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Coastal Aquaculture in Bangladesh: A Challenge

Binay Kumar Chakraborty

Swami Vivekananda Subharti University, Meerut, Uttar Pradesh, India

Abstract

Bangladesh has an inland water area of about 4.72 million ha and almost 118,813 sq. km in the Bay of Bengal. In 2023-24, the fisheries sector contributes 2.53% to the national GDP, 22.26% to the agricultural GDP, and more than 0.91% to the total export earnings. A study was conducted to get an accurate picture of the catch and catch composition of the fish population, using a semi-structured questionnaire, and primary data was collected by focus group discussion (FGD), local ecological knowledge (LEK), and direct interviews with the individuals, publications of the Department of Fisheries, the internet, and related gray literature. The marine production contributed only about 12.53% of total production in 2023–24. A decreasing trend was found from 2021-22 to 2023-24. The increasing total production of prawns and shrimp in the coastal area was recorded from 0.0082±0.03 to 0.3154±0.04 million metric tons between 1983–84 and 2023–24. The regression trend was logarithmic, and the equation was y = 0.1258 In(x) + 0.0005, where R^2 is 0.9395. Between 2015–16 and 2023–24, the total production of mud crab in the coastal area was noted between 0.0132±0.04 and 0.01078±0.05 million metric tons, respectively. The crab production decreased between 2022-23 and 2023-24. The regression trend was polynomial, and the equation was $y = -0.0002x^2+0.0041x-0.0069$, where R^2 is 0.7667.

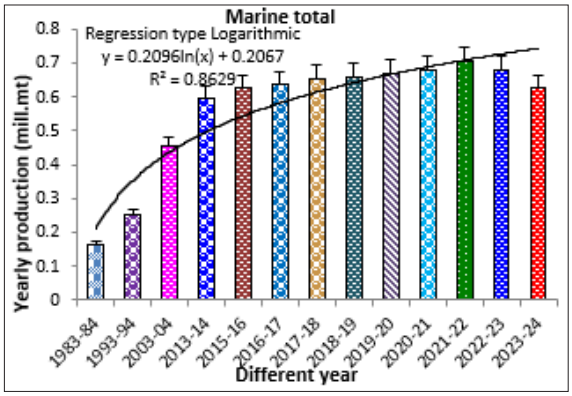

Figure: A decreasing trend of total marine production between 1983-84 and 2023-24.

The potential traditional cultures of sea bass (Lates calcarifer) areas are Satkhira-Khulna-Bagerhat and Patuakhali-Barisal-Barguna. The fish farmer collected sea bass fry from the river and prawns and shrimp gher. No other aquaculture of fish species is not developed still now. Fishery resources are facing challenges due to natural and anthropogenic causes, including overexploitation of prawns, crabs, sea bass, and dolphins. An eco-friendly catch should be practiced until hatchery was not established. Developing biological management technology for coastal aquaculture reduces resource declination and enhances production.