

Trash Fish: Really Trash or Treasure?



The capture and culture marine fisheries play a far-reaching role in the food security, poverty alleviation and economy of Bangladesh. Marine fisheries resources from the Bay of Bengal have been overexploited resulting in the development of coastal aquaculture to fulfil the protein demand, employment of the excess population and export earnings. Inevitably, the demand for low-value fish has supported the increased fishing pressure on overexploited resources in many countries. Bangladesh marine capture fishery is dominated by small-scale, labour-intensive artisanal vessel practices where multiple gears are used to catch mainly target species. The poorest of the poor fisher folks and the marginal fisher communities are extremely dependent on fishing for their livelihood. This survival pressure drives overexploitation and ecosystem deterioration. The lack of adequate management measures, poor implementation of policy tools and conflicting short-term production growth adopted by the national authorities are challenging for the sustainable fisheries development in the coastal belt. Different littoral countries around the Bay of Bengal discard about 400000 MT of trash fish annually.

Non-targeted fishes with low commercial value for their low quality, small size and low consumer preference are mainly termed as trash fish or low-value fish. The shrimp trawlers in offshore areas are mainly engaged in catching a large quantity of trash fish or garbage fish. Trash fish, however, could be an important food and economic resource in our country. The growing importance of low-value or trash fish seems quite dominant nowadays. The use of trash fish for human consumption increases the per capita consumption of fish in the country improving the nutritional and health status. The diverse uses of low-value/trash fish include:

- ◆ local consumption (fresh or dried)
- ◆ direct feed (livestock and aquaculture of high-value species)
- ◆ fish meal or fish oil production (poultry, aquaculture)
- ◆ value-added products (fish sauce, surimi, protein concentrates)

Sometimes fish becomes trash due to poor handling and post-harvest management, harvesting of juveniles of target species and catching unwanted fishes. The use of trash fish as direct feed or fish meal for aquaculture is economically viable. In contrast, the increasing price of trash fish reflects that

their supply is unable to meet the demand for fish feed. Therefore, the dependency on low-value/trash fish and fishmeal may hinder the rapid expansion of aquaculture, which is referred as the "fish meal trap".

There is a conflict between the use of low-value fish for poultry or fish feed and human consumption. Experts suggest consuming low-value fish with value-added products rather than supplying fishmeal plants and the income-oriented aquaculture industry and producing other high-value commodities. This eventually ensures food security. Even though fishers are achieving economic viability using trash fish effectively, we must think of the effects of catching fishes from the lower food chain on ecosystem sustainability, as aquatic ecosystems are complex and interconnected through food web. Trash fish may not be desirable, but they contribute to the ecosystem's functioning. Discarded fish during fishing operations constitutes a significant proportion of the global marine catch, which is considered as a waste of fishery resources.

However, this trash fish could be transformed into a tradable commodity bringing higher returns to operators of industrial trawlers, pair trawlers, shrimp trawlers, inshore vessels and artisanal fishers. In that case, a government-designated "collector vessel" may collect the trash/low-value fish from the commercial operator from different fish landing stations. In doing so, throwing and wasting trash fish into the water might be prevented, making this a more lucrative business.

The trash fish centred business can improve the socio-economic status of the artisanal fishers. At the same time, considerations should be taken into account about the possible ecological cost to the marine ecosystem. Often, lack of enough fish freezing scope in most of the artisanal trawlers leads them to throw away the low-value fish into the sea so that they can bring a targeted amount of commercial catch. Contrary, frequent and catching of large volumes of trash/low-value fish pinpoints the violation of the mesh size regulation and poor policy implementation. The proliferation of the discards in the market, however, may encourage offshore vessels to fish much closer to shore and use small mesh-sized nets. Thereby, the misperception regarding trash fish business may push out serious pressure on the exploited stocks towards collapse. On the other sense, the extension of fishing pressure on unexploited stocks may help reduce pressure on previously exploited stocks.

The management strategies adopted globally to decrease the incidence of discards in trawl fisheries include effort-based measures (reducing days at sea and decommissioning), area closures and technical measures such as using selective gears and reducing cod-end mesh size. Bangladesh government encourages the coastal fishers to use bait and fishing rods to avoid by-catch. Besides, higher wages for the poor trawler crew and alternative earning sources for people who are involved in trash fish trading, processing and marketing could be some possible management options. The respective authorities must control the trading of trash fish strictly in an eco-friendly way.

Author: Dr. Halima Khatun, Research Officer, Bangladesh Institute of Maritime Research and Development (BIMRAD)

The article was published in the [daily sun](#) newspaper on April 02, 2022