

Stakeholders' Consultation on CAGE FISH FARMING

Prospects of Bilateral Cooperation between India and Bangladesh

30 June 2021

Wednesday
11:00-12:30 (IST)

Moderator

- Veena Vidyadharan, Fellow, CUTS International

Opening Remarks

- Jyotiraj Patra, Project Manager, TROSA, Oxfam

Speakers

- Chandan Chettri, State Nodal Officer, Directorate of Fisheries, Government of Assam
- Supratim Chowdhury, Associate Professor, West Bengal University of Animal & Fishery Sciences
- Joydeep Gupta, South Asia Director, The Third Pole
- Shanta Soheli Moyna, Project Officer, Center for Natural Resource Studies, TROSA
- Mohammed Mukteruzzaman, Senior Specialist, Center for Environmental & Geographic Information Services (CEGIS)

Presenters

- Saurabh Kumar, Fellow, CUTS International
- Srijata Deb, Research Associate, CUTS International

Closing Remarks

- Avinash Singh, Programme Quality and Learning Specialist – TROSA, Oxfam India

1. Introduction

- 1.1 CUTS International organised a Stakeholder Consultation to explore the potential of cage fish farming in enhancing bilateral cooperation between India and Bangladesh. This consultation was being organised under a regional programme entitled “Transboundary Rivers of South Asia” (TROSA), supported by the Swedish International Development Agency (Sida) and managed by Oxfam Novib. The project aims to reduce the poverty of marginalised and vulnerable river basin communities through increased access to and control over water resources, on which their livelihoods depend. The details of the project can be accessed [here](#).
- 1.2 Objectives of the Consultation
 - Critical discussion and deliberations on the status of cage fish farming culture in India and how it can be enhanced for the improvement of livelihood of marginalised sections of the society, mainly women;
 - Private sector should start engaging with local communities, mainly women, for the long-term sustainability of cage fish farming as a part of fish trade and value chain in a trans-boundary context;
 - Get critical feedback from relevant stakeholders on the CUTS study on cage fish farming in the Indian state of Assam;

2. Opening Remarks

- 2.1 Cage fish farming has three critical areas to consider. These are: (i) inclusion, (ii) innovation and (iii) integration. It is critical to ensure that any new cage fish farming initiatives and related investments are more inclusive. Furthermore, the investment technologies and market opportunities should be such that communities can participate in the decision-making process.
- 2.2 Moreover, cage fish farming initiatives or any bilateral investments should deliberate human rights and related perspectives.
- 2.3 The range for cage fish farming is immense as it involves many technological and financial inputs. There is scope for innovation in financing related to microfinance and insurance. Certification of sustainably harvested feeds is also a possible option. Integrating cage fish farming is part of more extensive policy initiatives undertaken by the government.
- 2.4 Cage culture has been beneficial in employment generation. Women have extensive scope in engaging in this culture due to the simple nature of tasks undertaken to rear fish. The marginalised fishermen community has found this practice more welcoming and advantageous.

3. Presentation of CUTS Study

- 3.1 Saurabh Kumar and Srijata Deb presented the initial findings of CUTS research on cage fish farming and highlighted its importance for the fisherman of India and Bangladesh. They stated that fish occupies an important place in the lives of the people of the state. Fish farming has been one of the common activities in rural areas. Thus, the fishery sector is considered an essential economic activity in the socio-economic context in Assam.
- 3.2 Horizontal expansion in the Fisheries sector is being accomplished by creating new ponds and reclamation and renovation of existing areas followed by fish culture. Vertical expansion is given through productivity enhancement with advanced culture and better sustainable management practices.
- 3.3 The fieldwork findings of the Cage Fish Farming Project at Koliabor and Abhyapuri, Assam were also presented.
- 3.4 Under the Chief Minister's Samagra Gramya Unnayan Yojana (CMSGUY), the State Fisheries Department has installed a floating fish tank with the help of Fibre Reinforced Plastic (FRP) floating modular units. Fish Species: Pangash, Kawai, Rohu, Katla, Java Chitol, Puti fishes are being attempted for cultivation. The State Fisheries Department is planning to set up a fish feed plant in Koliabor itself. It was noticed that several beels exist in Koliabor, Naogaon, Goalpara, Bongaigaon districts, among others. The excreta of the fish are removed from the net just by shaking it. However, if fine mesh nets are used, the bottom needs scrapping.
- 3.5 This project was the state's first trial on cage fish farming projects, installed by the Directorate of Fisheries, Assam Government. The total cost of funding of the project is Rs 21 lakh. The Government of Assam provided Rs 14 lakh as a capital subsidy, while the rest was spent by the agency/society undertaking the work.
- 3.6 Benefits identified for the state: The practice is not very labour intensive and thus, reduced labour cost. Further, it has considerable scope for women's engagement in practice, given its simplified procedures. Sequential harvesting is possible. All the activities and tasks can be pre-planned. Different species of fish can be cultivated in different cages.
- 3.7 There was only one constraint identified. This project, being in its initial stage, still uses FRP modular floats, which is expensive. This can be improved by using local materials as floats and nets, leading to a further reduction in the capital cost.
- 3.8 In the context of Bangladesh, cage culture was first commenced in the 1970s. The cage area now is 17.6 hectares, with approximately 10000 cages operating. Flowing waters has proved to be more effective as the quality of fish gets better.

- 3.9 The major species found in Bangladesh cage culture include *kawai*, catfish, prawns, small catfish, *tilapia*, *papda*, etc. The country has seen an increase in the production of fish through cage culture since 2014.
- 3.10 However, cage fish farming in Bangladesh faces issues related to policies, acts, and water reduction in rivers. There is no policy/act on cage culture. Upper streamflow has also declined. There is a conflict of interest among related stakeholders. Availability of feeds is also a significant issue today.

4. Key Takeaways

- 4.1 Assam, in India, has 2.44 lakh hectares of fisheries resources available in the state. Wetland is over 1 lakh hectares. Prawn aquaculture covers about 77 thousand hectares. Assam has two major river sources: Brahmaputra and Barrack River and almost 53 tributaries flow across the state.
- 4.2 In 2019-20, fish production of the state was around 2.73 lakh metric tonnes which makes Assam self-sufficient to provide for its population. However, the stocking material in terms of fingerling is yet to be made self-sufficient. Chief Minister's Samagra Gramya Unnayan Yojana (CMSGUY) provides 70 per cent subsidy and the rest 30 per cent is to be contributed by the fishermen.
- 4.3 Under the CMSGUY scheme, 38 batteries in 10 cages were sanctioned, of which 28 have already been installed in 20 districts. Under Pradhan Mantri Machha Sampadan Machha Sampadan Yojana, 150 cages are sanctioned for 2021. The subsidy pattern under this scheme is 40 per cent for general and 60 per cent for SC/ST and women.
- 4.4 Due to the lack of knowledge on cage installation, the government has provided capacity building for around 10,000 people. Of this targeted population, training on cage fish farming has been provided to around 1450 members.
- 4.5 India and Bangladesh face severe tropical cyclones leading to an extensive need for rehabilitation. In this scenario, cage fish farming can be an alternative opportunity as both countries have salty water to promote cage fish farming. Furthermore, Assam in India faces the issue of siltation. This is also prevalent in the western part of West Bengal.
- 4.6 These region-specific challenges provide fertile ground for innovation and improvisation for cage fish farming. Under this context, alternative methods, such as high-value fish farming and organic mechanisms, can be pondered to enhance the scope of culture further.
- 4.7 In addition to this, cage fish farming can be integrated with tourism to establish an alternative method for livelihood generation and popularise the culture.

- 4.8 One example of this can be witnessed in the Purulia district of West Bengal. Tourists visiting this place can harvest their fish. Cage fish farming provides scope for improvisation and exploration.
- 4.9 The discussion highlighted the persistent issue of land rights. Before allocating lands or initiating new projects in the rivers, the rights of the local people and dependent fishers should be considered and protected.
- 4.10 There should be a vivid and in-depth assessment of that place before assigning it for fish culture. The ban period affects the marginalised fisherfolk community; hence, there is an extensive need to safeguard the environment and public health. Fish culture should be initiated in ponds rather than rivers.
- 4.11 Another challenge identified in the discussion was overstocking. This had a severe impact on prawn farming due to the fast spread of diseases and the resultant antibiotic treatment of the fish. This challenge rendered several fish farms completely unviable.
- 4.12 Given this, organic farming and initiatives to encourage the same are pivotal. This can provide optimal stocking with maximum benefit. Subsidy-driven initiatives can never be effective. Traditionally, fish farming was much more sustainable and had a closed loop system. At the same time, the modern fish farming method has lost its sustainable nature.

5. Conclusion

- 5.1 It was discussed and agreed that cage culture needs to be more systematic instead of sporadic. Vigorous collaborative research needs to be conducted with neighbouring countries. This will entail the exchange of valuable information and success stories. Policies or acts related to cage fish farming should be implemented.