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# Case Study on the Impact of Pandemic COVID-19 in Aquaculture with its Recommendations

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## ABSTRACT

In Bangladesh, lockdown has been started officially from 26th March, 2020 which is actually most important time for harvesting and summer stocking in pond. The whole aquaculture production system is now hampering due to pandemic COVID-19 and value chain in this sector is quite vulnerable. I conducted wireless survey through cell phone collected information from different stakeholders of different agro-ecological zones of Bangladesh to assess impact of pandemic situation in aquaculture sector. Survey results revealed that pandemic COVID-19 has been affected in different areas of aquaculture sector including reduction of consumption, export order cancellation, reduction in price, delayed in summer stocking, lack of technical support and transport crisis.

**Keywords:** COVID-19, Stakeholders, Aquaculture, Recommendations, Pandemic, Lockdown, and Impact.

## INTRODUCTION

Bangladesh is endowed with fisheries resources including inland, marine and freshwater resources. According to FAO (2016), the aquaculture production is rapidly growing which has made it the fastest expanding global production system over the last 40 years. The global requirement of fish is expected to increase by 30 percent due to increased number population and improving the living standard of people (FAO 2017; Beveridge *et al.*, 2013).

Considering the requirement, aquaculture production will have to increase up to 50-60 percent from the present level by 2030 as production from capture fisheries remain static (Henriksson *et al.*, 2018).

Intensification in aquaculture is increasing to meet this growing demand of fish. However, all the value chain in aquaculture including hatcheries to processing has been destroyed throughout the world during the pandemic COVID-19.

Although the analysis of economic loss is quite difficult now but some issues can be pointed out where government and non-government agencies can work to improve this situation.

## MATERIALS AND METHODS

Survey was carried out using non-structured questionnaire to collect the relevant information from different stakeholders of different agro-ecological regions of Bangladesh. The information was collected over telephone call to the respondents.

## RESULTS AND DISCUSSION

### *Impact of pandemic COVID-19 on aquaculture sector*

**Reducing domestic consumption:** According to BIDS, more than 20 million people are suffering miserable condition due to job less during this pandemic covid-19 and nationwide lockdown situation. They are not eating caloric energy based food items for healthy life. This pandemic situation also closes the restaurants and community programs which also significantly reduces the demand of domestic requirement. In addition, some illiterate people is saying that CORONA virus can spreading through consuming tilapia fish using different social media like Facebook.

**Cancellation of shipment by buyer:** Production of Shrimp, as major contributor in national GDP, isfacing great challenges during the pandemic situation of COVID-19.Currently, almost all export and import based business is going slowdown globally and nationwide lockdown situation imposed the processors in shutdown mode and that resulted in oversupply of shrimps with low demand. Similarly, processing and exporting of some exportable freshwater fish item also hampered due to pandemic situation. Processors are operating at reduced capacity which keeps the prices minimal and poor market absorption due to cancellation of shipment by buyer.

**Low prices:** Price of farm gate fish and shrimp are in decreasing trend heavily due to the COVID lockdown. Nationwide lockdown and unavailability of foreign and local buyer led to market instability and price reduction.

**Transport crisis**: All the stakeholders in aquaculture sector are suffering severe problem for transporting the finished products, raw materials, feed and other necessary required materials which is ultimately hampering the business not only for this time but also it will affect for long time.

**Delaying in summer stocking:** This is actually high time for stocking in ponds which will ensure the food supply for next year. The stocking activities is seriously hampered due to unavailability of inputs including aquamedicine, disinfectants, labor crisis, seed and feed etc. In addition, farmers are not interested to harvest the fishes due to low price which is also another reason of delaying re-stocking during this season.

**Lack of Technical service provider:** Farmers and entrepreneurs are facing problems not to get technical service duly from the experts due to nationwide lockdown which is also hampering the total aquaculture production.

## CONCLUSION AND RECOMMEDATIONS

**Promotion of domestic consumption:** Domestic consumption of fishes to be promoted by circulating the beneficial effects of fish protein for boosting the immunity through different printed, TV program and social media. Introducing e-market and open place market may help to buy the fishes maintaining the social distance in village level which also can increase the domestic consumption.

**Digitalize the marketing system**: Digitalization of marketing linkage and development electronic portal of producer organization could be the best option for whole selling and retailing the fish with stable price. To do this, union digital center in coordination with Upazila Fisheries Officer, Department of Fisheries can take the proper initiatives to make it affordable for producer and sellers in remote areas.

**Availability of workers:** Workforce in this different sector of aquaculture should be available and movement to be resumed with proper health protection. In this case, a valid identity card can be provided by the owners of farm.

**Movement of technical expert:** Emergency pass from potent authority should be given to the technical expert to ease farm visit and provide necessary support to the producer for overcoming the problems and constraints.

**Availability of input:** Aquafarm shop should be opened for supplying the necessary inputs for aquaculture. Transport service related to aquaculture industry should get privilege.

**Financial assistance**: Short and long-term interest free financial assistance for real stakeholders for aquaculture to be ensured by the Government.More importantly, the stakeholders who are involved in shrimp sector should get especial priority for getting government stimulus fund to get sustainable contribution in national GDP from this sector.

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## COFLICTS OF INTEREST

There is no conflict of interest to publish the article in the journal.

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