve power crisis. Those include:

- Ensure peoples ownership of natural resources. Stop privatization of common property.
- Cancel immunity to power projects, take actions against officials, consultants and politicians responsible for taking disastrous path of 'development'.
- Prohibit export of natural resources for its necessary utilization.
- Stop signing production sharing contracts to ensure utilization of natural gas for power generation. Reclaim compensation (nearly US\$5 billion) from Chevron and NIKO for blowouts.
- Implement Phulbari agreement including banning open pit mining and oust GCM.
- Improve national capability for energy security and sustainable development.
- Develop human resources and institutions to make renewable energy as mainstream source of power and energy.

We hope people from all strata will unite to save natural resources including Sundarbans and raise their voice:

**Cancel RAMPAL and ORION Coal Power Project
Stop Illegal Land Grabbing**

**Scrap Policies and Contracts against National Interest.
Punish the Corrupt Officials, Consultants and Politicians.**

**Ensure Utilization of Natural Resources in
Peoples Interest**

**Implement 7 points Demand of National
Committee to Solve Energy Crisis**

Implement Phulbari Agreement Completely

**Improve national capability for energy security and
sustainable development.**

National Committee to Protect Oil-Gas-Mineral Resource, Power and Port, Bangladesh