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Diversification of Aquaculture and Fisheries in Bangladesh and its Challenges

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An aquatic resource of Bangladesh belongs to a. Inland Open Water (Capture): River and Estuary, Sundarbans, Floodplains, Beel, and Kaptai Lake; b. Inland Close Water (Culture): Pond, Seasonal cultured waterbody, Baor, Shrimp, Prawn and crab farm, Pen culture and Cage culture; c. Marine Fisheries: Industrial and Artisanal. Data and information sources are used from the direct interview with individual, publication of the Department of Fisheries, internet and related grey literature. The country has an inland water area of about 4.915mil.ha and almost about 118,813 sq.kms in the Bay of Bengal. Fisheries sector contributes 2.43 percent to the national GDP, 22.14percent to the agricultural GDP and more than 0.80 percent to the total export earnings. The total fish production was crossed by producing 4.915mil.mt in 2022-23, whereas, inland open water (capture) contributed 28.15percent and inland closed water (culture) contributed 58.03 percent. Finally, contribution of total production from inland fisheries was 86.18 percent. On the other hand, marine fisheries contributed 13.82 percent (FRSS, 2024). The total fish production was increased about six times more (0.754 mil.mt to 4.915 mil.mt) during the last 39 years and regression type was Polynomial and the equation was $y = 0.0022x^2 + 0.0225x + 0.6405$ ($R^2=0.9972$).

Bangladesh is enriched with an aquatic diversity, comprising almost 260 freshwater and 486 marine water fish species with other aquatic lives. The fish and aquatic animals contribute a significant amount of nutritious and cheapest protein, by providing essential vitamins, proteins, micronutrients, and minerals, for the human being. Aquaculture and capture fisheries have been playing a vital role in national economic development, and global food supply of Bangladesh. Very recently, the fisheries resources have been facing with challenges posed by numerous natural and anthropogenic causes such as climate change, natural disaster, environmental pollution, industrialization, overexploitation, pesticide and agrochemicals. So, important national policy, biological management technology and mitigating climate change policy are needed to develop this sector to restrict the declination of resources and enhance production.

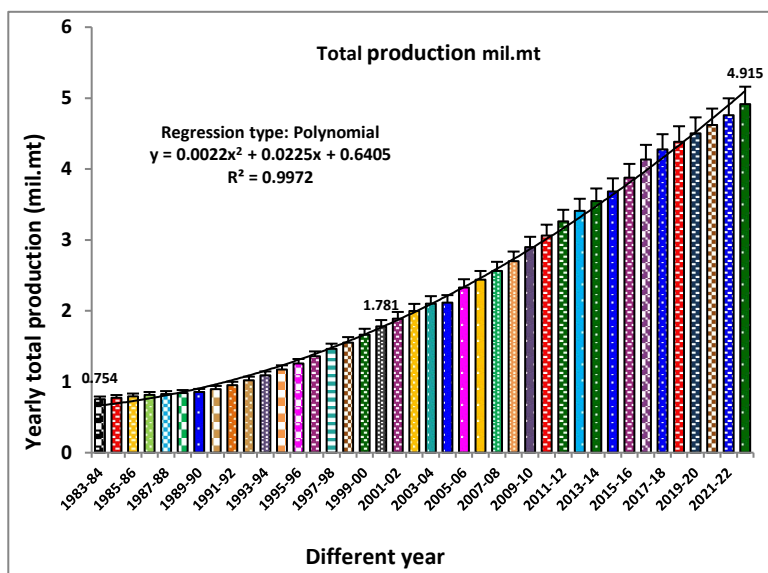


Figure 1. Yearly total production between 1883 -84 and 2022-23.