
PREFACE



Wetlands are among the most productive ecosystems in the world, comparable to rain forests and coral reefs. They are repositories of diverse species of microbes, plants, insects, amphibians, reptiles, birds, fishes and mammals. The ideal climate, landscape (topology), geology, movement and abundance of water help the flora and fauna inhabiting the wetland ecosystems. Wetlands are “biological supermarkets”, which provide immense food that attracts many animal species for completion of their life-cycle. The decaying dead plants and animals in the wetlands are converted by bacteria into organic matter (detritus) that are fed by many small aquatic insects, shellfishes and small fishes that are food for larger predatory fishes, reptiles, amphibians, birds, and mammals. Wetlands are transitional zones between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water.

The main adverse factor threatening the site is the significant change of waste water quality flowing out from the city. This has been on account of a large number of industries which make unauthorized connection of their waste water effluent without treatment to the recently laid storm sewers emptying into the city outfall channels flowing eastwards. In my first chapter, analysis of Physio-chemical characters of water in different study area of East Kolkata Wetland shows that the how much heavy metal are deposition in the canal sludge and rendered waste water incapable of ensuring the edible quality of the fish and vegetables grown in the wetlands. The surrounding areas are threatened by encroachment and urban

expansion. Another adverse factor is the disappearing of know-how heritage. Because of institutional indifference, the traditional mix of cultural practices and wonders of ecological wisdom provided by the local people is slowly dying.

Unfortunately, many such areas have been converted for agriculture, industry or settlements. A great number of wetlands have been affected by industrial effluents, discharge of sewage, household wastes and sedimentation due to ecological degradation in catchment areas.

Second Chapter shows the wetlands are increasingly facing several anthropogenic pressures, due to rapidly expanding human population, large scale changes in land use/land cover and burgeoning development projects and improper use of watersheds have all caused a substantial decline of wetland resources of the country. Absence of reliable and updated information and data on extent of wetlands, their conservation values and socioeconomic importance has greatly hampered for development of policy, legislation and administrative interventions by the state. The changing land use pattern had therefore led to

- Changes in hydrological regimes and thereby affecting ecological balances and factions.
- Inundation of periphery causing loss of property and life
- Loss of agricultural and fish production and diversity leading to unemployment
- Rise in urban pollution and social unrest.

Third chapter deals that East Kolkata wetlands directly or indirectly have an enormous ecological, economic, commercial and socio-economic importance and values. Such lands constitute very rich biodiversity of flora and fauna of important local, natural and regional significance. Two significant parameters identified these study (i) Functions and (ii) Values. The garbage farm lands are used for cultivating

different types of seasonal vegetables. They are irrigated with water from the intermittent ponds where the waste waters are settled for purification. The downstream area is mostly paddy growing (in regular course), with occasional patches of settlements. On the eastern boundary of the designated conservation area, there is an upcoming tannery complex. Study of the Biodiversity of East Kolkata Wetlands are:

- Preliminary Assessment of Floral Diversity.
- Preliminary Assessment of Faunal Diversity.
- To record the plant diversity of socio-economic aspect.
- To record the animal diversity of socio-economic aspect
- Assessment of present status of biodiversity

In present survey, it had been observed that how wetland peoples are supported directly or indirectly to prevent the wetland as an International slandered? It also provides annually direct employment and generates gross revenues throughout the year. People living in wetland area were found concerned about the existence of the resource and expressed their Willing to Pay (WTP) for the preservation of East Kolkata Wetland. Average willingness to pay of the stakeholders was found. Science one objective of the study was to learn the people's perception about the wetlands an attempt had been made to find out the association between willingness to pay for preserving the wetlands and any of the factors like consumption, income, fishing land, agricultural land, fish production and agricultural production.

Fourth Chapter specks for long-term conservation planning of wetlands, spatial data and information are required for any intervention. Wetland ecosystem in India constitutes an integral part of cultural and biodiversity landscape. For a country like India, with its vast biological and cultural diversity, a comprehensive use of remote sensing, GIS and other related technologies will be of great use in

conservation. Previous research works on wetland conservation in the country has shown conclusively that micro wetlands or satellite wetlands around a bigger wetland act as a constellation of habitat mosaic for resident and migratory waterfowl.

Significant amount of scientific study has not been carried out in details on the site area of East Kolkata Wetland. The vast information from the above study will help us to sharing the knowledge of wetland, to enrich the baseline data of biodiversity of flora, fauna, medical importance of wetland resources to meet the betterment and development in near future. It also shows the Government & NGOs for the further worked to find out the way of wetland conservation from existing encroachment for rapid urbanization.