

Course Name: An Introduction To Urban Ecological Heritage: Theories and Applications

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Case study 1: The Nalban and Goltala Fisheries

There are two state-owned fisheries in the East Kolkata wetlands the Nalban and Goltala fisheries both run by the state fisheries development corporation in 1979 Nalban and Goltala came under state fisheries development corporation which is a West Bengal government undertaking within the administrative control of the fisheries department. Nalban and Goltala are the largest among government-managed fisheries comprising approximately 165 and 110 hectares respectively. The spectacular Nalban fishery dotted with 14 sewage fed ferries is located in Dhapa Manpur area of South Vidhanagar police station in Kolkata. Shadon Seringi, the induced project in charge of the Nalban fishery walked us through the operational and managerial complexities of government fishery projects in the East Kolkata wetlands. On the other hand, our long conversation with Debobroto Das, junior project officer of the state fisheries development corporation, foregrounded the management operations in the Goltala Bheri and highlighted major obstacles on the way of managing the fishery and how these challenges are addressed.

- Out of 165 hectares of the fishery less than 110 hectares are used for sewage fed fish farming.
- Each bheri has an average depth of 5.5 to 6 metres.
- Due to lack of funds and poor infrastructures, it is not possible to cultivate several fish varieties, that were grown in an extensive space of the fisheries project previously.
- 6-7 varieties of fish are produced in the Nalban bheri, Signi and Monosex, Tilapia are the two important fish types and other include Rohu, fresh water minor carp (Bata) South Asian carp (Catla) silver carp, lylantica, grass carp and black carp.
- Fish is sold at the nearby municipal market at the fixed rate of decided by the department of fisheries and surplus is sold in Chingrighata and Chowbhaga auction market.
- Except monosex Tilapia other fish types under the Indian Major Culture experience variable demand in the market, resulting in price shifts.
- Cormorant often brings trouble by eating fish, hence bird fencing is done in Nalban.

- Declining availability of sewage water that is usually distributed twice a week from the Dhapa pumping station has been affecting fish production in the Nalban Fishery.
- Decreasing fish output during the recent times is the combined result of closing cowshed in the City, clogging of the outfall canals and escalating cost of fish feed in the running markets.
- To retain fish growth and output certain novel approaches to preparing and applying fish feed are adopted.
- Interactions between EKWMA and Nalban Fishery committee with regard to wastewater distribution and sharing underscores co-dependencies among fishery management institutions.
- Plantation of coconut and betel nut, palm around the Nalban bheries is an important endeavour under taken by EKWMA marketing a co-intervention of the fisheries corporation and forest Department.

The practical empirical implementation project on East Kolkata Wetlands aims to train young investigators from the two schools of the wetlands on the SMUS toolkit after a contextual situational analysis on the complex wastewater scapes.

This is done through a series of workshop come trainings where the IIT Kharagpur and the Creative Collective Disappearing Dialogue stream is working with the young investigators to gauge the efficacy of the toolkit which is then taken to the practitioners to enhance their practical knowledge implementation capacities in terms of their own involvements with the wetlands. The academia practitioner collaboration also intends to generate ethno-visual outputs such as sketches, 3D imageries, knowledge brochures, co-produced video clips, etc., creating a roadmap through which the heritage wetlands can be collectively explored at and comprehensively captured through the increased awareness, participation, involvement, and engagement of multiple stakeholders.

- The total area of Goltala bheri is 110 hectares there are three large stocking ponds and rest are nursery and rearing ponds.
- There are 85 people working on the bheri including administrative personnel field workers and other permanent and temporary members.
- The fisheries are sent to the city markets like Chingrighata, Chowbaga, Kestopur etc.

- With a decrease in the amount of incoming wastewater complementary fish feed is provided it raises the production cost.
- Local disturbances such as poaching threatens aquacultural activities in Goltala.
- Invasive species such as crocodile fish eat small fish disrupting fish growth and production.

Filtration in main canals and reduction in the nutrient status of wastewater is the common concern of the fisheries in the East Kolkata Wetlands. However, the Nalban fishery benefits from a variety of advantages and incentives as a state-owned fishery starting with air-conditioned vending cards for transporting fish to auction venues and continuing through parallel marketing programs of the Department of Fisheries.

As government projects, both Nolpon and Goltala fisheries are organized in terms of operations, sewage utilization, procurement planning, manpower, fish health monitoring, and personnel management.

Challenges:

- Declining availability of sewage water and shutting down of cowsheds.
- High cost of fish feed in the market.
- Lack of funds and poor infrastructure.

Opportunities:

- Complementary fish feed is used, interactions on adequate wastewater distribution within committees.
- Novel approaches to preparing and applying fish feed are adopted.
- Governmental assistance and interventions persist.