
A Report of Geographical Environment Around Manaharpur Village in Bakreswar, Birbhum District

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Part – I

LOCATION OF THE STUDY AREA OF MANAHARPUR VILLAGE AND IT'S ENVIRONMENTAL SCENARIO

1.0 Introduction

I. About the study Area:

Manaharpur is a small village located at a distance of about 2 kms. to the east of the Bakreswar Thermal Power Plant in the district of Birbhm. Originally this village was located on the land where the present thermal power plant has now been established along with others. When the Power project was commissioned in 1992 all the villages which fell in the selected site of the project had to be removed from the area and the villagers of Manaharpur were given refuge at its present location. With some financial assistance the villagers rebuilt this village a few kilometres to the east away from the existing power plant site.

II. History of the village

Village Manaharpur, along with some other villages, was originally located in the area now occupied by the Bakreswar Thermal Power Plant. As the government of West Bengal took over the land for the power plant in the early 1990s the villages had to be shifted to the convenient nearby locations. The then Manaharpur village people received land in the present location to the east of the National High Way No. 60, with some financial aids to build up their new houses in the village. Other facilities like electrification, drainage, construction of new roads in the village were also provided. According to the terms of compensation one person from each family was given job as casual labour in the power plant.

1.2 Conceptual Framework:

I. Selection of the Study Area:

Geographers consider that for the sake of a through and in depth study upon the environmental aspects of a place, a number of factors are to be considered. They must be the qualities of the concerned area-namely-a) Accessibility b) Manageable extent in area c) Availability of essential secondary data d) having some uniqueness for study e) People with accommodative and friendly mind that live in the study area. It can be said that all these facilities are available in this area.

1. Considering the accessibility it is accessible by the Bolpur-Suri road and connected with Suri by National Highway No. 60.
2. The village is very small in rural extent, comprising with 55 households. So, 100% sample survey could be possible.
3. This region has got some uniqueness as per the bird view of the Geographers, as this region shows a series impact of the Bakreswar Thermal Power Plant regarding the the socio-economic profile, health status of the inhabitants as well as its impact upon the natural ecology.

4. At last but not the least the villagers are fairly helpful and open minded when approached for conversation and exchanging views they are quite extrovert in the real sense.

Regarding the above points this area has been selected for this geographical investigation.

II. Objectives of the study:

- The main objective of the study was to find out the impact of Bakreswar Thermal Power Plant on the local people as upon their environment.
- Another objective was To judge their levels of satisfaction about their area of living.

III. Data Base:

For the purpose of this reconnaissance survey data has been collected from the following two sources

- a) Primary Data
- b) Secondary Data

The primary data have been generated through a field of questionnaire with multiple choice options. Forty household have been selected randomly for the purposive manner for the primary survey. Some individuals belonging to this village have provided historical information and cultural identity of the village.

IV. Methodology:

Methodology of any work is of great importance as it contributes the actual stages or consequences of the study properly. It is an organization of the analysis of reality, identifying the type of analytical techniques and appropriate instruments to be used. So it is very vital thing in case study. Generally for any case study methodology should be canalized through the following three steps-

- **Pre-field Study:** the location of the area was identified in the satellite imagery and the mouja map was collected.
- **During field Survey:**
 - a) An outline Map of the village was drawn during the field investigation.
 - b) Using properly organized questionnaires field data were collected
 - c) Photographs were taken as the records of the different aspects of this area.
- **Post-Field Study:** The data generated in the field and collected from other different sources were compiled and analyzed using suitable statistical techniques.

1.3 Location and Geographical Profile of the village

I. Location

Manaharpur village with an area of 45 acres falls within Sadaipur Police Station under Siuri Block – 1. National Highway No. 60 runs along the western margin of this village. Manaharpur is inhabited by about 40 household with a total population of little over 200. Apart from the settlement area the village has about 150 acres of agricultural land extending around the north and east.

II. Geographical Profile of Manaharpur

- **Name of the village:** Manaharpur
- **Geographical Location:** Under Bhurkuna Gram Panchyat, Thana – Sadaipur, Block – Siuri – I. Located at a distance of about 2 Kms to the east of the Bakreswar Thermal Power Plant.
- **Area of the settlement:** 45 acres approx.
- **Number of Household:** 56 (Muslim – 42 and Tribal – 14)

- **Population:** 220 with Male : Female ratio – 55 : 45
- **Educational Status:** Literates 80%, Up to Madhyamik Level 40, Madhyamic Passed – 12, Graduate – 10
- **Occupation of the people:** Mostly agricultural labours and one person from each family works in the Bakreswar Thermal Power Plant (under the compensation system arranged by the Govt.)

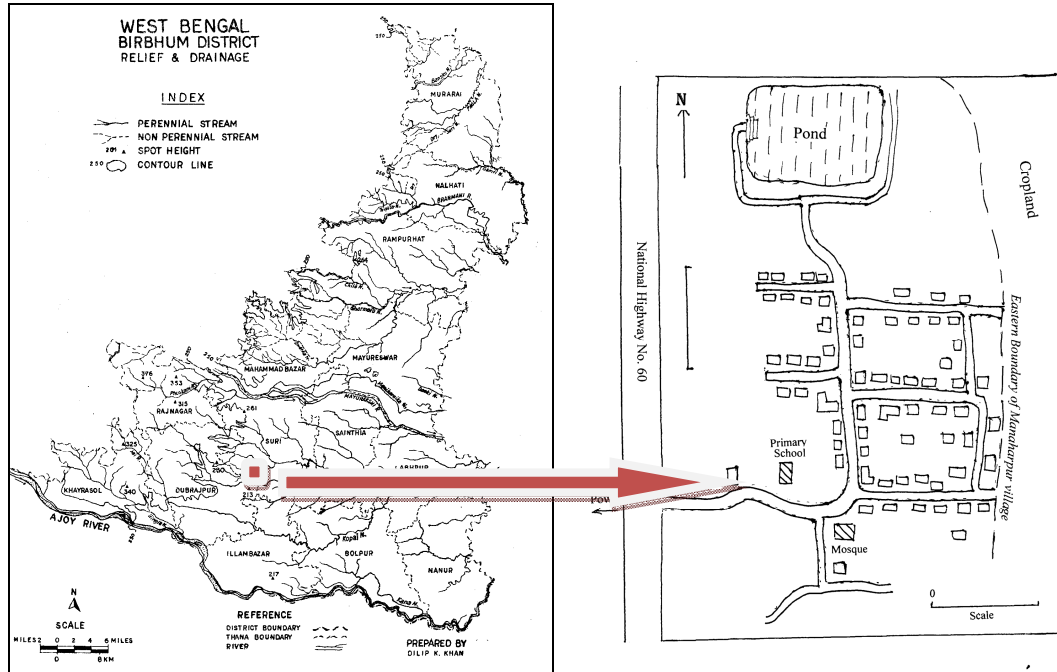


Figure 1: Location of Manaharpur Village Near Bakreswar area of Birbhum district

1.4 The village plan and the facilities available

Since the village plan was originally designed by the authority of the power project this village has been roughly rectangular in shape with the roads through the settlement joining with each other at right angle. Almost all the houses are brick build but the roads remain unmetalled. Electricity has been provided in the village and all houses enjoy the lighting facility through electrification. Adjoining the village, to its north and east, extensive paddy field exists where the villagers practice cultivation as agricultural labours. Crop (paddy) is grown only once a year, during the rainy season. Irrigation facility is negligible. There are as many as 12 tube wells for drinking water supply out of which 7 remains in working condition. There is one grocer shop but no health centre has been established in the village till date.



Pic No.:1.1: Main entrance to the Manaharpur village with the view of Bakreswar Thermal Power Plant at distance



Pic No. 1.2: A scene of the part of Manaharpur village with typical houses



Pic No. 1.3: A modern type house in the village



Pic No. 1.4: Farmers harvesting crops in the field



Pic No. 1.5: The only large tank – main source of water for the village



Pic No. 1.6: Bicycle is the only mode of transport for the villagers

Part – II

ENVIRONMENT, DEVELOPMENT AND POLLUTION

2.1 Environment versus Development

In the modern world there has always been a strong debate on the aspect that to what extent we the civilized people would accept modernization at the cost of environmental degradation.

It is universally accepted that industrial development is an essential part of the country's economic growth. In order to feed and give jobs to the growing number of people as well as to make economic and industrial progress new factories and power supply stations are being given green signals for establishment. But no threshold level has been given whatsoever of how much development can be accepted at the cost of environmental degradation and pollution. Under this condition a large contingent of our human generation are being pushed towards a fatal condition of environment where they are living in.

There is no doubt that then development of the Bakreswar Thermal Power Plant has assured our state government of more electricity requires now and also for the future industrial and urban development. Bakreswar Power plant was commissioned in 1992 and the generation of power started from 1996. Initially its production capacity was 210 Megawatt (with only one unit), now over the last two decades its production capacity has increased by five times as now 5 unit, capacity of each unit with generation of 210 Megawatt, are continuously working. Under this condition the possibility of atmospheric pollution around the area has increased many fold. During our field visit for perception study of the village people we selected to aspects in our framed questionnaire – 1) whether the establishment of the Power plant has been reasonably accepted by them and 2) their levels of satisfaction in living in their present place through rehabilitation. Door to door survey was conducted in the Manaharpur village by random sampling of 50 persons. Persons, irrespective of male and female were approached. The data was generated in the field thereby and the results have been demonstrated through data table and diagrammatically as given below.

2.3 Report and Assessment on Perception Study

Impact of Thermal Power Plant on their life as well as on environment

Table 1: Perceptions of the local residents about the impact of Thermal Power Project

Sample size: 40 persons

Perception on Impact	No. of Respondents	%
Impact has been very favourable	11	27.5
Impact has not been favourable to some extent	12	30.0
Impact has not at all been favourable	16	40.0
Do not know	1	2.5
Total Nos. responded	40	100



Figure 2.1: Perceptions of the local residents about the impact of Thermal Power Project

The above table and graph that although more than 50% of the villagers are reasonably satisfied a large contingent of them, as much as 40% believe that the impact of this development through establishment of power plant has not been favourable for their environment, both in the case of inherited productive character of their agricultural land and their atmosphere. Almost all of them said that almost all of their village people, from children to the aged people, often suffer from respiratory problem for inhalation of flying ashes from the plant throughout the year.

Levels of satisfaction of local residents about their area

Questions were also put forward to the villagers to know about their levels of satisfaction in living in this changed location of settlement and result is demonstrated below.

Table 1: Levels of satisfaction of local residents about their area as a place for habitation

Sample size: 40 persons

Levels of satisfaction	No. of Respondents	%
Like to live in the village very much	13	32.5
Like to live in the village to some extent	11	27.5
Do not like live in the village at all	12	30.0
Do not know	4	10.0
Total Nos. responded	40	100



Figure 2.2: Levels of satisfaction of local residents about their area as a place for habitation

The above display of data table and demonstrates a mixed pattern of opinion of the people. About 32% of the residents like their new place of village but others have different ideas. As much as 30% of the residents are not at all happy in living in the change location mainly because of two reasons – First, they still have the nostalgia and psychological feeling about their previous place where they lived for generations and Second, due to health problem and growing pollution in their crop land they are continuously being apprehended and would like to get rid of their present place of habitation.



Pic No. 2.1: Bakreswar Thermal Power Plant, not far from the Manaharpur village, emitting smoke with pollution



Pic No. 2.2: The exposed Ash Pond, the main dumping ground of pollutants discharged from the Bakreswar Thermal Power Plant



Pic No. 2.3: Growing pollution over the paddy field due to flying ashes emitted from the thermal power plant

2.3 Problems and prospects:

I. Problems: After visiting Manaharpur village near Bakreswar, certain problems have been observed which are as follows-

- a) The villagers have no permanent cultivated land. Basically they work as daily labour in different sectors, which shows the overall fragile economic base of them.
- b) The nearest primary health centre is at Mahubona, 15 kms away from the village and for hospital facility they have to visit to Suri.
- c) The thermal Power plant in the village has got very harsh impact regarding the health condition of the inhabitants, resulting several health hazards like breathing problem, skin problem etc.
- d) The waste materials of the Thermal power plant declining the fertility of the cultivated lands.
- e) At last but not the least there is a serious threat for the future regarding the mixing of solid and liquid waste products from the power plant with the ground water as well as the sub-surface water that may cause a dangerous effect upon the inhabitants as well as upon the natural ecology.

II. Prospects: The following measures can be taken for removing the above problems-

- a) The waste materials of the Thermal Power Plant basically the dust ashes are piled upon the open ground. These waste materials should be disposed and dumped with proper care and proper way that it should not any problem regarding the human and environmental health.
- b) There should be a Primary Health Centre in close proximity for the emergency cases.
- c) Proper care should be taken regarding the fact that the power plant's waste products should not mix up with the drinking water
- d) The local Govt. should also take necessary steps to stabilize the economy of the inhabitants and regarding the proper implementation of the central and State Govt.'s different schemes like 100 day's work, Kisan credit Card, subsidies and loans etc.

2.4 Overall Assessment

Manaharpur, a small village only couple of kilometers away, appears as the refuge of the inhabitants who were uprooted as a result of the development of Bakreswar Thermal Power Plant in the early 1990s. With the passage of time the villager have gathered both good and adverse experiences. This project is the revelation of some of these facts of the life and environment of this village.

The villagers, in general acknowledge the financial and other support they received from the administrative authority but as they believe their expectation remains far from fulfillment. Although many of the families have at least one person of their members of family has got job in the plant and earning some money, there still remain as many as 17 families who have not yet got any appointment. The government authority has connected this village with electricity and due to flying built a primary school for the children, road side drains have also been built there still remains some environmental problems for which they suffer to a great extent. The flying ashes emitted from the Power Plant not only make their house floors dirty and paddy field around infertile day by day inhalation of this ash-polluted air bring severe health problem to them.

However, a formidable contingent of the inhabitants still remains optimistic that their environmental condition will improve in future under proper planning to be taken up and implemented by the government authority.



Bibliography

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