

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

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Case study 3: Jhagrashisha

Situated in the south Bidhanagar police station in Kolkata. Jhagrashisha bheri covers an area of around 80 hectares. Jhagrashisha is a private bheri. A project manager is employed by the leaseholder who oversees the management of the bheri. Jhagrashisha is made up of three sizeable ponds that receive sewage from Ghosher khal.

The wastewater received by the secondary canal is shared among bheris based on their size. The arrangements and decisions for such distribution is made within wastewater users committee meetings. Jhagrashisha receives wastewater for three days a week, after which a locally built shutter or log gate known as kapat is closed to ensure wastewater supply in other bheris. Such an intricate yet collective way of managing and using wastewater for fish cultivation stirred our interest in the local shared system of Jhagrashisha bheri.

Shoshidulal Ghosh is the elderly leaseholder of Jhagrashisha bheri. He is senior not only by age but also by experiences that he has gathered throughout his tenure as deputy director in the department of fisheries. In listening to such stories, searching old files from a bundle of documents, reading maps, our conversation flowed. Dr Ghosh drew our attention to the major threats that have become aggravated in recent years. Most prominent among these is a lack of wastewater access due to siltation.

He went on explaining how it has affected not only the fish farming in Jhagrashisha bheri but also the functioning of the larger East Kolkata wetlands. Today we are going to talk about the Jhagrashisha bheri. Dr Ghosh is the elderly leaseholder of Jhagrashisha bheri.

- The area where Jhagrashisha bheri is now situated, was covered with trees and wetlands in early days.
- Around 60 years before today, Sumit Kumar Sarkar, the landowner of Belegkata bought a part of the land on from the government.
- The area was surrounded by mud dykes and made suitable for fish cultivation.
- A canal and ponds (nursery, rearing and maturing) were excavated.

- After almost 30 years of fish cultivation the landowner provided the land on lease to Shashidulal Ghosh for fish cultivation.
- From Topsia pumping station waste water is discharged towards Bantala dock and the Bantala lock gate regulates the distribution of sewage in the EKW area.
- Wastewater is lifted at Bantala lock gate to release through the Ghosher Khal (i.e. canal) connecting Jhagrashisha bheri.
- Ghosher khal (6km. in length) connects one cooperative bheri (Hara Singh) and three private bheris including Jhagrashisha.
- The waste water flows through the Ghosher Khal by gravity.
- If the flow is restricted, pumping machine at the Jhagrashisha bheri would facilitate the flow of waste water to the ponds.
- Jhagrashisha receives wastewater for three days a week.
- After receiving wastewater, the 'kapt' (locally constructed shutter) is closed to ensure wastewater supply in the bheris.
- Wastewater flows down to Ghosighata via Keshtopur outlet canal to reach the outfall.
- Jhagrashisha consists of three large ponds drawing sewage from Ghosher khal.
- The bheri uses multiple stocking and harvesting strategies and nurtures fingerlings in a nursery pond.
- Fish feed is obtained from local hatcheries.
- Fish spawn is bought from Naihati (minor carp) and Bishnupur (Indian Major carp).

8 Steps of Pond Preparation and Fish Farming:

- The nursery and rearing ponds are dried after every 3-4 months.
- After drying sweetwater and wastewater is mixed to discharge into the pond at a level of 3 ft.
- 'Mohua' cake oil and lime are applied during the pond preparation stage for cultivating spawn.
- Whether the pond is prepared is understood through the colour and touch of the water.
- Spawn is transferred to the nursery pond and light mustard oil cake is used as fish feed.
- After, one week the spawn is transferred to the first rearing pond and after two-three weeks it is transferred to the second rearing pond.
- The fish is moved to the large maturing bheri after reaching 10 grams of weight during the second rearing phase that continues for 20 – 30 days.
- The young fish is sold to the whole sale markets in Kolkata when it weighs between 75 and 100 grams after three months.

Tasks and Labour:

- More than 140 workers ranging from the permanent fishers to contractual labourers are employed for specific activities.
- Nine nursery workers are engaged in rearing and drying the pond, repairing dykes, and adding Mohua cake oil and lime.
- Netting, maintaining dykes, cleaning water hyacinth, nighttime monitoring, transporting fish to auction markets are some of the key tasks performed by the employees.

Challenges faced by Jhagrashisha and larger EKW:

- Ghosher khal the main canal through which it draws sewage, suffers from siltation.
- During monsoon sewage gets diluted and consists of 75% of rainwater which is insufficient for fish production and growth.
- Obtaining a sufficient quantity and quality of the waste water is a big challenge affecting annual turnover, leaseholders incur losses that are not easily recovered.
- Water retention capacity of the EKW region has gone down to 2.7 metres.
- Metro rail pillars are big barriers to the flow of wastewater in the canals.
- Framers are not getting adequate waste water and they can hardly earn Rs 1000 - 2000/- per month.
- Fish prices are either reduced or remains the same for the past few years while the production cost is increasing.
- There is no support price in fisheries.

Possibilities:

- No internal strife is reported among the bheris sharing wastewater from the secondary canal.
- Soil excavation is required to increase the depth of the ponds.
- Coordination among government, semi-government, private and other stakeholders must become stronger rather than working isolated.
- Government should come forward with a financial package to improve the aquaculture activities.

So we are with Shoshidulal Ghosh sir. He has multiple expertise and I must say that he is a stalwart so far as fisheries, fishing and several other allied activities like agriculture, horticulture etc. in West Bengal and also beyond are concerned. We are very blessed that he has kindly allowed us to take his interview and footage. Today we are here mainly to learn from him several constraints, opportunities that surround privately owned bheris as part of the East Kolkata wetlands. So Shoshidulal Ghosh sir, again as I mentioned he has definitely these days also multiple commitments but I would like to introduce him as the secretary 24 parganas FPA which means Fish Producers Association and also The Secretary Jolaabni Bachao Committee. My

question is that you know if we do a comparison between these three types of bheris, cooperatives, government and privately owned bheris.

So I mean what do you think the condition of which type of bheri is more severe than the others? The cooperative and the small small private firms is severe. And why is this so like what are their like additional disadvantages over the government actually there are two things there, shortage of fund and decision of the policy. What they can do in the next stage that is the decision making is the main problem. Sir who are the decision makers for this privately owned bheris? Few associations or there are like one or two associations? Only one association. FPA? The fish producers organization is a 70 years old organization.

Alright alright. And so they take the decisions. They take decisions of their own. They are negotiating with the government, the meetings with the governments, discuss with the governments. And sir is there also like a discrepancy or is there also like I mean a kind of an inequality in access to waste water between the government and the privately owned bheris? Actually fortunately the government to fishery, Nalban Goltala. situation is so good is very source of the waste water. Near and nearer to the source of the waste water.

But the other fishery is distant from the source. Source. And so they receive water from the tertiary canals. Exactly. That's why the primary canals and own the getting the much better and the tertiary and distant canal are the getting lesser and lesser water.

So sir may I like come to the last leg of this discussion. My question is that there are so many challenges and so many constraints. But still I think like you know you at least I know you and you are very very passionate so far as this sustenance of this wetlands you know are concerned. And I think that you know your like privately owned bheris are also hoping hoping up and they are they have some or rather you have some adaptive management strategies through which you are actually trying to overcome these challenges. So sir can you also shed some light on how are you you know kind of overcoming these challenges.

Actually actually actually East Kolkata Wetland Authority has a big role to play. There is a EKWMA. EKWMA. Yes. They are investing one court 90 lakh rupees for a fishery.

Those fishery converted due to a land and the building. There is a good approach. I appreciate it. But at the same time if they use the same amount for the renovation of the canals of the East Kolkata all the canals more than 20 canals by two courts then

the more than two lakh people will be survive. I think this also a very important to take a measurement those are culprit and at the same time it also equally or more than equally important to rejuvenate the canals for the wastewater supply.

Our coordination is very poor. Even the government, semi government, private and the other stakeholders. This bonding was this coordination is required very strongly. If the bond is worked very strongly and a very good NGO is also there. The work all together that can be done very easily.

However, the situation would be significantly improved by greater coordination between the various sectors and cooperative management of the wastewater canals and sewage distribution system. The words of Mr. Ghosh exposed us to the bracing social, economic and ecological issues of the East Kolkata wetlands and served as a necessary caution about the urgency of action and implementation for a viable wastewater aquaculture.