

THE NORTH STAR

Burgeoning Aquaculture Market in North Bengal





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Executive Summary

Over the last few decades, Bangladesh has witnessed remarkable economic growth spearheaded by strong private sector consumption, steady export market growth and increased flow of remittance. Household disposable income has surged in tandem with GDP growth which enabled people to upgrade their standard of living and consume more products and services in their day to day lives. In the coming years, this group will purchase more protein to maintain an improved diet and thus drive demand higher. Simultaneously, due to inequitable economic growth, a significant portion of the population are living in poverty and fish is one of the main sources of protein for them due to its lower price. During 2010-16, the consumption of per capita fish increased **26%** from **49.50 grams** to **62.58 grams**.

In FY 2017-18, the fisheries sector contributed **3.57%** to the national GDP and employed **11%** of the country's total population. The prominence of the fisheries sector in the economy and its huge potential to create livelihood opportunities for many.

Over **143** supply chain actors and **30** aquaculture LSPs in the northwest Bangladesh have been reached out to understand the current aquaculture culture market in Bangladesh. The key highlights are:

a. Cultured fish market is growing fueled by nationwide demand

The fisheries sector recently contributed **3.5%** to the national GDP and more than one-fourth (**25.3%**) to the agricultural GDP. The country's fish production has topped **4.2 million MT**, with an average annual growth rate of **5.3%** for this sector for the last ten years. **56%** of the country's total production comes from the cultured fish farming, **28%** are captured fish and **16%** are derived from marine sources.

b. Fish farmers suffer in the short term, but can take advantage of recovered stocks post-COVID-19

While farmers and farm owners, to an extent, have the flexibility to choose to sell their products at a time of their choosing to gain favorable prices or otherwise fatten their fish inventory, fishermen do not have this luxury and are expected to be worse off particularly since captured fish are considered premium, command higher market prices and will, therefore, likely suffer from a skewed drop in demand. Farmers of high-value fish are expected to be the biggest losers as they will only see a small fraction of their envisioned returns since consumer appetite for high-value fish is expected to take moderate time to recover even after the lockdown is lifted.

c. The expanding aquaculture sector in North Bengal is an opportunity to scale

The Rajshahi division is a key carp fish production hub in Bangladesh, especially for the carp varieties which have come to dominate the market and are exported far and wide including the capital city of Dhaka. The eight districts under Rajshahi division produced a total of **458,400 MT** of fish against its demand for **404,800 MT** in 2018, resulting in a surplus of **53,600 MT**. Bogra district in Rajshahi division is a major urban conglomeration in the Northwest and has some of the largest carp hatcheries in the country.

Rangpur itself is a divisional city, and the division is home to some larger district headquarters urban areas such as Dinajpur. Our study findings suggest that the division is a client zone for fish from Rajshahi, as it is the division with the lowest fish production in Bangladesh, by far, at just over **210,000 MT** in FY 2017-2018.

Unfortunately, the aquaculture industry in the north is still facing some roadblocks -

a. Rampant spread of fish diseases hurt nurseries/hatcheries businesses

The rapid spread of disease in the aquaculture industry affects about **30%** of the fish nursery & producers. These diseases not only hamper the overall health of the fish, but also put a constriction in the output yield. **38%** of hatcheries have reported to suffer from diseases hurting their production yield. Other factors like high temperature, flooding and shortage of water are also hampering the production.

b. Seed quality and feed management are major constraints to productivity

Rising production costs and the lack of means to enforce compliance of quality standards for feed ingredients and finished products is hurting the aquaculture industry. The latter is firstly a policy constraint and secondly a capacity-building issue. The small producers tend to produce lower-quality feeds (in terms of nutritive value and structure) due to usage of low-quality raw materials and an unreliable power supply. Overall, the sector itself is only operating at **45%** capacity.

c. Absence of gender inclusiveness in the value chain

The state of gender inclusiveness is still quite low in the aquaculture sector; mostly bound to homestead small roles and largely understated. Only **8%** of the respondents reported as females and only a handful are involved in the aquaculture chain as suppliers, buyers or LSPs.

d. Inadequate contract farming & market linkage measures as hindrance to growth

Contract farming practice is limited and there is a massive potential for improvement and increasing output yield by optimizing the available water body resources and excess workforce. Production yield is also affected by the lack of market linkage contracts with aquaculture intermediaries creating an unsecured supply chain prone to interruptions.

The pandemic crisis has created major disruptions in the aquaculture supply chain, which will have aggregated effects both for all stakeholders, including consumers. The crisis effect is already disrupting mid-season activities (such as late season fingerling stocking) and will likely also disrupt 2021 aquaculture season, particularly on fingerling availability and farmers ability to buy inputs to start a new season.

Top-cited effects include disruptions to demand in all segments of the supply chain due to the reduction of clients, difficulty in collecting loan repayments, and general disruptions to input supply. About **64%** of the farmers reported a forced delay in fish harvesting owing to lower price of fish in local and city markets. Farmers and input suppliers is in immediate need of cash flow to fund mid-season new operations.

Average price of most fish species was **5% to 15%** lower during April-May 2020 compared to pre-COVID period. **37%** of the farmers reported significant revenue decrease of at least 50%-100%. **51%** have reported of revenue decrease ranging from 1%-50%. The rest **10%** reported of not occurring of any type of revenue loss.

Conversely, lower prices have had a positive effect by increasing fish consumption, particularly in rural population. Consumption survey results show that the average per capita per day consumption of fish was **91g** during the pandemic period, which is much higher than the national average of **62.6g**.

Local service providers (LSPs) can play a key role in the development of aquaculture in the north. However, it is eminent to guide and improve the knowledge base of LSPs to boost end-line impact. If proper guidance is ensured; sustainable opportunities will lie ahead in front of LSPs in return. The role of service providers also help them make a living and expand their existing business. To ensure a significant impact and outcome, the government and development sector stakeholders (like OXFAM, WorldFish) in collaboration with vested private partners can play a vital role for LSPs by delivering training, facilitating the rise in number and type of LSPs, raising awareness for inclusiveness of women and the poor through market-driven approaches.

Chapter 1

Overview of the Aquaculture Industry



Overview of the Aquaculture Industry

The cultured fish market is growing, fueled by nationwide demand

Bangladesh is called the land of rivers or the Gift Rivers. Almost **300** rivers crisscrossed the country. Hence, it is of no surprise that Bangladeshi people have long relied on fish for their daily dose of protein, with fish comprising **60%** of the protein intake of the country¹ and the fisheries sector contributes significantly to food, and nutrition security.

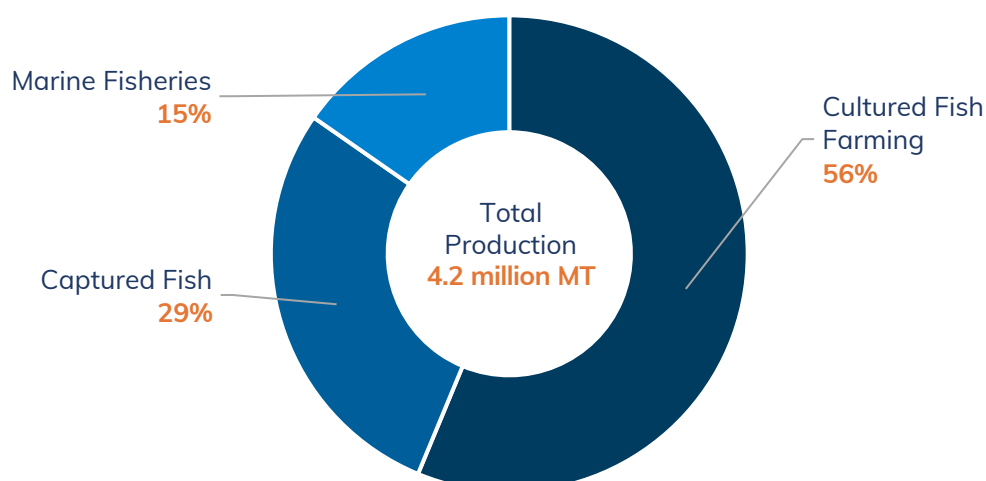
The country already had vast and diverse stocks of fish at the start of the millennium. For fish being the primary source of animal protein for Bangladesh, generating domestic demand for cultured fish wasn't an issue. Aquaculture production has increased threefold since the year 2000, largely thanks to technological innovations and regulations that are producer friendly.

The fisheries sector recently contributed **3.5%** to the national GDP and more than one-fourth (**25.3%**) to the agricultural GDP. The country's fish production has topped **4.2 million MT**, with an average annual growth rate of **5.3%** for this sector for the last ten years. **56%** of the country's total production comes from the cultured fish farming, **28%** are captured fish and **16%** are derived from marine sources.²

As Bangladesh becomes less reliant on captured fisheries and embraces aquaculture to meet domestic and export demand, the sector's employment opportunities offer a glimmer of hope. In fact, the fisheries and aquaculture sectors (directly and indirectly) support more than **18 million** people, which is **11%** of the total population, for their livelihoods (FY 2017-18).²

In 2018, Bangladesh was 3rd in producing fish in inland water-bodies, and the 5th largest global aquaculture producer.³ Bangladesh has attained self-sufficiency in fish production in 2019 as the country's per capita fish consumption increased to 62.58 grams per day against the demand of 60 grams.⁴ Before COVID-19, the Bangladesh government had projected that production would rise to **4.5 million MT** by 2021, and the sector is expected to continue growing in the coming years.

Cultured Fish Market Contributes 56% of Fisheries Production²



1. Bangladesh Bureau of Statistics. 2016 Household Income and Expenditure Survey 2016-2017

2. Bangladesh Department of Fisheries. 2018. Yearbook of Fisheries Statistics of Bangladesh

3. Bangladesh's aquaculture success story, Megan Howell, 2020

4. Bangladesh becomes self-sufficient in fish production, 2019



Fishermen will suffer in the short term, but can take advantage of recovered stocks post-COVID-19⁵

The COVID-19 pandemic has disrupted food systems globally, resulting in significant impacts on economic and food security. In Bangladesh, aquatic food value chains make up a large part of the country's food system. The fisheries sector in Bangladesh is unique in that it is still a highly informal and largely unregulated sector with significant market influence resting with the large number of small intermediaries and commission agents. As a consequence, the challenges to the sector arising from Covid-19 and possible remedies will also be highly specific to the local context.

While farmers and farm owners, to an extent, have the flexibility to choose to sell their products at a time of their choosing to gain favorable prices or otherwise fatten their fish inventory, fishermen do not have this luxury and are expected to be worse off particularly since captured fish are considered premium, command higher market prices and will therefore likely suffer from a skewed drop in demand. In the long term, catch from natural water bodies, however, may see a slight uptick given the hiatus on fishing and improved water quality resulting from reduced industrial activities.

In the short to medium term, the farmers of high-value fish are expected to be the biggest losers as they will only see a small fraction of their envisioned returns, since consumer appetite for high-value fish is expected to take moderate time to recover even after the lockdown is lifted. Until recently, the fisheries sector had seen a major drive towards diversification of fish species under aquaculture with farmer interest focused on growing high-value fish such as Shing and Pabda. The relative decline in market prices for premium fish is likely to slow this transition towards diversification as many farmers leave the business and others scale back their operations.

The expanding aquaculture sector in North Bengal is an opportunity to scale

The Rajshahi division is a key carp fish production hub in Bangladesh, especially for the carp varieties which have come to dominate the market and are exported far and wide including the capital city of Dhaka. The eight districts under Rajshahi division produced a total of **458,400 MT** of fish³ against its demand for **404,800 MT** in 2018 resulting in a surplus of **53,600 MT**. Bogra district in Rajshahi division, is a major urban conglomeration in the Northwest and has some of the largest carp hatcheries in the country.

Katol and Rui have been the most popular type of fish among the fish producer/trader along with the other types of commonly available fish known as Bangla Chash. In line with the fish producers' demand, the hatcher/nursery also concentrate on producing fish fries of Rui, Katol, Magur, Tangram, Gulsha, Pabda, Tilapia and different types of carp.

Pabna, a fish export processing hub is also located within Rajshahi division. Case in point, Bengal Meat, one of the country's leading meat and fish processors has a meat processing plant with livestock rearing & slaughtering facilities in Pabna with an abattoir which is ISO- 22000; 2005 certified. The plant also has fish processing facilities, producing two up-market value-added fish items and processes **15 MT** of fish annually.⁴

The boon in culture fish production is a positive impact on the livelihoods dependent on the sector. According to our study, we found the following:

- The producer/traders are in the higher segment of revenue generation where **40%** of them earn more than **BDT 500K (US\$5,800)** a month.
- **22%** of the feed dealer/retailer earn a revenue of over **BDT 500K (US\$5,800)**, and another **22%** earn between **BDT 251-500K (US\$2,900-US\$5,800)**.
- The feed market being capital as well as volume intensive, where **28%** deal above **75-ton** per month and **42%** deals are between **51-75 ton** per month.
- The bulk of the hatcheries earn about **BDT 5K-20K (US\$60-US\$235)** per month in revenue.

Rangpur itself is a divisional city, and the division is home to some larger district headquarters urban areas such as Dinajpur. Study findings suggest that the division is a client zone for fish from Rajshahi, as it is the division with the lowest fish production in Bangladesh by far at just over 210,000 MT in FY 2017-2018.

³ Bangladesh's aquaculture success story, Megan Howell, 2020

⁴ Bangladesh becomes self-sufficient in fish production, 2019

⁵ How has the Covid 19 Pandemic Impacted the Fisheries Sector?, LightCastle Partners, 2020

Chapter 2

Impact of Pandemic in Aquaculture Up North



Impact of Pandemic in Aquaculture Up North

Fish feed and other aqua input prices are increasing⁶

Fish feed is the most important input in commercial fish farming in Bangladesh. Evidence suggests that, similar to fish seed actors, aquaculture input actors such as feed millers, input dealers and retailers are also affected by COVID-19. Overall feed sales tanked sharply after the COVID19 outbreak. As in the case of seed actors, feed millers have reduced their production targets based on the situation but failed to reach even revised target. In fact, in the months of March, April and May, actual sales were **46%, 39% and 46%** less respectively than the expected sales in terms of volume and value of production. The feed millers informed they had to keep the production suspended in some production units, as their inventory grew large; if feed remains unsold production cannot continue, and companies would face losses.

Feed millers expressed their concern over the increase in prices of some essential feed ingredients such as fish meal, maize, meat and bone meal, soya bean, rice bran and polish, which are mostly imported from overseas. The price of these ingredients are showing signs of volatility in international markets. Moreover, transportation costs (from port to plant) along with other administrative costs have also increased. As a result, the relative costs of these inputs have risen. It remains to be seen how – and when – the increase in input costs will ultimately translate into the price of feed. Although not confirmed by the millers, input suppliers mention local feed mills have stopped incentives to dealers (e.g. 3-6% cash support over total sell). This reflects the need of millers to reduce costs to compensate for increased prices in inputs.

Farm losses increases due to delayed harvest⁶

Pond-based fish farming cycle starts from April-May and continues up to March-April of the following year. Most ponds are harvested in February and May and become vacant for new fingerlings to be stocked. Due to COVID-19, the start of 2020/21 season will be significantly delayed in Rangpur and Rajshahi.

Farmers were supposed to complete the harvesting by April. However, as of May only **36%** reported completed full harvesting. The remaining **60%** farmers had done partial harvesting and **4%** of the farmers had not started the harvesting yet. Most farmers reported waiting for the COVID19 situation to ease down so that they would get their desirable price for the fish. The interviewed farmers, who had a total pond area of about 23ha, had harvested 9mt ton of fish before COVID-19 and had expected to harvest total **72 MT** of fish during March-May; in reality, they only managed to harvest **64%** (46MT of fish) of the expected amount.

Most of the farmers reported they could not sell their fish and had to continue feeding their ponds regularly to maintain the proper size of fish, driving production costs. The upward trend in prices of feed ingredients and fertilizers is a concern.

The farmers who completed harvesting tried to stock fingerlings for the new production season. Most of them obtained the desired species for stockings, but it took more time than expected. Because of unseen time constraints, few have gone for de-watering the pond, which is a key pre-stocking practice. They have, however, moderately followed other pre-stocking practices such as eradication of weeds/vegetation, dike preparation, liming and fertilization of the pond etc.

The farmers who did not manage to fully harvest their ponds had to stock new species immediately after completing the harvesting in June. As retailers, nurseries and input dealers stopped selling on credit, farmers faced a liquidity problem around June/July. Considering many of them had to face increased costs and losses due to partial harvesting, financial resources were in dire need.

Markets are still volatile; affected repercussion of supply chain disruption⁶

The nationwide lockdown significantly affected fish supply chain. Fish producers have already borne its brunt. Fish market, both wholesale and retail faced tough times with the fluctuating volume of trade and prices due to unstable demand and supply. Price data from a renowned non-profit working in aquaculture development in Northwest Bangladesh shows the average price for most of the fish species to be about **5%-15%** lower during lockdown than that of January 2020. The trend is similar in both the wholesale and retails markets. A little rise in the fish price rate was seen in May but, overall, prices remain lower compared to pre-covid19 periods.

Fish consumption is helping families to maintain a nutritious diet amid the pandemic⁶

97% of surveyed households consumed fish at least one day a week. About **72%** of the households had fish in their meals at least every alternate day in the week. These figures of fish consumption underscore the importance of fish in Bengali diet.

Change in Fish Consumption	Overall Population	Urban Population	Rural Population
Increase	43%	20%	23%
No Change	41%	22%	19%
Decrease	16%	8%	8%

About **43%** of the respondents (Urban: **20%**; Rural **23%**) reported an increased rate in fish consumption. **41%** of the respondents (Urban: **22%**; Rural **19%**) reported no change in consumption level, and **16%** (Urban: **8%**; Rural **8%**) mentioned their fish intake level decreased compared to pre-COVID situation. Respondents mentioned fear of COVID19 transmission (**10%**) and reduction of income (**6%**) as the salient reasons for the decrease in fish consumption.

The average value for daily per capita consumption was reported **91g**, ranging from as little as no consumption to as high as 190g against the average national per capita daily consumption of **62.6g**.

The preferred choice from most consumed fish species were Tilapia, Bata, Catla, Pangus, Koi and a variety of small fish which mostly come from aquaculture farming.

Chapter 3

Existing Practices & Hurdles Impending Sector Growth



Existing Practices & Hurdles Impending Sector Growth

Rampant spread of fish diseases hurts nurseries/hatcheries businesses

The effects of diseases on traditional and semi-intensive culture systems are significant. The noticeable effect of the diseases is mortalities in the fish population, followed by economic losses. The rural fish farmers incur an average financial loss of **BDT 20,615/ha/year** (equal to U\$ 344) due to fish disease. This value was equivalent to approximately **15%** of the total production. Such a loss affects the livelihood of poor people involved in the aquaculture sector.⁷

Disease is considered as an important factor in decreasing fish production, both in farming and wild conditions. Large-scale fish mortality often occurs in ponds due to environmental stress followed by parasitic invasion and bacterial, fungal, protozoan, and monogenean infections. Failures in fish production also occur due to indiscriminate and unplanned use of feed and fertilizer, overstocking that increase stress on fish and enhance their susceptibility to various pathogens that lead to diseases.

Seed quality and feed management are major constraints to productivity

The key constraints to producing quality feed include rising production costs, which are driven mainly by the higher cost of ingredients (most of which are imported), and the lack of means to enforce compliance of quality standards for feed ingredients and finished products. The latter is firstly a policy constraint and secondly a capacity-building issue; i.e. a lack of farmers' capacity to assess and demand quality feed, but also their lack of capital to purchase higher-priced quality feed. This is compounded by poor-quality inputs (seed and feed) and abetted by suboptimal farm management practices.

The structure of the feed industry, which consists of small farm-made feed formulators, small- and medium-scale commercial feed manufacturers, and large livestock feed manufacturers producing well-known brands of poultry feed (the bulk of their output) and fish and shrimp feed, presents a difficult policy issue and capacity-building task. The small producers tend to produce lower-quality feeds (in terms of nutritive value and structure), and the sector itself is only operating at **45%** capacity. As a result, they are prone to suffer from the use of low-quality raw materials and instability in power supply. Feed quality standards, manufacturing equipment and associated processes also need upgrading

Gender inclusivity is absent in the value chain

Although aquaculture is the fastest growing food producing sector in the world and generates employment opportunities of **18 million** people in Bangladesh at multiple scales, men and women are not necessarily able to participate in aquaculture value chains in the same way, and benefits may not be evenly distributed between them.⁸

In Bangladesh, gender roles expect women to fulfill reproductive roles and responsibilities, such as household management, food provisioning, and nursing tasks, which hinder their ability to participate in paid economic activities. In addition, women's freedom of movement may be limited by social norms regarding women's mobility, even though there are no laws limiting women's access to public space. These social norms may also lead to women facing harassment in the workplace. This, in turn, affects women's access to markets and aquaculture ponds, limiting their involvement in aquaculture value chains.

From our study, we found that only **8%** of the respondents to be females and only a handful are involved in the aquaculture value chain in the form of suppliers, buyers or LSPs.

7. Fish Diseases And Strategies Taken By The Farmers In Freshwater Aquaculture At Southwestern Bangladesh, 2016

8. Gender and aquaculture value chains: A review of key issues and implications for research, 2018

Inadequate contract farming & market linkage measures are serving as growth hindrance

In Bangladesh, contract farming practice is limited, leaving a massive potential for improvement. Contract farming in fisheries can be encouraged to increase productivity of fish farms, in which entrepreneurs with higher investment capacity and skills will invest, and where lower skilled fisher folk can work as paid employees. This will require the creation of an enabling environment for large entrepreneurs to invest in aquaculture and fish processing. Such an initiative would also be good for ensuring better prices for entrepreneurs. Investors should only be given special tax incentives when they establish contract farming in fisheries that provides some stability for poor fisher folk (tax facilities currently are given to any earning from fisheries, and these are misused by many rich individuals).⁹

Production yield is also affected by a lack of market linkage contracts with aquaculture intermediaries creating an unsecured supply chain prone to interruptions.



9. Inclusive Market Development in the Agriculture Sector of Bangladesh: Challenges and Opportunities, Nazneen Ahmed, 2016

Chapter 4

Status and Scope of Entrepreneurial Development Up North



Status and Scope of Entrepreneurial Development Up North

Local service providers (LSPs) can play a key role in the development of aquaculture in the north¹⁰

The LSP model is a decentralized extension model whereby local actors (farmers, business owners, breeders, etc.) are trained to provide extension services (knowledge, technology transfer, training, etc.) to aquaculture farmers.

LSP models can differ in the ways extension services are delivered to the farmers and in those who are acting as the extension service providers, including public and private sector actors. The LSP model is on principle based on farmer demand, though companies that sell inputs sometimes also provide services to increase sales of their products. Therefore, many LSP models are designed for larger commercial purposes for those providing the extension, either through direct payment or, perhaps more likely, by increased sales of inputs.

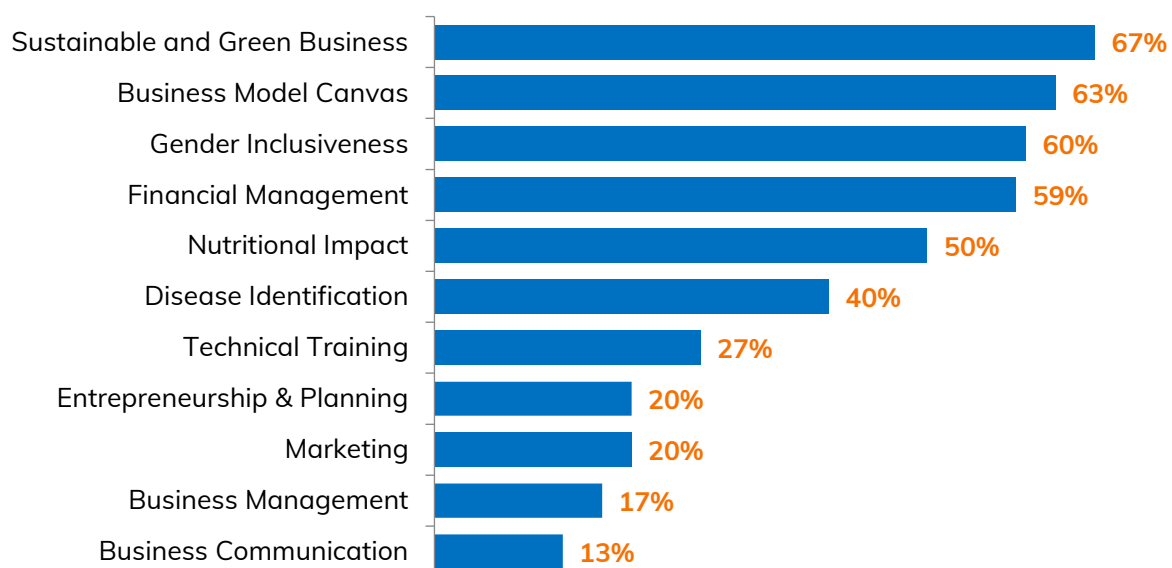
LSP models provide several positive, emerging outcomes – both in adopting improved practices and improved yields. There have also been some more intangible benefits related to increased awareness and self-confidence of producers to interact with service providers, and also in their problem-solving abilities, notably among women. LSPs such as feed traders, input traders or fish buyers could further diversify the services and make them more relevant for the development of aquaculture sector.

Knowledge improvement of LSPs is crucial to boost end-line impact

LSPs are diversely experienced and hold expertise in certain areas. However, they also have shortcomings in terms of certain skill sets which could prove to be crucial as they try to scale up their businesses and services.

According to a recent assessment conducted by LightCastle Partners, **67%** LSPs showed low proficiency in the topic of Sustainable and Green Business as the top most concern. Next in line were Business Model Canvas (63%), Gender Inclusiveness (60%), Financial Management (59%), and Nutritional Impact (50%).

Identifying Core Training Requirement for the LSPs



Source: LightCastle Analysis, 10-14 May, 2020; n=30

¹⁰. Assessment of the local service provider model in Bangladesh, WorldFish, 2019

Sustainable opportunities lie ahead in front of LSPs in return, if proper guidance is ensured¹⁰

The role of service providers also help them make a living and expand their existing business. However, to ensure a significant impact and outcome, government and development sector stakeholders can play a vital role for LSPs.

Providing Training and Service Centers: Proper support to LSPs in the form of more practical training, such as demonstrations, rather than theoretical training, can keep them up to date with the latest technologies. Providing written and visual contents, such as videos and pictures, would help LSPs disburse better to aquaculture farmers, helping them retain more knowledge. Setting up a service center for LSPs can provide a one-stop platform to access continuous up-to-date information and technical instruments.

Increasing Number and Types of LSPs: The sector can benefit from increased varieties of LSPs who also may operate as feed traders, input traders, or fish buyers - improving market linkages. Developing additional LSPs in areas where few or none at present, such as in rural areas, would be highly effective.

Raise Inclusiveness of Women: Raising public awareness to improve women's role in aquaculture and the LSP model will enhance the sector's inclusivity. LSPs can also be guided to provide more inputs and services directly in women-led households to overcome the mobility barriers women face.

Improve Inclusiveness of the Poor: The most significant barrier to the poor is the affordability of inputs to put the advice into practice. Improving access to more affordable inputs, such as through group deals with input or feed companies, and enhancing credit provisions for poor farmers, will have a high economic impact.



10. Assessment of the local service provider model in Bangladesh, WorldFish, 2019

Chapter 5

Recommendations



Recommendations

Drive demand of local produce as family favorites

Larger cultured fish varieties, in addition to being more affordable, are also favorites among younger family members as they contain less bones and are more convenient to consume. The relatively boneless species of Rui, Pangash, Katla and Tilapia are easier to prepare and dress – hence they are ideal for urban families.

Producers can take advantage of this demand for convenience by offering ready-to-cook processed fish items in small quantities for regular family consumption. Processed fish items such as fish fillets are usually imported and made from imported fish, but if local alternatives based on carp species can be marketed, it will be beneficial for carp producers in the Northwestern regions.

Container standardization and specialized equipment can be a boon for live fish

In markets, a variety of different containers are used to transport fish, without consideration of best practices for retaining freshness. In most cases, fish is transported not in refrigerated trucks but in cartons containing ice – which reduce the fresh life of fish. There are only a limited number of specialized vehicles and instruments to transport live fish and most actors perceive live fish transport to be expensive and challenging. However, it is reported that the consumers are prepared to pay a substantial premium (median of 20-30% extra) for live fish. Solving the challenges of transportation can turn live fish into a lucrative business opportunity.

Financial accessibility and literacy are critical development avenues for intermediaries

Most aratdars cannot access mainstream financial channels due to lack of paper trail. Because most aratdars do not maintain any deeds when providing credit to their buyers, they often do not have any acceptable form of records to help them recover their loans. This means that they cannot seek legal measures to recover the loans through a court of law. For this reason, banks are not willing to extend loans to fish aratdars. These intermediaries should be trained on financial literacy and bookkeeping skills so that they can access mainstream finance providers such as banks and financial institutions to cover their working capital and disbursements.

Prompt disbursement of stimulus package holds the key

The government has declared multiple stimulus packages with the aim to support the stakeholders active in this sector during the COVID-19 pandemic. However, NGOs or development sector partners should take necessary steps in order to raise awareness among these players on easing the access to these packages. Till now, the government of Bangladesh has disbursed loans totaling **BDT 260 million (US\$ 3 million)** to help the fisheries sector overcome difficulties caused by the COVID-19 pandemic. The loans, with an interest rate of four percent, were provided by several public and private banks to **1,326** fishermen and farmers in the country.¹¹

The financial support can be leveraged to procure aquafeed and other inputs to boost fish production. Alongside loans, the Ministry of Fisheries and Livestock can take other measures to assist the local fisheries sector, including offering incentives to help them maintain their business operations.

11. Bangladesh allocates loans to support pandemic-hit fisheries sector



LightCastle Partners (LCP) focuses on creating data-driven opportunities for growth and impact for Development Partners, Corporates, Startups and SMEs to promote a positive investment climate in Bangladesh.

The company's service suites include Strategy Consulting, Entrepreneurship Ecosystem Development and Digital Transformation solutions. Till date, the company has consulted for 130+ corporations & development partners, collaborated with 400+ SMEs & startups, mobilized U\$ 25 million+ in investments and organized/ supported over 30 accelerator programs across Bangladesh.

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