

Wetland Ecology Of Goalpara District Problem and Prospect : A Geographical Analysis

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Abstract: *Water, whether it is running or static plays a significant role in human society. Wetlands are natural depressions on the surface of the earth and mirror the nation's ecological health. They are an integral part of the ecosystem and play host to several species of birds, flora and fauna and also support the livelihoods of fisher folk. Wetlands have a close relationship with the growth of human habitation from the days of ancient civilization. But almost all the beels of Assam whether in cities or rural areas are dying day by day with increasing human menace. The habitants of wetlands birds, fishes, flora and fauna are facing great danger. Wetlands of Assam are clear indication of environmental degradation and a topic of intensive study are generally termed as beels. But these beels are facing serious threat from human race for its existence. The growing menace of human civilization has disrupted the organic continuity of the wetland. In this paper an attempt has been made to access the problems for survival of wetland and prospect of using wetlands for welfare of human habitation.*

Key Words: *Degradation, ecology, society, wetlands.*

1. Introduction:

Wetland plays an important role in human society. Wetlands are depressions on the surface of the earth and mirror the nation's ecological health. It is an integral part of the natural ecosystem and host of several species of flora, fauna and birds. Wetland also supports the livelihood of fisher folk. But now almost all the wetlands of Assam including Goalpara district whether in cities or rural areas are dying by day. Wetlands are important indicators of environmental degradation in Assam. Hence in this paper, an attempt has been made to access the problem of survival of wetland and prospect of using wetland for welfare of human habitation.

2. Methodology:

To access the problem and prospect of wetlands in the district, a survey schedule has been prepared to collect relevant data from the villagers inhabiting nearby the wetlands where information like encroachment, overfishing, birds hunting, use of chemical manure in agricultural field etc. have been collected and analysed. Moreover, self-visited most of the wetlands of the district to access the problems faced by the wetland in an prospect of wetland for future development.

3. Location:

The district Goalpara is located between 25°53' N latitude to 26°30' N latitude and 90°07' E longitude to 91°05' E longitude. It comprises an area of 1824 sq km. It's northern boundary is covered by the river Brahmaputra whereas in south there is Garo Hills. It's eastern side is covered by the Kamrup district and in western there is the Dhubri district adjacent to the Bangladesh border. The rivers which are flowing throughout the district originate in Garo Hills and flows from south to north direction according to the slope. Beels are located unevenly in the district but most of them are located near the river Brahmaputra.

4. Geology and Physiology:

According to geological history, the area came into existence in the precem brain period and the plain area was made up in the tertiary period. The hills and hillocks situated in this area comprise of igneous rock. These hillocks are extended part of Meghalaya plateau. As we know that the Meghalaya Plateau is the drifted part of the Gondwana land. According to physiography, the area canbe divided into three physiographic divisions from south to north. First is the southern hill region in the north near the river Brahmaputra.

5. Distribution of Wetland:

The district Goalpara is rich in wetlands. It has an area of 1824 sq km of which 17.72% is covered by wetland. The district contributed 7% of wetland to Assam's total. There are many big and medium size wetlands besides

numerous in smaller size. Most of the wetlands were created by the action of river. But Urapad Beel was seemed to be created by the earth movement. This is the largest beel of the district having an area of 14 sq km.

6. Effect of wetland on Society:

If we look back to the past civilization it will be clear to us that all the civilizations in the past were developed on the back of the rivers because every human being directly or indirectly depend upon water, as water is considered to be a life savior. Following are the functions of wetland-

- **To work as reservoir of excess water :**

In rainy season continuous rainfall takes place because of prevailing monsoons in this district with the rest of the state. As the district of Goalpara is nearer to the Garo Hill and the slope of the hill is towards the north. Most of the quick flowing rivers originate in the Garo Hill and drain throughout the district. But in rainy season the river cannot carry the water for which it floods the plain areas. This over flooded water is stored in the wetland. Moreover the excessive water from rainfall is also stored. This process works as a natural device of flood control.

- **To work as host of birds, flora and fauna :**

Wetland of Goalpara works as host of bird's flora and fauna which are the integral part of natural ecosystem. There are thousands of local birds who visited the wetland everyday. The wetland also works as the host of different fisher folk. There are also several varieties of fauna live on the wetlands of this district. The wetland plays host to several species of birds, flora and fauna and also support the livelihood of fisher folk.

- **To work as a reservoir of fisher folk :**

Wetland work as the reservoir of fisher folk. Different varieties of fishes and other aquatic animal are found abundantly in the wetlands of the district. Moreover most of the species of fishes are found here. In this respect, "Prawn" is found in huge quantity at urpad, hashila and kumari beel

7. Some problems faced by wetland :

Almost all the wetlands of Goalpara district are facing problems for its existence. Among them some have been described as follows:

- **Siltation of the wetland :**

Siltation is the major problem faced by the wetland of Goalpara. Deforestation is going at a higher rate within the district and as well as in Garo Hills which contributed more silt to wetland particularly to the Urapad Beel. Every in flow of water into the beel bring some amount of silt. Increased deforestation in the wetlands loosens the top soil and these eroded materials find its way to wetland easily due to its existing topographic structure.

- **Encroachment of the wetland :**

Encroachment of the wetland is one of the major problems faced by the wetland at present. As the wetlands are becoming shallower and shallower because of siltation and now fit for cultivation, the people from nearby villages started to encroach for cultivation. Moreover population pressure in the surrounding areas also contribute a lot for encroachment. Again there is no control from the government over the wetland.

- **Overfishing the wetland :**

Overfishing is one of the major problems that wetlands are facing nowadays. The professional fisherman use thick net to catch fishes irrespective of size and also beat drum etc. as a local technique of catching fish.

- **Birds hunting at the wetland :**

Poaching of birds including migratory birds in the wetland of Goalpara district is a common phenomenon. Wetland which was one a habitat of local and migratory birds earlier, a few birds visit the wetlands nowadays due to excessive fishing and birds poaching which is continuing unabated.

- **Setting up of Brick Industry:**

It is seen that brick industries are coming un-systematically on the bank of the wetland. These brick industries are running unscientifically with traditional "Bhatti" system without obtaining any clearance from Pollution Control Board, thus making the ecosystem of the wetland polluted.

- **Ecological Degradation Of the wetland :**

The growing menace of human civilization has disrupted the organic continuity of the wetland. A large portion of the wetland is encroached for agricultural purpose. Pesticide and fertilizer used throughout civilizations contaminated the water of the wetland. The wetland has turned blue green with maximum overflowing weeds. Fisher flocks have to do their fishing through a tiny patch of water by local country made boat due to presence of maximum weeds. Availability of fish is directly related to the number of birds present in the wetland. Larger the number of birds, the more the birds dropping available for fishes. But due to water pollution and other disturbances birds stopped visiting the wetland in a large number. Trapping and poaching of birds are also two major factor responsible lesser number of birds visiting the wetland.

- **Developmental works of Govt. :**

Development works by Govt. like the construction of PWD Road, Railway etc., is also a major problem for existence of wetland. In Goalpara district, newly constructed BG Railway Line from Panchatantra and Guwahati passed through some of the wetland. In this respect the wetland near Panchatantra is completely dried up because of earth filling.

8. Study to be under taken :

To overcome the above mentioned problems, a study was under taken in this respect, stress has been given on human perception on wetland ecology. A survey schedule was prepared and sample survey was done on the surrounding villages to know the perception of the villagers about wetland ecology. The results are summarized below:

1. Surrounding people have no idea about wetland ecology.
2. Encroachment and overfishing take place due to population pressure and poverty.
3. Immigrant people practice overfishing.
4. Deforestation on surrounding areas causes siltation on the wetland
5. Negligence of Govt. to protect the wetland.

9. Remedial Measures :

A master plan should be prepared and executed to protect the wetland on the following points :

- 1) Stop encroachment of the wetland.
- 2) To ensure preservation of ecosystem of the wetland.
- 3) Mass awareness of people to protect the wetland.
- 4) To enrich its flora and fauna.
- 5) Plantation should be done in the surrounding areas of the wetland to stop further erosion.\
- 6) Formation of strict rules and regulations to protect the wetland.
- 7) Motivation of public, living nearby areas.

10. Conclusion :

The plan will be successful when Govt. will pay attention towards the preparation and execution of the plan. But participation of people to make it a success is vital. As the rural folk is directly benefitted by practicing agriculture, catching fishes and poaching birds, attention is to be made to motivate the villagers to protect the wetland. Proper education should be imparted to allow them to live harmoniously with the nature too maintain a balance of existing ecosystem. Government, NGO, as well as public should come forward to save the wetland.

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