

# The impact of COVID-19 on the aquaculture value chain

Photo by Fahad Abdullah Kaizer

The COVID-19 crisis has been a shock to the aquaculture value chain in Bangladesh. More than five million households across Bangladesh depend on aquaculture production for their daily livelihoods, and fish is an accessible and traditional source of food for most people. COVID-19 has halved demand for fish and fish products, and massively disrupted the supply system, leading hatchery operations to close, feed imports to stop, and many value chain actors to suffer economic losses right from the beginning of the culture season. This has particularly affected small and medium-sized entrepreneurs and fish producers who have still not been able to resume their regular business.

After recovering from the initial shock, the aquaculture value chain has regained some degree of operational robustness. The initial challenge was

Fish is an important source of protein for urban consumers but disruptions to the aquaculture value chain have meant that fish farmers have not been able to get their fish to market, buy sufficient feed, or restock ponds properly. This has caused financial problems for fish farmers across the country.

to restore the supply system. With a relaxation of movement restrictions it was expected that the supply chain would return to normal but that did not happen. Instead, COVID-19 has led to a number of complex and long-term challenges to sustain the operation of the aquaculture value chain, and uphold the livelihoods of the millions of households who depend on it.

This second edition value chain report provides a summary of some of the most significant impacts of COVID-19 on Bangladesh's aquaculture value chain. It describes what has happened to actors throughout the aquaculture supply chain and sets out a number of recommendations for how to address challenges and return the supply chain to normal.

## 1. Fish farmers have been hit hard and are struggling to adapt

Photo by Fahad Abdullah Kaizer



Kazi Alam operates a small fish farm in Sreepur Upazila in Gazipur. Due to the COVID-19 crisis he could not buy fish feed on time, extract eggs properly, and ultimately could not sell his fish at the market due to a lack of buyers and disruptions to the food value chain.

The lockdown measures taken by the Government of Bangladesh to limit the spread of COVID-19 disrupted the transport of aquaculture inputs and outputs for months. This happened at the beginning of the season when aquaculture operations were getting underway and it prevented aquaculture businesses from selling their fish, emptying their ponds, and preparing for the new cycle.

Instead they held on to their fish in the ponds, limiting their feed during the period of low demand. However these measures only served prolonged a difficult situation and drove up production costs -- labour costs had increased 10 per cent, the price of feed had risen by 5 per cent, and transport costs for seed and feed was also higher-- as a result fish farmers suffered serious economic losses early in the year. For those who were willing and able to sell their fish, farmgate prices in

March were 30 per cent lower than normal, so they had to operate at a loss. Overall demand had declined, costs were higher, and their profits were either greatly reduced, or wiped out, causing fish famers to either operate at a loss or close down.

### Recommendations:

- Support farmers to add value to fish products through processing and drying, so that they can receive a higher share of profits from sales.
- Ensure access to the government's special financial packages for farmers in need of emergency finance.

## 2. Small and medium enterprises are vulnerable to bankruptcy



**Nayan Sheikh** is a shopkeeper in the Neemtoli City Corporation Market, in Old Dhaka, where he works for the Rupali Fish Feed Company. Ever since the COVID-19 crisis, he struggles to make any sales, he opens and closes his store every day but is rarely able to sell more than two sacks a day.

**Feed mills:** Most small and medium-sized feed companies were forced to close during the lockdown, and have been unable to resume full-scale operations ever since. The combination of shortages of inputs, technical expertise, and labour have meant that many remain closed, while others have adjusted by operating at a limited scale. But these small and medium enterprises are vulnerable to bankruptcy. Large fish feed companies have been able to adjust their production to meet lower market demand, and have been able to resume full-scale production immediately after limits to movement were relaxed.

#### Non-industrial feed producers and ingredient sellers:

The COVID-19 crisis has left about half of all non-industrial (semi-automatic pellet) feed producers and ingredient sellers without any business. They have suffered from a limited capacity to adapt to disruptions in the supply system, a lack of labour to operate their

businesses, and an inability to sell their products on credit.

**Hatcheries:** Nearly 10 percent of hatcheries have been forced to close as they were unable to source the required brood and essential chemicals, such as pituitary gland hormones, to continue breeding and producing seeds. Given their challenging financial situation, many of these hatcheries are now running the risk of going bankrupt.

### Recommendations:

- Support small and medium entrepreneurs to access Government special financial packages so that they can better overcome shocks, avoid bankruptcy, and sustain their businesses.

### 3. Demand for fish by urban consumers has dropped



Photo by Fahad Abdullah Kaizer

*Business has been slow for Md Azizul Islam and Md Moktar Hossain. They both work at Mohammadpur Krishi Market, a wet market in Dhaka. They used to earn 1,000 Tk. a day but now struggle to even earn 200 Tk.*

Demand for fish from urban consumers has halved because of COVID-19. This is due to a combination of reasons: limited circulation of customers because of lockdown restrictions; a significant reduction in household income for many families, especially those who lost employment; fear of wet markets that has frightened off many from shopping there for fish; limited opening hours at wet markets; and a general trend towards more non-perishable and processed food items. While demand for raw fish in wet markets dropped, demand for processed fish has remained buoyant. Lowered demand affects stakeholders throughout the fish value chain who have seen their business drop.

#### Recommendations:

- Scale-up mobile or online marketing and home deliveries of fish, to encourage demand from urban consumers.
- Increase government purchases of fish by including it in food assistance packages. This will also help to combat malnutrition and micronutrient deficiency and boost demand for fish.
- Encourage the private sector to invest more in the aquaculture sector, notably businesses involved with fish sector inputs and fish products to bolster demand

### 4. The market for aquaculture feed inputs and fish outputs has slowed



Photo by Fahad Abdullah Kaizer



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*At the Neemtoli City Corporation Market in Old Dhaka, many stores either remain closed, or operate at reduced levels, because sales for fish feed has dropped so dramatically. Abu Dawood (left) puts on a brave face but he rarely has any customers since the COVID-19 crisis badly hit his fish feed business.*

COVID-19 has slowed the market for fish farm inputs, as well as outputs. The lockdown meant the distribution of inputs and outputs fell to 60 per cent of normal levels until May as transportation was impeded. Even following the resumption of transportation and the return to regular business hours, the different stages of the aquaculture value chain have not returned to normal, with many remaining closed or inactive. For example, most small feed mills, 10 per cent of the hatcheries, 20 per cent of retailers, and 40 per cent of the fish processor are unable to reopen their businesses

### Recommendations:

- Encourage the private sector to invest in fish input businesses and fish-based process products (e.g. fish fingers, burgers, etc.) in order to increase demand and sustain the operations of the aquaculture value chain.

## 5. Changes in consumer behaviour means the lowered demand for fish may linger



Photo by Fahad Abdullah Kaizer

**While demand for fish has halved, and many urban consumers continue to believe that handling raw fish can lead to COVID-19 infection, dry fish products have become more popular. Vendors like Md Bijoy, a dry fish seller at Mohammadpur Krishi Market, in Dhaka, have experienced increased sales since the beginning of the COVID-19 crisis.**

Consumers have been eating less fish over the past months and this poses potential problems for the future of the aquaculture industry if changes in consumer behaviour persist. One issue that contributes has been the fear by many urban consumers that handling raw fish may lead to COVID-19 infection, as well as consumer preference to stay away from wet markets that are perceived as dangerous places where shoppers risk the spread of the virus. Without better awareness that fish and other food are safe, consumers may adopt other eating habits and turn away from fish, raising concern about how people will find alternative sources of protein in their diets.

### Recommendations:

- Promote online, mobile sales systems and home deliveries so shoppers can continue to buy fish without having to venture into wet markets
- Promote the inclusion of dry fish in the Governments 'Open Market Sales' (OMS) and in food relief packages so that vulnerable groups can continue to consume foods rich in protein.
- Provide orientation to the public to encourage eating fish as a safe and nutritious source of nutrition.

## **Recommendations for the Government:**

- ✓ Support farmers to add value to fish products through processing and drying
- ✓ Ensure struggling small and medium-sized hatcheries and feed companies have access to special financial packages
- ✓ Encourage the private sector to invest in the aquaculture sector
- ✓ Increase government purchases of fish, by including fish in food assistance packages.
- ✓ Promote online, mobile sales systems and home deliveries
- ✓ Promote the inclusion of dry fish in ‘Open Market Sales’ (OMS) and in food relief packages so that vulnerable groups can continue to consume foods rich in protein.
- ✓ Provide orientation to the public to encourage eating fish as a safe and nutritious source of nutrition.



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*The Karwan Bazar wholesale fish market is Dhaka's largest fish wholesale market. At dawn, traders and buyers come to participate in the auction. Many traders are seen here disregarding safety measures and physical distancing.*