



Emerging Threats to Yellowtail Catfish (*Pangasius Pangasius*; Hamilton, 1822) from Chai Fishing Practices in the Meghna River, Bangladesh

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Abstract

The Yellowtail catfish (*Pangasius pangasiu*), a commercially important species in Bangladesh, faces severe threats from overexploitation, habitat destruction, and unsustainable fishing practices. Among these, Chai fishing has emerged as a particularly damaging method, leading to significant declines in Yellowtail catfish populations. This article examines the impact of Chai fishing on Yellowtail catfish in the Meghna River and proposes strategies for sustainable management and conservation..

Keywords: Yellowtail CatFish; Meghna River; Fishing Practices; Species

Abbreviations

IUCN: International Union for Conservation of Nature; BDT: Bangladeshi Taka.

Introduction

The Yellowtail catfish is a carnivorous species that thrives in various aquatic habitats throughout its life cycle. Juveniles inhabit freshwater tidal zones, while sub-adults migrate to brackish waters, and adults reside in river mouths and inshore areas [1]. During the breeding season, fry are predominantly found in the Meghna River, where they are heavily exploited. Despite its commercial value, the Yellowtail catfish is listed as a critically threatened species by IUCN Bangladesh [2] due to overexploitation and habitat degradation. This study focuses on the adverse effects of Chai fishing practices on this species and the urgent need for conservation measures.

Chai Fishing Practices

Chai fishing, originating in Munshiganj district, has spread to other regions, including Chandpur and Shariatpur. There are three types of Chai (small, medium, and large), all of which are constructed using locally available bamboo. Skilled labor, often hired from Munshiganj, is required to make Chai, with costs ranging from 8000 to 12000 BDT (Bangladeshi Taka) per unit. The Chai is set underwater at a depth of 80-120 feet, using weights to prevent it from being washed away by the tide. Fishers supply 25-30 kg of feed, composed of various locally sourced ingredients, to attract fish.

Environmental and Economic Impact

Chai fishing is highly efficient, often yielding over 100 kg of *Pangasius* fish per haul. However, this practice indiscriminately captures fish from fry to juvenile stages, severely impacting the natural population. Each kilogram of

Yellowtail catfish sells for 150-200 BDT, while Rita fish (Rita rita; Hamilton, 1822) caught as bycatch are sold for 400-500 BDT/kg. This intense fishing pressure has led to a marked decline in Yellowtail catfish populations, raising concerns about their long-term sustainability.

Conservation Challenges

The decline in natural fry due to Chai fishing is alarming. Overexploitation and improper handling during capture contribute to the species' endangered status. The lack of available seeds for commercial aquaculture further exacerbates the problem, hindering efforts to cultivate Yellowtail catfish.

Recommendations

To mitigate the impact of Chai fishing and ensure the conservation of Yellowtail catfish, the following measures are recommended:

- **Ban Chai Fishing during Breeding Season:** Implement a ban on Chai fishing from April to May to protect the breeding grounds and nursery areas of Yellowtail catfish.
- **Alternative Livelihood Programs:** Provide alternative livelihood options for Chai fishers to reduce their dependence on this harmful practice.
- **Habitat Restoration:** Invest in habitat restoration projects to rebuild breeding grounds and improve the overall health of aquatic ecosystems in the Meghna River.
- **Community Awareness and Education:** Launch

awareness campaigns to educate local communities about the ecological and economic importance of sustainable fishing practices.

- **Research and Monitoring:** Establish monitoring programs to track the population dynamics of Yellowtail catfish and assess the effectiveness of conservation measures.

Conclusion

The survival of the Yellowtail catfish in the Meghna River is at a critical juncture due to unsustainable fishing practices like Chai fishing. Immediate and coordinated efforts by the government, local communities, and conservation organizations are essential to protect this valuable species. By implementing sustainable management practices and promoting conservation awareness, it is possible to ensure the long-term viability of Yellowtail catfish populations and the ecological health of the Meghna River.

References

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