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A STUDY ON THE MIGRATORY BIRDS OF THE PROPOSED BARH SUPER THERMAL POWER PROJECT (NTPC) AND ITS ENVIRONS



Report Submitted to
National Thermal Power Corporation Limited, New Delhi

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Dr Pandit V, Patna University)

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8 SUMMARY AND CONCLUSION

The National Thermal Power Corporation Limited (NTPC) proposes a super thermal power plant (STPP) of 3x660 MW capacity at Barh, Patna district, Bihar. The power plant is located in a low-lying area, positioned between the NH31 and Eastern Railway connecting Howrah and Patna on the right bank of the river Ganges. The site falls in *Mor-Taal*, a part of the Mokameh group of *Taals*. The STPP is expected to utilize about ten million tonnes of coal per annum and generate huge quantity of ash (~4 million tonnes) The ash will be send to the ash pond in the Sarhan *Taal* in the form of slurry.

In connection with execution of the project, at the request of the NTPC, SACON undertook the study, covering all seasons for full one-year period. The scope of the present work includes field observations of migratory and local birds in 10 km radial distance from the project site covering all seasons of one year. The present study covered all seasons to document the microhabitats, congregations, time of arrival and period of stay of the waterfowl and other birds in the NTPC project area.

The study area mainly included the project area, part of the *Mor-Taal*, the largest in the Mokameh group of *Taals*, and the area falling within approximately 10 km radial distance from the project site. Higher attention was given to the

wetland where the ash pond is located. The Mokameh group of *Taals* falls in the middle part of the Kiul-Harohar basin through which several rivers and rivulets such as Dhanyan, Sakri, Panchane, Tali Nagi, Lilajan, Mohane, Falgu, Kiul and Harohar meander.

Field surveys were undertaken during July 2003 – May 2004 and baseline data were collected. According to the group of animals or plants, appropriate sampling methods were adopted to collect data on occurrence, distribution and abundance.

Almost all the study area falling under the *Taal* is extensively cultivated and hence the floral species composition is highly altered by human activities. Thus the cultivated crop and associated species contribute to the vegetation cover of the area to a large extent. This is especially true for the areas under the *Taal* for the extensive operations during cultivable seasons of the year. Trees are poorly represented in the area, because of intensive agricultural activities and frequent spells of inundation. In total only twenty species of trees were recorded from the study sites.

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One hundred and thirty species of vertebrate were recorded during this study. There were three species of amphibians, eight reptiles, 101 of birds and eight of mammals. Several species of riverine turtles (*Kachuga* spp.) and two species of crocodiles (*Gavialis gangeticus*, *Crocodilus palustris*) are reported to be present in Ganges. Gangetic dolphin is common in the Ganges nearby Barh.

Birds observed during the present investigation include 25 species of (largely winter) migrants and 76 species of resident birds. The bird community is more or less homogenous among the locations: the proposed ash pond area, its environs and nearby Ganges. Highest number of species was observed in Ganges, while the lowest was in the ash pond area.

A total of 53 species of aquatic species were recorded in the study area. Number of water dependant avian species of the area is marginally higher (52.5%) compared to the terrestrial ones (47.5%). This could be due to overall wet nature of the area and presence of Ganges in close vicinity of the study area. Only 26 species of water birds were found in the *Taal* area, while the Ganges had 40 species.

Of the 101 species, only 25 were migratory ones. This includes three terrestrial species and the remaining 22 aquatic ones. All the three terrestrial species were found through out the study area. Among 22 migratory water dependant species, only 10 were found in the *Taal* area. In all, 23 out of 25 migratory species were seen in close vicinity of the Ganges. Three internationally “Threatened or Near Threatened” species were observed during this study in small numbers in the general locality.

Mokemeh *Taal* has been proposed as an “Important Bird Area” based on the criterion of congregation of migratory species. The present study also shows that *Taal* near Mokemeh is comparatively wet round the year and could be a potential Important Bird Area. This *Taal* is about 25 km in a straight line down stream of the proposed ash pond. In contrast with the proposed ash pond, Mokameh *Taal* is rich in terms of bird diversity.

During the present study, aggregations of aquatic birds were rarely seen in the ash pond location, the contiguous *Taal* and other area within 10 km. However, assemblages of migratory anatids (ducks) were frequent in Ganges in the undisturbed sand bars and oxbow lakes during day. Indirect evidences (feathers, droppings, foot marks etc) of these birds suggest that they visit the shallow marshes of the *Taal* or crop fields during night for feeding, but not in large numbers. The locals also reported hunting birds as usual in the nearby *Taals*. In general, in the Ash pond area (Serhan *Taal*) the availability of many important microhabitats required for water birds are scanty during winter (i.e. the major migratory season).

Study of the migratory birds- Barh STPP



The *Taal*, where ash pond proposed to be located is apparently not an important bird area. However, measures have to be taken so that whatever few numbers visiting the area is not disturbed and areas not used for dumping ash remains conducive for their use. Some conservation measures, to be implemented, are proposed with the view to reduce the impacts on the birds.