



A review on the socio-economic impact of Rampal power plant on local women of Sundarban

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ARTICLE INFO

Article history

Accepted 10 August 2019
Online release 23 September 2019

Keywords

Rampal Power Plant
Environment
Development
Local Women

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ABSTRACT

Women in Sundarban already live in margins due to their socio-economic status in the society of Sundarban. Unfriendly environment adds to their sufferings. In this situation, the creation of Rampal power plant, a project which will degrade the economy and environment of Sundarban can possibly change the situation of women. Thus this review article is dedicated to find out how the establishment of Rampal will affect the socioeconomic status of women. The research is conducted through analyzing secondary data. The findings from this study are that the execution of this power plant will increase domestic violence, create unemployment and degrade the health condition of women. The paper also suggests policies which can be undertaken by Bangladesh and Indian government, NGOs and donor organizations to improve their situation.

INTRODUCTION

The Rampal power plant project is an issue that faced massive protest from not only youths and scholars, but also from people of higher and lower class economy. It is a coal fired power station which is the result of partnership between National Thermal Power Corporation owned by India and Bangladesh Power Development Board owned by Bangladesh Government. The proposed area for executing this project is 1834 acres of land which is located near 14 kilometers north to the world's largest Mangrove forest; Sundarban. Majority of these 1834 acres of land is previously used for agriculture and shrimp cultivation (Water keeper 2017). Hence, building a power plant in that area will surely create unemployment. Although this unemployment problem is thought to be subsidized by the job sectors created in the power plant itself, the environmental problem created by this project has no remedy to it. Apart from the toxic fumes released by the power plant itself, Bangladesh needs to import coal for this project (Ref). Environmentalists claim, the coal-carrying

vehicles are not often covered and they scatter large amounts of fly ash, coal dust, sulfur and other toxic chemicals. Further, environment and ecology experts predict that the plant will release various toxic gases such as carbon monoxide, oxides of nitrogen and sulphur dioxide, thereby putting the surrounding areas and, most importantly, Sundarban at grave risk (BPDB 2013). The impacts of these environmental and economic problems have received significant attentions. But one of the crucial points of this whole project remained unnoticed; that is, the impact of the construction of Rampal power plant on the local women of Sundarban. Most of the inhabitants of Sundarban live a poverty stricken life. Therefore, women in Sundarban do not only have to do the household chores but also, they have to contribute in economic activities as well. These economic activities include, contribution in shrimp cultivation and tiger spotting. Women also work in agro-fishery and forestry, shrimp processing at export-oriented plants, cleaning weeds and grass at agro-fishery mud beds,

conserving and growing homesteads, and rearing livestock.

Women in the island of Sundarbans are still subjected to domestic violence. Lack of education and skills make them unable to be equipped with the recent technological innovations (Mizanur 2017, Chindarkar 2012). Thus they still face backlash in the road to empowerment. Moreover, the current economic conditions and environmental elements i.e. saltwater and poverty of people living in Sundarbans add to this vulnerability. Given the above mentioned crucial socio-economic roles of women in the islands of Sundarbans, it is essential to look into how the execution of the project Rampal is going to affect them. This paper argues that, the economic and environmental hazard created by the establishment of Rampal power plant will lead to the degradation of economic, health and social status of women. These issues will be the result of increased domestic violence and lack of employment and inaccessibility to clean drinking water.

Impact of Rampal

As the issue of Rampal has caught attention worldwide, the existing covers detailed information regarding environmental, economic and health aspects of Rampal power plant in Sundarban. Researchers have agreed that Rampal power plant will vastly impact the environmental balance of Sundarban. Establishment of this power plant can disturb the water balance of Sundarbans which will pollute the water and air around it. Furthermore, the construction of the site requires raising the elevation by 5 meter. During natural calamities, such as heavy rainfall, flood, cyclone, the low land areas will get waterlogged causing trouble to the people. Moreover in an average year, a typical coal plant generates approximately 3,700,000 tons of carbon dioxide (CO₂), 10,200 tons of nitrogen oxide (NO₂), equivalent to emission from half a million old late-model cars; 720 tons of carbon monoxide (CO), 220 tons of hydrocarbons, 170 pounds of mercury, 225 pounds of arsenic, 114 pounds of lead, 4 pounds of cadmium, other toxic heavy metals, and trace amounts of uranium⁴ (Nargis 2016). Environmental impact of coal based power plant of Rampal on the Sundarban and surrounding

areas (Chowdhury 2012) confirms the above mentioned data of carbon dioxide emission which comes from burning coal is a leading cause of smog, acid rain, global warming, and air toxics.

Chowdhury (2012) claimed that the environmental problem due to construction of Rampal will also create health problem to the local inhabitants of this area they stated that 10,000 tons of sulfur dioxide (SO₂) which causes acid rain that damages forests, lakes, and buildings, and forms small airborne particles that can penetrate deep into lungs. Also those 500 tons of air borne particles will be produced resulting into bronchitis, aggravated asthma, and premature death to local people. It will also hamper the eyesight. Additionally, the creation of NO₂ will initiate the formation of ozone which hampers lung tissues, increasing chances of the causation of respiratory illness. Apart from the pollutions caused by the power plant, there are other factors which will contribute to significant damage to the health of animals and humans.

The existing literature confirms that the establishment of Rampal will also have striking impact on the economy of Sundarban. Environmental Impact Assessment (EIA) informs that the 1834 acres of land which have been acquired forcefully from the local inhabitants were previously used for economic activities such as agriculture or shrimp cultivation. Among the acquired area, 62353 tons of rice, about 140461 tons of non-rice crops were produced previously. The livestock and poultry population per households in the project and study area has been estimated to comprise of 4 and 3 cattle, 3 and 2 buffaloes, 4 and 4 goats, 1 and 1 sheep, 5 and 5 duck and 7 and 6 chicken respectively. Again, the area has diversified water quality which is suitable for the breeding of both fresh water fishes and marine water fishes. The total fish production from this area is about 5218.66 M. tons. EIA further asserts that open water fisheries habitats like rivers (Passur, Maidara), khals and inter-tidal area may be affected due to dredging, traffic movements, and oil and chemical spilling. Dredging activities may also alter the habitat of the bottom feeder fish for short period.

Not much study has been done about the local women's socio-economic and health situations. The existing literature suggests that women in Sundarban are subjected to domestic violence, lack of education and poor health. Mr. Mizanur Rahman (2017) notifies that due to the socio-economic factors in the society of Sundarban, women can hardly move out of their house. Furthermore, they do not have access to education. Most of their time is spent to take care of their children and family and also they suffer from malnutrition. A local NGO, "Nakshikatha Mohila Unnayan Shangstha" added significant detail in this context that women are solely responsible for managing drinking water. As most of the water resources of Sunderban are saline, they have to go a long way to search for clean drinkable water. Most of their time of the day is actually spend in the journey towards the water resource. Thus they get less time to do other household chores which results into domestic violence. As women spend most of their time in salty water for cultivating shrimp and other purposes, they suffer from skin problem (Nusrat 2016).

Rampal power plant is a recent issue which caught attention. In spite of that the existing literature provides a detailed account of how the ashes originated from the power plant will create a negative impact on the environment and the health. The economic and social effects created by Rampal will have gender based implications as well. That is, men and women will not face the same impacts which the existing literature fails to address. This paper will fulfill this gap by analyzing how the economic and environmental problems mentioned above will affect women.

METHODOLOGY

The review article is written in qualitative method through analyzing secondary data (i.e books, journals, scholarly articles). Newspaper articles are also used as evidences. Selection of these data has been done through three steps. Firstly, the social, economic status and health related issues of the women in Sundarbans were identified through reviewing literature. Secondly, the impacts of constructing the Rampal power plant are identified. Lastly, data about how aforementioned

factors have affected women in similar scenarios are used to draw conclusions.

ANALYSIS

Although it is argued that the power plant will create additional job opportunities in Sundarban area, establishing Rampal power plant is more likely to reduce women's economic participation (Mizanur 2017) because of devastation agro-fishery and forestry, shrimp processing at export-oriented plants, cleaning weeds and grass at agro-fishery mud beds, conserving and growing homesteads, and rearing livestock. He also confirmed that due to the socio economic culture of of Sundarban, women are subjected to lack of their mobility. Basically they engage in activities with in or around their home. Although it is argued that this power plant will create job opportunities for the local inhabitants of Sundarbans, it is highly debatable that whether a society which confines women in their home will allow them to work on the power plant. Additionally, as they have lack of training and skill of industrial work they are less likely to get the job as well. In order to solve this unemployment problem, the government should create quotas for employing women worker in the power plant. Also, the government, along with the help of NGO should start training programs for them so that they can develop their skills and become efficient workers of the power plant.

Furthermore, toxic substances emitted from Rampal will create threat to the local inhabitant's health. It is assumed that also mercury will emit from Rampal Power Plant. Mercury is a highly neurotoxin that adversely affects the nervous system of both people and wildlife. It is particularly dangerous for pregnant and breast feeding women (Mohavong et.al 2017). Additionally, the food chain in Sundarban ecosystem will get contaminated. When leaves are being injured by sulphur emissions and then it will be eaten by micro level organisms. These micro level organisms will eventually end up being the food of higher level carnivores such as fish which will eventually be consumed by human being (Ahmed el.al 2017). Already, reported that more than half of women in Sundarban are to suffer from anemia (The Hindu Business Line 2013). Now, the additional threat to existing fisheries,

which is a significant contributor of nutrition in the regular diet of the inhabitants of Sundarban will challenge their health condition. In order to solve the food problem, Bangladesh government should pair up with donor organizations such as Asian Development Bank or USAID and local NGOs to arrange workshops for women regarding the importance of balanced diet, especially during pregnancy. They can further encourage the participation in this workshop by providing food supplies to the participants. Moreover, the government can introduce a policy of no interest loan only for the establishment of fisheries. In that way, the local inhabitants of Sundarban will have a source of non-toxic protein. Along with the above mentioned facilities this policies will give them the option to carry on their old occupation which will minimize the amount of unemployment.

The water and air pollution caused by the establishment of Rampal power plant will not only harm women's health but also will increase domestic violence. As discussed before, a local NGO "Nakhikatha Unnayan Shangtha" has reported that women in Sundarban spend a huge amount of time in collecting water. Thus they get less time in doing other household chores. Their husbands come back home and see their wives are not done with their work which results in domestic violence (Nusrat 2016). According to environmental impact assessment (EIA) the water from the Poshur River will be used in order to operate the power plant which will make it polluted. Hence, the pollution of Poshur River will create significant effect on the access to clean drinking water of the local inhabitants. Therefore, water pollution will make it harder to get access to uncontaminated water. It will make women spend more time in searching water compared to before. This will give them lesser time to finish their chores causing more domestic violence. Already, Community health programs have started to address the drinking water problems of Sundarban (Global Giving #7564). Yet, the emerging water pollution created by Rampal power plant requires more attention from NGO's and organizations like Clean Water Projects should consider the situation of Sundarban and promote rainwater harvesting and preserving and hand dug wells in grand scale. In addition to that, the National Thermal Power Corporation and Bangladesh Power Development

Board can undertake certain strategies suggested by IAEA (2012) to decrease the water pollution.

The loss of jobs of the local inhabitants makes them migrate to different cities where it can be assumed that they won't be facing the above mentioned local problems. In fact, it was reported that with a power plant and other government projects in high gear, industrialists are apparently forcing small farmers and poor villagers of Mongla and Rampal to sell land and move out (The Daily Star 2013). In this case, the problems women faced in their habitats regarding clean water supplies may also exist even when they migrate. The Daily Star informs that the affected inhabitants are moving to Khulna. The New Nation on 31st July 2017 informs that Khulna WASA is providing only half of the demand of water. It is very unlikely that the vulnerable migrants of Sundarban will get access to this scarce water supply.

Along with the above mentioned impacts of migration there are additional sufferings faced by women due to migration. It suggests that women suffer from psychosocial impacts of natural disasters to a greater degree as compared to men (Chindarkar 2012). The extra burden of looking after their family members even when they themselves were in great distress resulted many women to suffer from anxiety and post-traumatic stress. Further, the breaking of social ties and separation of families also had a severe impact on these women. Thus the project Rampal will bring in nothing but additional sufferings to women. In order to address migration related issues, Bangladesh government should take responsibility to accommodate these migrants and give them temporary food and other resources necessary for living until they reallocate them when the construction of power plant is done. This time can be utilized by providing trainings to these migrants while they are away from their home so that they can become efficient workers of the power plant. This temporary migration polity will give assurance of safety and security of the families resulting in lesser anxiety and post-traumatic stress to women.

CONCLUSION

The women in Sundarban face innumerable number of difficulties. Sometimes, tigers take away their husband and children; sometimes they become victims of domestic violence. Various natural disasters make their lives miserable. They also suffer from various kinds of skin diseases due to salt water. In this scenario, Rampal power plant is a man-made disaster camouflaged as development. It is the responsibility of Bangladesh government to develop necessary policies and call upon for nongovernmental and international help to amend for this losses. Main findings of this article are that Rampal will create economic degradation of women, jeopardize women's health and increase domestic violence.

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