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Bitter Truth
Proposed Power Plant

Threat to ecology of Sundarbans

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THE World Heritage Convention has the responsibility of protecting outstanding natural and cultural areas that form a part of the heritage of all mankind. Bangladesh became a party to the Convention in 1983. The Convention ruled favourably on the nomination of a part of the Sundarbans as a World Heritage Site.

Environmentalists and nature lovers felt deeply disturbed when they learnt about setting up of a 1,320 MW coal fired power plant at Rampal just 14 km away from the Sundarbans.

Coal-based power plants create serious environmental pollution. No country would allow them to be set up even within 20 to 25 km distance from either forest or agricultural or residential area. How could the Environmental Impact Assessment (EIA) group approve it even after acknowledging the dangers it held? The area is linked with the Sundarbans by a network of rivers and canals and environmental degradation of this area caused by the power plant will definitely spread to the Sundarbans region.

The Sundarbans region is an 'ecologically critical area.' EIA, in its impact assessment report, admits that the 142 tons of sulphur dioxide and 85 tons of nitrogen dioxide that will be emitted daily from the plant will increase the concentration of Sulphur Dioxide (SO_2) and Nitrogen Dioxide (NO_2) in the air near the Sundarbans. Even after admitting that so much emission will be destructive for the whole environment of the Sundabans region, they take the defence that on a 24 hour basis 53.4 microgram of SO_2 per cubic metre does not exceed the 80 microgram per cubic metre, which is an allowable limit set by the MoEF for residential and rural areas.

The argument is confusing because the mangrove forest is not a residential area by any reasoning, criteria and consideration. In the same vein, it claims that although the concentration of nitrogen dioxide would increase three-fold from 16 microgram per cubic metre to 51 microgram per cubic metre, it is still safer and much below the Environmental Conservation Rule 1997 (ECR). Actually, the emission standards set for ecologically sensitive area is 30 microgram per cubic metre both for SO_2 and NO_2, which is much below the resultant concentrations that are likely to be released from the plant. It defies logic to treat the Sundarbans, the largest mangrove forest, a Ramsar site and Unesco World Heritage Site, as a residential area instead of an ecologically critical and sensitive area.

The Fayette coal-fired power plant constructed in 1979 in Texas, USA, with an initial generation capacity 1,230 MW, which was later raised to 1,641 MW, has started to take its toll now. At that time Environmental Impact Statement (EIS) in Texas region had ensured that there would be no adverse impacts on the nearby pecan orchards and other vegetation. Annual emission of Fayette plant comes to about 30,000 tons—a daily average of 82 tons. In December 2010, plant experts,

scientists, and environmentalists stated that SO2 pollution from Fayette coal-fired power plants is slowly killing vegetation across Texas. Yielding to public demand, Texas Power Authority has taken up a plan to shut down the plant before 2020.

If annual emission of 30 thousand tons of SO2 from Fayette power plant could destroy vegetation as far away as 48 km, then what might be the impact of 52 thousand tons per year of SO2 emission from the Rampal plant on the vegetation of the Sundarbans, which is just 14 km away from the proposed plant site? Evidently, the emission from the plant will have a devastating impact on the whole mangrove food chain.

Unesco's evaluation committee also said that the forest supports a wide range of flora and fauna, including the Bengal Tiger, and is a significant example of processes monsoon rain, delta formation, tidal influence and plant colonisation.

Citizens and environmentalists have to be worried about the proposed plant when the forest is already facing threats from pollution, lack of monitoring, ignorance, poaching, lack of implementation of laws, and illegal wild life trade.

As far as is known from sources close to the planners of the power plant, it is likely to burn 4.75 million tonnes of coal annually and some 3 lakh tonnes of ashes and 5 lakh tonnes of sludge or liquid waste would be produced. It would also produce a good amount of carbon dioxide — key factor for global warming — and some other toxic gases and airborne particles, according to Union of Concerned Scientists, a USA-based group.

The project will use deep tube wells for washing coal — drawing around 25,000 cubic metres of water every day — which will push the ground water level down. Moreover, it will discharge used hot water — treated or untreated — into the river, threatening the availability of drinking water.

The ground water and Passur river water will also be polluted by the huge amount of waste produced by burning coal. The liquid waste contains hazardous arsenic, mercury, cadmium and chromium.

How can the government set up the plant so close to the Sundarbans when EIA report says that it would devastate shrimp farms, inter-tidal areas, and tidal creeks which are used as fish habitat?

Construction work including land filling by dredging, sand lifting, site clearance will have impact on open water fish habitats and fish diversity, polluting rivers Passur and Shela and inter-tidal areas due to oil and chemical spillage. The EIA report expresses concern that if navigational spillages, noise, speed, lighting, and waste disposal rules are not properly maintained they may impact the Sundarbans ecosystems.

If, for example, the leaves of kewra trees are affected due to SO2, the effect will not remain confined just to kewra trees. Spotted deer of the Sundarbans eat kewra leaves, so the impact on kewra trees would spill over to the deer population via the food chain, which in turn would have resultant effect on Royal Bengal Tigers as well.

Water, at the rate of 9,150 cubic metre per hour, will be drawn from the Passur river for operating the project, and 5,150 cubic metre per hour will be discharged into the river. The impact of this withdrawal and discharge has not been studied, because the amount of water to be withdrawn will be less than 1% of the lowest flow condition of the river Passur, ignoring the climatic change upheaval and Farakka Barrage effect that has reduced the flow pattern in all the rivers of Bangladesh.

The most salient feature about coal-based thermal power plants is that zero-discharge policy is followed because no amount of treatment can ensure that original water quality will remain intact. NTPC, which will build the power plant, are maintaining this standard while building the 1,320 MW coal-based thermal power plant at Chattisgarh in India.

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