

**SCENARIO OF RASIKBILL WETLAND, COOCH BEHAR DISTRICT: A GEOGRAPHICAL PERSPECTIVE**

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**ABSTRACT**

Present paper discusses the geographical scenario of the largest wetland of North Bengal i.e. Rasik bill of Cooch Behar district. Wetlands are one of the most productive environments in the world. They are the 'supermarket' of biological diversity. But the wetlands have dwindled world-wide due to over-use, increasing pollution, unscientific use of agricultural fertilizers and pesticides etc. So some remedial measures and proposals have been suggested for preserving the wetlands and to sustain its biological diversity.

**KEYWORDS:**

**INTRODUCTION**

Wetlands are one of the most productive environments in the worlds. They are the 'supermarket' of biological diversity (Bhandari, Abe, Takanashi, Nakahata 2003). These are the interface between land and water and are the contributor of the global hydrological cycles. An estimated 6 percent of the land surface of the world is Wetland (Bazilivich, Roadivi, Rozov, 1971). Wetlands being important ecosystems internationally recognized are exemplified by Ramsar convention (1971). These Wetlands have vital physical, chemical, biological and socio economic functions. They are important because of flood mitigation, storm protection, pollution removal, ground water recharge or discharge, water source, niche for many species, aquaculture, biological productivity, fuel, food and livelihood for people, recreation and eco-tourism etc. Another important function of the wetlands is as habitats for wildlife and migratory birds. Terrestrial animals are linked with wetlands. Migratory birds select routes via wetlands where they take rest for few days.

**SALIENT FEATURES AND SIGNIFICANCE OF THE STUDY AREA**

Rasikbeel or Rasikbill is a vast natural wetland with covered area of 175 hectares, located under Tufanganj subdivision of Cooch Behar district. It is the largest wetland of North Bengal. It is a very popular bird watching spot, famous for local and migratory birds. This sanctuary is constituted of five 'beels' or wide elongated water bodies namely Neeldaba, Bochamari, Raichagmari, Shankhadanga and Rasikbeel (Mandal & Das ,2012). Rasikbill is the abode of about a jumble of wild flora and fauna. It is surrounded by three dark and dense forests namely Nagurhaat, Atasmochar and Bochamari.

**OBJECTIVES**

The objectives of the present study are to –

- Find out the present status of Rasikbill wetland.
- Find out the diverse habitat and ecosystem of the wetlands.
- Study the impact of economic activities on the degradation of the wetlands.
- Suggest proposals for the sustainable management of wetlands.

**METHODOLOGY:** This research paper is based on primary and secondary data. Primary data has been derived from field survey. Secondary data has been obtained from District Forest office, Cooch Behar.

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**OBSERVATION**

**Status of Rasik bill Wetland**

*Hydrology and water Regime*

The hydrology is mainly controlled by the run off feeding through the huge catchment area. Certain portion of the beels is of perennial nature. The wetland complex has a definite boundary fixed through last 10 years but the inundated area is fluctuated.

**TABLE-1, STATUS OF RASIKBILL WETLAND AS HABITAT OF WATER FOWLS AND RELATED BIO DIVERSE ELEMENTS**

Aspects	Status
Ownership	Government
Vicinity of City/industry/Religious Place	Far
Hydrology Input	Good
Hydrology Output	Good
Siltation	Low
Peat	Nil
Improvement Potential	High
Water Quality	Good
Encroachment	Low
Water Fowl	Good
Habitat Landscape	Pleasing
Infrastructural facility	Good
Awareness	Medium

Source: Field study

It is to be noted from table -1 that the status of the sanctuary as habitat is satisfactory, vicinity of city, industry, religious place is far from the wetland. So hydrology input, hydrology output, habitat landscape are good. But lack of proper management, awareness is found.

**TABLE-2, WATER QUALITY OF RASIKBEEL WETLAND**

Salinity (PPT)	0.08
PH	7.9
Ox-Red potential (Niv) Bottom layer	3.0
Top Layer	4.0
Dissolved Oxygen	9.72
COD (ppm)	70.84
BOD (ppm)	5.0

Source: District Forest office, Cooch Behar.

Table -2 shows that the water quality of this wetland is satisfactory because the BOD value is 5.0 which indicate the wetland is less polluted. PH value is 7.9 that indicate the neutral to slight alkaline condition.

**TABLE-3, FLORA OF RASIK BIL WETLAND**

Flora	No. of species identified
Pteridophytes	3
Dicotyledons	31
Monocotyledons	41

Source: District forest office, Cooch Behar.

Table-3 highlights that there are many species of flora. dicotyledons ,monocotyledons found here.

**Table-4, FAUNA OF RASIK BIL WETLAND**

<i>Fauna</i>	<i>No. of species identified</i>
Annulids	2
Arthropods	20
Mollusch	5
Fishes	25
Amphibians	2
Reptiles	3
Birds	66
Mammals	2

Source - District Forest office, Cooch Behar.

Many species of fauna are found here. Among them, diversified birds, fishes are the main species of the wetland (Table-4). Food webs are complex in nature. Beside these, the wetland also possesses the following species. Some ex-situ conservation are found, like leopards, deers, python, gharials etc.

**Table-5, ANIMALS AND BIRDS OF RASIK BILL WETLAND**

<i>Name of animal and birds</i>	<i>Number</i>
Leopard	7
Deer	60
Python	3
Gharials	8
Birds	15

Source: District Forest office, Cooch Behar.

**FINDINGS**

- Migratory birds in North Bengal are in danger of being constantly exposed to chemical fertilizers and pesticides used in tea gardens. Survey report of Salim Ali centre for ornithology and Natural History (SACON) also reveals that.
- There has been a 50 percent reduction of the population of Pintail in the past few years at Rasik bill (Indian Bird conservation Network, 2009). Such birds include Adjustant Stonk, the Osprey and the Greater Spotted Eagle.
- Pollution and change in climate are not only the causes for the decrease in the number of birds. It also indicates that birds are facing problem for degradation of their original habitat or ecological change.
- BOD Value is 5.0 (ppm), that indicates that water is less polluted.
- Participatory programme and local awareness are not satisfactory.
- Community pressure for fuel, food and fodder is maximum.
- Waste disposal by intensive aquaculture and its wastes are found.
- Agricultural practice along the catchment area is found.
- Lack of proper management and awareness is remarkable.
- Tourism activity also hampers the ecological balance.

**MANAGEMENT**

- Ensuring local people participation is necessary i.e. local people should involve for ecotourism activity without hampering the natural set up.

- Local forest protection committee should be developed; Regular discussion about conservation can also preserve the wetland.
- Meeting, campaign, awareness programme etc. are essential.
- Employment programme should be taken for sustainable development.
- Improvement of Hydrological condition is necessary.
- Removal of silts is required.
- Control of erosion by afforestation in the catchment areas.
- Restriction of cultivation in the wetland edges.
- Minimization of fertilizer use.
- Improvement of water quality should be made conducive to the water fowls and other flora and fauna by regular removal of silts and weeds.
- Prevention of encroachment should be done.
- Prevention of large scale water uplift from the beels.
- Stoppage of grazing in the wetland area and also restriction of fishing and pisciculture.
- Prevention of water fowl hunting.

#### **CONCLUSION**

The resource conservation and management of environment needs a holistic approach involving strong cooperation of the people by the participatory programmes. The developmental activities should also consider the immediate stress on the micro ecological set up and on the local community who are the stakeholders. Economically sound measures that will act as incentives for conservation, promoting scientific, technical and socio-economic co-operation with the stakeholder, and implementing measures that avoid and minimize adverse impacts on bio diversity should be encouraged.

#### **REFERENCE:**

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