



CANVAS of CHANGE



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FOREWORD

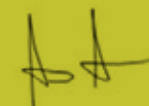
Agri-business for Trade Competitiveness Project (ATC-P), branded as Katalyst, is a market development project which aims to increase the income of poor men and women, thereby contributing to sustainable poverty reduction in Bangladesh. Katalyst has been working in Bangladesh since 2003 and the project's current phase, Phase 3, commenced in March 2014. The livelihoods of poor people depend on market systems in which they are involved as labourers, producers, entrepreneurs and consumers. Often however, the poor are systematically excluded from these markets. Katalyst uses the approach of Making Markets Work for the Poor (M4P) to break this vicious cycle of poverty. M4P identifies the barriers preventing poor people's participation in the markets and the root causes of this, and finds innovative solutions to overcome them in partnership with the public and private sectors. It partners with a wide range of private companies to ensure the inclusion of the poor in their business models. This benefits both the private companies and the poor. The project has so far reached out to over 3.5 million farmers and small enterprises, and increased their income by USD 430 million.

Canvas of Change brings you stories from Phase 3 and presents the positive impact that Katalyst is achieving. We believe that stories are the best medium to capture that impact, and this booklet expresses, from the perspective of the beneficiaries themselves, how the poor are benefiting from Katalyst's innovative approach. These beneficiaries describe how Katalyst has brought real change to their lives. This has

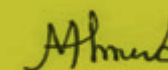
been possible because they have adopted some of the innovative services and products that Katalyst has introduced to them through local partners: where to find quality inputs like quality seeds and how to use them, how to select the right type and apply the correct amount of fertiliser, where and how to access relevant and accurate agriculture related information, how to successfully link up with output markets in order to sell their produce at the best time and for a good price, and much more. These services and products have given people living in poverty new skills, knowledge and information to increase their income and improve their living conditions. As a result, these families now eat nutritious food on a regular basis, and fulfil their dreams of educating their children, building durable homes, and living more secure lives.

We are happy to share with you the stories of our beneficiaries in this booklet, which are testimony to the success and positive impact of our 15 years of work in Bangladesh.

Happy reading!



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PARUL BEGUM

“Thanks to quality seeds, my life has improved. Besides earning my own income, I am respected in my community, and my decision-making role has increased.”



Many women in rural Bangladesh grow vegetables in their homestead gardens to support their families. Despite the scope which exists for vegetable cultivation, in char (islets) regions this is rather limited, as many farmers are unaware of its profit-earning potential; they also lack access to quality inputs such as seeds which are genetically of good quality. To increase awareness and availability of quality vegetable seeds, Katalyst partnered with Lal Teer Seed Ltd, a leading Bangladeshi seed company, to extend its market in the char areas. Katalyst strengthened the distribution channels of quality seeds through appropriate value chain actors, such as dealers, retailers, and mobile seed vendors. The project also supported Lal Teer to conduct promotional activities to create awareness among small farmers; it also helped to ensure information about proper cultivation techniques reached the farmers.





Parul Begum is a homestead farmer of Char Muladi, Barisal. She has four decimals of land and is the mother of two daughters and two sons. Her husband works at a sawmill factory. One day she was sitting in her front yard, wondering how to make the best use of her land. A member of Lal Teer staff, Hasib, made an unexpected visit to the char and visited Parul's house. He later, helped her to set up a demonstration plot using the company's seeds to grow sweet gourd, ladies finger, cucumber and cowpea. Parul was provided with mini-pack costing less than BDT 25

(USD 0.3) of quality vegetable seeds, along with the relevant information about the cultivation techniques for each vegetable.

Following these methods, within 40 days of sowing the seed Parul had produced sweet gourd, cowpea and ladies finger. The cost of investment in the demonstration plot was BDT 1,200 (USD 14), which included seed land preparation, pesticide and irrigation. She got good yields, and she sold her vegetables at the local market for BDT

500 (USD 6), each month earning a profit of BDT 250 (USD 3). After one long year of hard saving, Parul had BDT 3,000 (USD 36). She then spent BDT 500 (USD 6) on seed and other inputs, and continued homestead vegetable farming in the following season.

Parul's use of quality seeds and modern cultivation techniques meant that her yield has gradually increased. "The whole village respects me, and Lal Teer organises regular community meetings in my yard; about 20-25 women come each time. I am happy to share the benefits of using quality seeds with them and I encourage them to do the same," Parul says.

In 2016, using more of her profits saved from homestead farming, Parul bought a few ducks and chickens. Many women in Parul's village have been inspired by her example and have started to use quality seed for homestead gardening.

MOMENA KHATUN

“We cultivate prawn in the hope of making good profits, which we invest in our children’s education, health and nutrition, repairing shelter damaged from storm and flood.”



During the last decade, prawn cultivation has emerged among farmers as a popular cash crop in Bangladesh, including among a large population of women farmers who practice it in their homestead ponds. Identifying their potential, Katalyst’s Women’s Economic Empowerment (WEE) sector designed an intervention to provide training on modern prawn cultivation techniques and input linkage to the women prawn farmers of the Jessore-Khulna-Bagerhat-Satkhira-Narail belt .

Momena Khatun, from Shyamnagar, Satkhira district, has been engaged in prawn cultivation for three years now, using traditional practices in her small homestead pond. Shyamnagar is a poverty-stricken area which offers very few income-generating options. With her six children and husband, Momena lives in her village home, made of mud. She and her husband work as day labourers from season to season. Katalyst





facilitated NGO partners and input companies to provide training on modern prawn cultivation to Momena and many others like her in the Jessore-Khulna-Bagerhat-Satkhira-Narail. They were taught basic technical knowledge, and introduced to better quality feeds and aqua chemicals which provide higher yields. Aqua chemical and prawn feed companies made additional human resources available to provide services to this particular cluster of women farmers. Using modern prawn cultivation practices, Momena and others like her, farming an average pond size of 36 decimals, are now achieving an additional annual income of around BDT 20,000 (USD 250). With this extra income, women like Momena can invest in a better life for their families.



Momena is happy with her increased income. The increased yield from the pond is bringing in more money and giving her confidence to continue farming using modern methods. She is keen to participate in further training, which will improve her financial situation even more and help her secure a better future for her children. In terms of improvements which could be made, Momena commented that a more accessible supply of hatchery post-larvae and customised services from input companies would help to improve the production per decimal.

MD. REJAUL SHEIKH

“ I never thought that a small change in farm practices would lead to such a big change in my life. ”



Across Bangladesh, more than four million people are engaged in commercial or homestead vegetable farming. The vegetable sector thus plays an important role in improving the livelihoods of small farmers. Katalyst identified how small vegetable farmers can further improve their yields and increase their incomes by using a balanced mix of fertilisers.

Md. Rejaul Sheikh from the village of Shekhor, Faridpur district, learned how to grow vegetables from his father and grandfather. Rejaul and his three brothers each have five bighas (approximately 2 acres) of land where they cultivate seasonal vegetables to make a living for their extended family of 17 members, who all live together under one roof. One day, after yields had fallen below their expectations, Rejaul and his brothers consulted a local input retailer from their village, who told them about the need for balanced fertilisation. However, they thought the costs were too high and the expected outcome too vague to justify the extra investment needed in quality fertilisers.

This changed when Rejaul attended a training session in his village provided by Katalyst and its private sector partner Petrochem. Here, he had a first-hand experience of the benefits and usage of





the balanced application of fertilisers: “The training taught me the importance of using a combination of macronutrients, micronutrients and compost fertilisers, and of choosing which fertilisers to apply before, during and after cultivation. I didn’t really believe that a mere change in fertiliser application would create any significant impact, but visiting a demonstration plot and talking to the lead farmer convinced me to give it a try,” Rejaul says.

This, as Rejaul goes on to say, was one of the best decisions of his life. In 2015, when Rejaul applied a balanced mix of fertilisers, by using a proper mix of micro, macro and compost, for the first time, his harvest doubled – and seeing the result, his brothers instantly followed him suit. The slightly increased investment they have had to make in quality micronutrients has more than paid off for Rejaul and his brothers.

Rejaul now makes an annual profit of BDT 100,000 (USD 1205) from vegetable cultivation on his land, a three-fold increase from before. With his extra earnings he bought another 2 acres of land for vegetable cultivation. Alongside this, having learned about the importance of properly storing his produce to keep it safe and healthy in order to achieve a higher market price, Rejaul invested in two warehouses where he stores seasonal products.



Rejaul is now much more confident about the future for his three-years old daughter and his eleven-years old son. Thanks to his increased income, they will not have to do odd jobs to support the family when they are older – they can go to school and pursue their dreams.

Rejaul is also very happy to share his knowledge of modern vegetable farming methods with other farmers. Whenever he or his brothers encounter any issue, they go directly to the local Petrochem dealer office, where they can get advice and learn about the newest techniques and products.

MD. ALMAS SHIKDER

“With the right training and knowledge of modern cultivation methods, everyone can achieve high yields from maize farming. After struggling for many years, my life has improved and I can offer my family a decent life.”



Maize is a high-yielding crop which is even more profitable than rice and wheat – which is why Katalyst is promoting maize cultivation as an effective pathway out of poverty for many small and poor farmers across Bangladesh. However, in order to practice successful, commercially profitable maize cultivation, farmers need to overcome a number of key challenges. These include knowing how to select and where to obtain the right variety of quality seeds, and the adoption of modern cultivation techniques, as well as usage of the right amount and combination of fertilisers in order to maximise yield.

Almas Shikder is from Faridpur district in central Bangladesh, and started maize farming in 2011. With a family of five to support and encouraged by what he heard about the potential high profitability of the crop, Almas decided to start maize cultivation on two bighas (0.8 acre) of land. Drawing on his traditional farming knowledge, at first he applied high dosages of macro fertilisers to his land and used long-established cultivation techniques. But when it was time to reap the benefits of his hard, dedicated work, Almas felt disenchanted. The harvest was below his expectations, and would not even cover the comparably high start-up costs he had incurred. Although successive harvests improved gradually as Almas experimented with new techniques and methods that he learned



from friends and relatives, yields were never enough to make ends meet. As a result Almas, being family's main earner, had to take on extra work and odd jobs.

Three years after Almas started to grow maize in the hope of a better life for himself and his family, things started to change. Katalyst and its private sector partners in the maize sector developed a business model whereby input companies such as Petrochem provide training and information to small maize farmers, in turn creating loyal customers who acquire quality inputs (such as fertilisers and seeds) from the companies authorised retailers/dealers. Almas heard about the training offered by Katalyst and Petrochem in a neighbouring village and decided to attend a session. The hands-on training included information about the benefits of using quality seeds and fertilisers, modern cultivation techniques, improved irrigation management, and proper harvest technology. Putting this newly gained knowledge to use in his fields, Almas experienced a growth in yield, and encouraged by this unfolding success he attended four more training sessions.

He says that thanks to using modern cultivation practices, his yields and income have increased considerably: "I never knew about the importance of using a balanced mix of macronutrients, micronutrients and compost fertilisers to maximise yields. Since starting to use the right dosage



and combination of these three inputs, my harvest has been increasing and I can sell much more maize grain."

Before Katalyst's intervention, Almas obtained 15 maunds (0.6 Metric Tonnes, or MTs) of maize grain every year from one bigha (0.4 acre) of land, earning him a profit BDT 9,000 (USD 108); now he harvests an average of 30 maunds (1.2 MTs), earning him a profit BDT 18,000 (USD 217) a year, investing minimum amount on inputs. This is all thanks to the usage and balanced application of quality fertilisers. With his additional income, Almas recently bought a new house for his family; he is earning a stable, regular income which allows him and his family to live a decent life. His eldest son, aged 23, has also started maize farming on land, Almas bought for him using the additional income. Almas has also become a mentor to other farmers in his village on modern, commercially profitable maize farming methods, and is proud to share his knowledge with them.

FIROZA AKTAR


“The new skills I acquired made me realise that I can pursue all of my dreams.”



Bangladesh's craft sector employs a large number of women. Tapping into the sector's potential for women's economic empowerment, Katalyst identified that by providing independent craft producers and poor women artisans with better access to skills development, knowledge of effective production technologies, and market linkages, they can increase their income and lift themselves out of poverty. This has resulted in an innovative collaboration between Katalyst and Aarong, Bangladesh's largest craft retailer and a social enterprise which has emerged from the development organisation BRAC. Under this project, women entrepreneurs and independent producers working with Aarong receive business and technical skills training which they pass on to their women artisans.

Firoza Aktar from the village of Godaikandi, Netrokana district, works as a quality controller at a factory on the outskirts of Dhaka which supplies Aarong with embroidered curtains, bedsheets, cushion covers and table linen. Before that, she used to live with her family of fourteen. "My father and brothers grow rice and






vegetables to feed the family, but over time we found ourselves struggling more and more. So I decided to take my destiny in my own hands and go to Dhaka. I wanted to be able to take care of myself and support my family at the same time,” Firoza says.

Firoza really struggled when she first came to Dhaka. She knew no one, and many people tried to exploit her, making false promises and giving her false hopes. “I was on the point of giving up when I came across an employment opportunity at Isabah Enterprise, owned by Md. Rejaul Islam Rana. I started as a helper under the supervision of Ms. Mou, the owner’s sister. Ms. Mou was like a mentor and a guardian to me – she encouraged me to learn from her,” Firoza says. Ms. Mou had taken part in the Katalyst and Aarong skills training programme and, recognising her efforts and dedication to her work, passed on to Firoza the relevant parts of the training she had learned. Through this, Firoza learned about embroidery work and quality checking.

She proved a fast learner and was promoted to the position of quality controller, meaning that she was able to put her newly gained knowledge into



practice. As a helper, Firoza used to get a monthly salary of BDT 3,500 (USD 42) – this has now increased to BDT 7,500 (USD 90). “My samples get immediate approval and I’m getting more orders from Aarong,” she says. She spends the money on essentials such as rent and food, and sends additional money back home to her family. With this money, her family has been able to buy extra land on which they grow rice.

The training that Firoza has received, not only provided her with an increased income – it also empowered her.

Firoza says that she feels proud of what she has achieved: she has gone from being a helper to becoming a quality controller with a staff of eight working under her.

Now Firoza is keen to attend more training and improve her business skills. She wants to build on her knowledge and become a small entrepreneur, producing toys she designs herself. Thanks to the training and the immense impact it has had on her life, Firoza is confident that she can achieve anything she takes on.

NURUNNAHAR RUNU


“ Improving my artisanal skills has directly translated into an increased income for me and my family. Now I am the main earner in my household. ”



According to a study by the Bangladesh Women Chamber of Commerce and Industry (BWCCI), 69.4 per cent of the country's women entrepreneurs are involved in the craft sector. It provides numerous income-generating opportunities, employing an estimated 120,000 women artisan who works either from home or in small factories. By providing business and technical skills training to the women entrepreneurs who work as independent producers for Aarong, Katalyst creates a win-win situation: on

one hand, independent producers and their women artisans are able to enhance their skills, improve their competitiveness, and ultimately increase their income. On the other hand, the initiative helps Aarong to ensure a steady supply of high quality products for its growing customer base.

Nurunnahar Runu from the village of Chorbongkhuri, Manikganj district, works from home and supports her family. Her husband runs a machine repair

A woman in a purple and teal sari is seated in a textile factory, working on a traditional spinning wheel. She is focused on her work, with her hands positioned to spin the threads. The factory environment is visible in the background, with shelves stocked with various colored threads and other workers in the distance. The lighting is warm, highlighting the vibrant colors of the threads and the woman's attire.

business, but after becoming sick a few years ago he had to drastically cut back his workload. “To support my family, I do different types of artisanal work – cotton embroidery, attaching buttons to jute sacks and other jute-related work. I do all of my work at home – sometimes my son and my husband help me – and then I supply it to Ms. Parvin Akter’s toy factory, from where I get a regular monthly income,” Nurunnahar says.

Before receiving training from Ms. Akter, Nurunnahar’s monthly profits amounted to BDT 2,000-3,000 (USD 24-36), which was barely enough to make ends meet for herself and her family. “I acquired all the artisanal skills by myself. It often took me a long time to finish the work I got from the factory; at times it would be rejected because of mistakes, and I had to do everything again at my own cost,” Nurunnahar says.

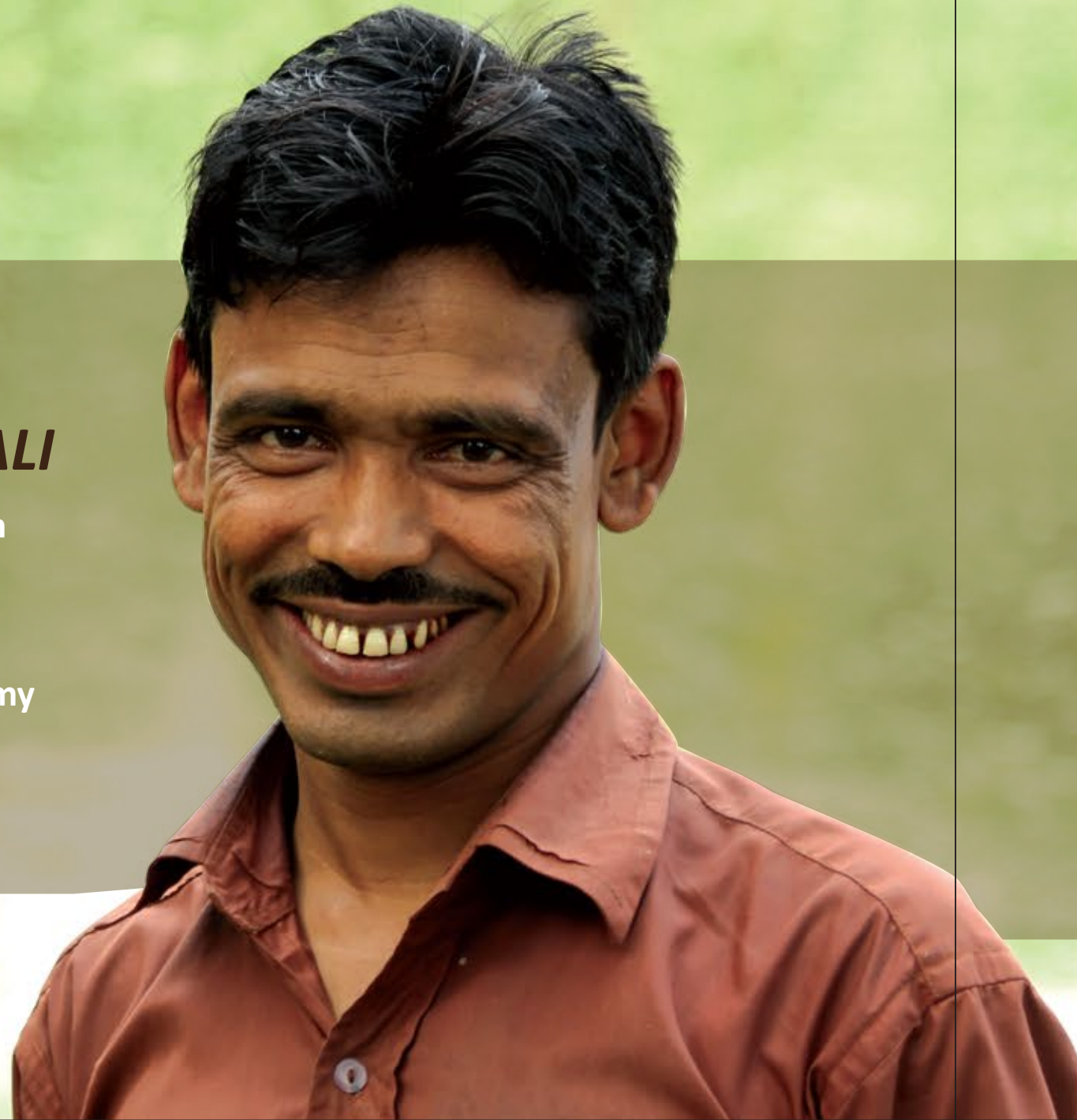
Ms. Akter, one of Aarong’s independent producers and the owner of a small factory, had received training from Katalyst and Aarong; she passed on some of the most essential skills she had learned to her women artisans, to improve the quality of

her products and to run her business more effectively. As a result of the improved quality and better time management, Ms. Akter’s business will almost certainly get more orders from Aarong, which in turn will allow her to increase the income of her women artisans and to employ more staff: everyone benefits.

After receiving skills training from Ms. Akter, the quality of Nurunnahar’s work improved and she was able to deliver most of it on time, making her a reliable, effective part of the business chain. As a result, her monthly order volume increased, with a considerably less work being rejected for quality reasons. Nurunnahar now makes at least BDT 6,000-7,000 (USD 72-84) each month. Together with her husband’s income, this is enough to pay the rent on their house and send their two children to school and university.

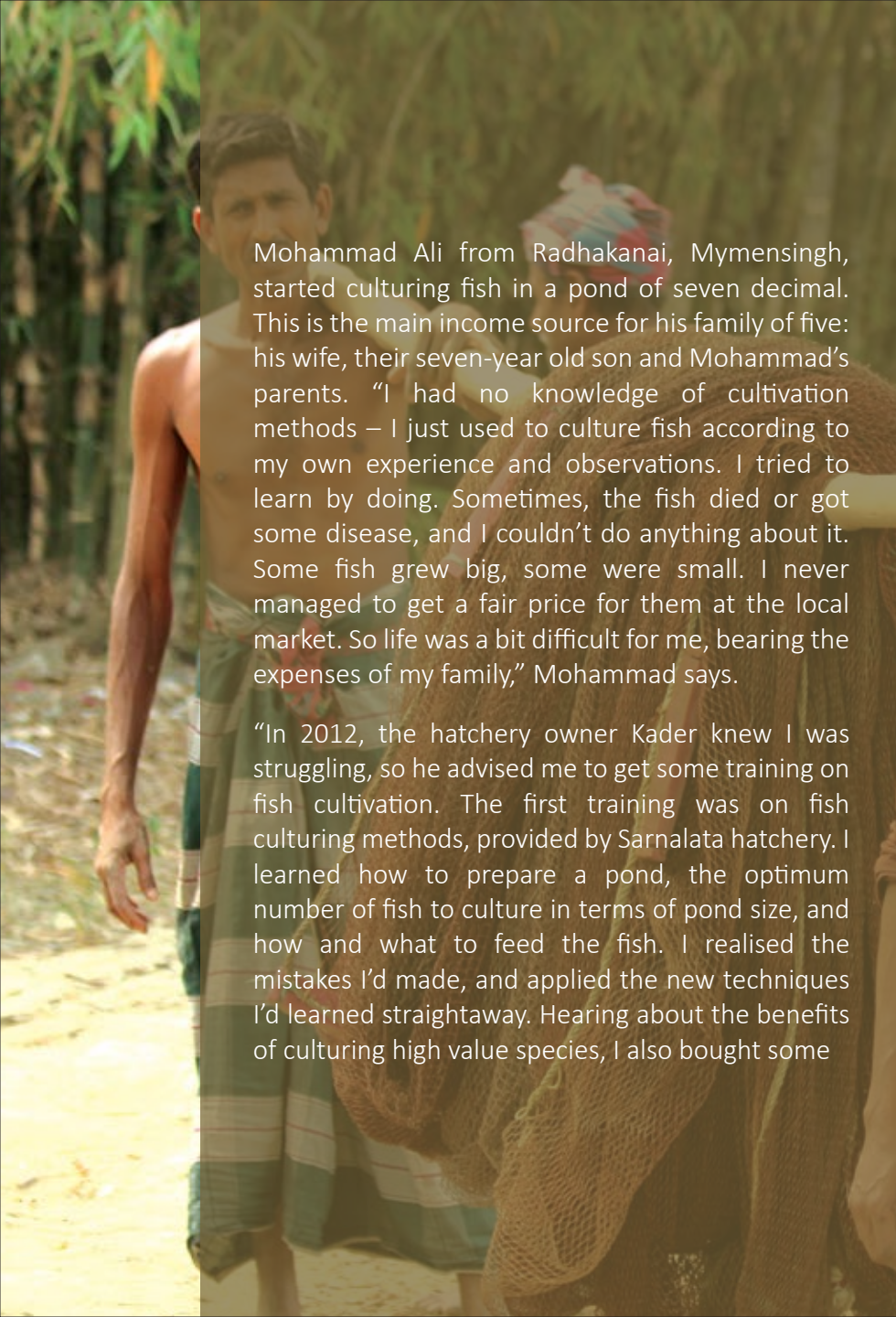
MOHAMMAD ALI

“ I never knew that fish farming could be so profitable. Culturing high value species means my income is increasing and my life is changing. ”



High quality inputs such as fingerlings, commercial feeds and aqua chemicals are key factors in commercially-profitable fish farming. Small fish farmers however lack access to these inputs: private companies usually cater only for medium and large fish farmers. Even when small farmers do get improved access to quality inputs, their knowledge of effective culturing techniques tends to be limited, and improper post-harvest management practices can result in considerable wastage of the fish produced. Katalyst works across these three areas (quality inputs, flow of information and knowledge, and post-harvest management) in order to help increase the income of small and poor fish farmers. In collaboration with input companies (such as local hatcheries, feed and aqua chemical companies), Katalyst developed a business model to promote the culture of high value species among small and poor fish farmers.





Mohammad Ali from Radhakanai, Mymensingh, started culturing fish in a pond of seven decimal. This is the main income source for his family of five: his wife, their seven-year old son and Mohammad's parents. "I had no knowledge of cultivation methods – I just used to culture fish according to my own experience and observations. I tried to learn by doing. Sometimes, the fish died or got some disease, and I couldn't do anything about it. Some fish grew big, some were small. I never managed to get a fair price for them at the local market. So life was a bit difficult for me, bearing the expenses of my family," Mohammad says.

"In 2012, the hatchery owner Kader knew I was struggling, so he advised me to get some training on fish cultivation. The first training was on fish culturing methods, provided by Sarnalata hatchery. I learned how to prepare a pond, the optimum number of fish to culture in terms of pond size, and how and what to feed the fish. I realised the mistakes I'd made, and applied the new techniques I'd learned straightaway. Hearing about the benefits of culturing high value species, I also bought some



quality tilapia fingerlings from the hatchery: now, I culture these alongside the traditional species developed," Mohammad goes on to say.

Mohammad Ali used to spend BDT 8,000 (USD 99) to buy enough fish feed to culture BDT 8,000 (USD 99) of fish, which he can sell in the market for BDT 35,000 (USD 435), making an increase in annual profit of BDT 12,000-15,000 (USD 145-181). However, the training showed him how to

make fish feed at home instead of having to buy it. The money he saves as a result – as much as BDT 2,000 (USD 24) – counts towards his profit.

With the additional income he has earned during the last three years, Ali says, first he repaired his small house, and later spent some money expanding it. He feels good about the future, and plans to lease a pond and continue cultivating fish.

MD. FAZLUL HAQUE

“Becoming part of LAN has helped me and other farmers in the village to get relevant training and information on modern cultivation methods. Now, with support from the traders’ association, we can communicate regularly with extension officers and discuss any important issue.”

“I have five daughters and a son –I can’t provide for them through vegetable farming alone”. Md. Fazlul Haque from Noirpara Comilla, inherited 39 decimals of land from his father and grows vegetables like snake gourd, bitter gourd and ladies fingers. Fazlul used to farm using traditional methods, as his father and grandfather did before him, but he noticed that over time the soil degraded and vegetable yields fluctuated enormously. “We always seek advice from the extension officers but they are not available all the time. We once tried to get their help when half of the crops farmed in the village were infected with a fungal disease, but it was time consuming.” Fazlul went on to say, “Everyone relies on them and they don’t have enough personnel to cover problems which come up suddenly.” Most of Bangladesh’s vegetable farmers have a similar story to tell.

With the right information, inputs and services, many poor and small farmers like Fazlul can lift themselves out of poverty. The government’s public extension services provide information that farmers find trustworthy, but these are limited in terms of outreach and coverage, ultimately compromising





farmers' productivity. Katalyst identified that at sub-district level, agriculture traders have an established relationship with extension officers and at the same time a healthy interaction with farmers, who they either supply or buy from. Usually formed into associations, these traders are appropriate actors for the project intervention to target, having both the incentive to create better access to extension services for farmers, and being in the position to do so.

Katalyst's Local Agri-business Network (LAN) taps into local trader association potential by enhancing its capacity in advocacy and organisation management. A trader association can reach groups of farmers as clients, and at the same time support them to access the agricultural extension services they need. By putting traders in the role of facilitator, LAN has created a complementary channel to support public extension services to reach farmers more efficiently. In order to make this linkage formal and organised, sector-based public-private initiative (PPI) committee is formed jointly by extension officers and traders, comprising representatives from three parties – farmers, input and output traders, and extension officers. This committee addresses any major issue raised by farmers, taking appropriate action by sharing resources, roles and responsibilities.



Fazlul Haque, through his farmer group, became associated with the LAN and participated in training on the use of quality seeds, and effective crop protection methods (such as sex pheromone traps, disease prevention and how to apply a balanced mix of fertilisers). Farmer training like this is arranged by the trader association, with the extension office providing the technical resources and the association helping bring the farmers together, arranging a venue, and providing logistical support.

According to Fazlul, the training has helped him enormously. His yields are improving and the increased income he gets as a result helps him to meet his family's needs. Now, with support of the local trader association, extension officers can communicate regularly with farmers like Fazlul to check on their progress and provide advice whenever necessary.

The LAN initiative has strengthened the link between farmers and extension offices with help from local trader association representatives. Regularly scheduled PPI meetings help both government officials and farmers identify emerging issues and plan effectively for the forthcoming season. In keeping with Katalyst's M4P approach, LAN has enabled farmers like Fazlul Haque to get quality inputs when he needs them, the information to use them correctly, and enhanced his ability to compete in the market.

MD. BABAR ALI

“ I am delighted with the outcome of my hatchery and prepared to invest more if local demand requires. ”



Md. Babar Ali is a hatchery owner in Baliadangi sub-district, Thakurgaon district. He has been cultivating fish since 2007 and currently owns five ponds covering a total area of 800 decimals (8 acres). The main difficulty Babar and other local fish farmers faced was sourcing the fry and fingerling they needed – there was no hatchery in their locality, and instead they had to travel to government hatcheries in Parbatipur sub-district, more than 100 kms away. They either rented a car to transport the fry back home, which cost at least BDT 2,000 (USD25), or used a motorbike if the amount they were carrying back was small. Either way, the fry and fingerling were getting damaged during transportation.

In February 2015, Katalyst’s Local Agri-business Network (LAN) formed a public-private initiative (PPI) committee for the fisheries sector to address the problems of the fish farmers by sharing their resources and responsibilities. The committee comprised the upazila fisheries officer, upazila traders and fish farmers, including Babar Ali, and it identified that a hatchery in Balidangi sub-district would help the fish



farmers overcome the problem of wastage during transportation. Babar Ali recognised a business opportunity and was persuaded by the farmers' demand for fry and fingerlings to invest in building a hatchery. The upazila extension officers assured him they would provide the technical knowledge to make his business a going concern, and local fish farmer representatives agreed to get their fry and fingerling from his hatchery as soon as it was up and running.

Encouraged by the PPI committee's response, Babar started to build his hatchery, with an investment of BDT 1,500,000 (USD 18,750). The extension officer made suggestions about layout and design, and assisted Babar to source BDT 400,000 (USD 5,000) worth of mother fish for the hatchery. He also recruited five employees who he pays BDT 39,000 (USD 500) a month.

In January 2016, Babar Ali's hatchery had produce ready to sell. In the first month he sold BDT 53,400 (USD 668) worth of fry, and indications are that he is likely to earn BDT 1,760,000 (USD 22,000) from the sale of fry and fingerling, which will almost cover his investment.



Babar Ali acknowledges the role of the PPI committee who provided the support and confidence he needed to start his venture, and is passing on advice and suggestions to his fellow fish farmers who get their fry and fingerling from him. This hatchery significantly benefits the local fish farmers of Baliadangi upazila, making it easy to collect fry and fingerling, saving money and time, and mitigating against the struggle of farming fish.

MD. OMAR FARUK MONDOL

“7676 is a phone number that every farmer should know about. I call it whenever I have an agriculture issue or need some trustworthy, reliable agriculture information.”



The availability of relevant, up-to-date agriculture information and services is one of the key elements needed to empower small farmers, allowing them to reduce potential losses and increase productivity. Katalyst identified that information and communication technologies (ICT) such as mobile phones offer an effective and easy way to help get farmers the support they need. In 2008, Katalyst and telecom operator Banglalink established a call centre-based helpline which provides farmers with solutions to their agriculture queries.

Omar Faruk Mondol from Jaipurhut district is a vegetable farmer and day labourer. Together with his father, a rickshaw puller, he makes a living for himself and their family. Whatever they earn is spent on household essentials.

Omar has been growing vegetables for the last four years. At first, he leased some land and started to grow bitter melon. However, the yield was always lower than expected. “I needed some reliable information on what I could do better or what I was doing wrong. But every person in the village who I asked gave me different advice. I didn’t know what to do,” Omar says.





Then one day, as he was selling some of his meagre harvest at the local market, Omar saw an advertisement painted on a wall. "It said to call 7676 for agriculture information and advice. I immediately made a call on my mobile and spoke to one of the call centre agents," Omar goes on to say.

Katalyst has partnered with Banglalink to launch the agriculture helpline 7676 as an effective, easy-to-reach platform and fast way to disseminate agriculture information to rural farmers. Krishi Jigyasha 7676, introduced in 2009, has been widely accepted by farmers, with more than 385,000 calls registered in 2011 and 2012. Utilising the experiences of this helpline, Banglalink is also partnering with the Department of Agriculture Extension to launch another helpline service, connecting farmers to their nearby agro extension officers.

Omar's story shows how effective such an innovative ICT-based solution can improve the lives of millions of farmers across Bangladesh.



After describing to the call centre agent the cultivation methods he applies, which crops he grows and the issues he faces, Omar learned how and with which dosage to apply urea and potassium fertilisers in order to improve his yield. He also found out about the most effective crop protection methods available to reduce losses. He has called 7676 another three times to obtain agriculture information he can trust.

Omar has obtained information about pesticide spray on his vegetables that was affected by insects. Through 7676 helpline, Omar has been able to increase his annual profits considerably, to BDT 86,000 (USD 1,036) from selling vegetable. With the additional income his bitter gourd production brings him, he has bought a water pump which ensures safe drinking water for his family. He also puts away some money for emergencies and necessary household expenditure.

A photograph of a man with dark hair and a mustache, wearing a light blue button-down shirt, smiling warmly. He is positioned in the center-left of the frame, with his head and shoulders visible. The background is a lush green field of plants, likely a vegetable garden or farm, with large green leaves and thin brown stems. The lighting is bright and natural, suggesting an outdoor setting during the day. The overall tone is positive and hopeful.

SHARIFUL ISLAM

“Timely information from the customer based care brought me happiness”

Access to timely and relevant agriculture information is a crucial factor in determining higher yields for farmers and reducing potential losses. This information is available from a number of sources; however, a major market constraint is that these sources do not cater to each farmer's individual demands. Katalyst has been working in the ICT sector since the project's inception, addressing this constraint through the utilisation of ICT-based agriculture information solutions. One example is the use of telecom-led helplines, which have been developed with Katalyst's strategic guidance. Here, telecom operators provide advice to farmers via a helpline – the information is available at their fingertips and at the time it's needed, vital for farmers dealing with issues which require immediate attention.

In Phase 3 of the project, and using the experience and learning gained through its work with helplines in previous years, Katalyst started focusing on agriculture input companies as leverage points. In 2015, Katalyst partnered with Metal Agro Ltd, a major Bangladeshi seed company, to develop a customer care solution for farmers. The first of its kind in Bangladesh's agriculture input industry, this

requires farmers to place a missed call, which is then followed by a call back from the company's representative (or call centre agent). This missed-call model makes the solution more affordable for Bangladesh's large number of smallholder farmers, unlike the paid helpline services provided by the leading telecom operators. Metal Agro have opted to make the calls free for farmers, and pay for it themselves as their research indicates that this will enable them to retain their existing customers while at the same time attracting farmers who currently use their competitor's products. It also allows the company to benefit farmers by providing information on the effective usage of its products, alongside other generic agriculture information. It means Metal Agro can promote its brands to a large number of farmers and at the same time gather market intelligence from its system reports, enabling it to develop its business strategies more effectively.

Shariful Islam from Mymensingh is a vegetable farmer, and like many others has accessed Metal Agro's customer care service. His home is in the Borogram of Muktagacha district, where he lives with his wife and four daughters; his



brothers live in the same locality and they support each other in times of need, often discussing the agricultural issues affecting them. Last season, one of Shariful's brothers recommended the bottle gourd seed sold by Metal Agro. Motivated by his brother's bumper harvest, Shariful bought some of the seeds from a retailer, who told him about Metal Agro's newly launched customer care solution.

Shariful has been involved in farming for the last twelve years, but still felt ill-informed about the ever-changing scenario of new plant diseases. He was familiar with just a few common pesticides, which he used when necessary. Following his brother's suggestion, Shariful grew bottle gourd on the 15 decimals of land he owns, but after a month, noticed that the leaves were crumbling and turning a toxic yellow. The medicines he applied did not help and every day he was losing part of his potential valuable harvest. Poverty seemed imminent.

When his brothers were unable to come up with an answer, Shariful decided to approach Metal Agro's customer care service the call centre agent recommended a powder, based pesticide; Shariful took this advice and after two weeks his crops were disease-free and healthy again. Encouraged by this success, his brother can now access the helpline

whenever they encounter a problem they cannot solve themselves. For them, it has proved a reliable source of agriculture information – and they are particularly appreciative of the fact that the service is free to farmers. Shariful sold more than 400 bottle gourds last year, a success he attributes to the timely information he received from the call centre which meant he could save his crops.

Metal Agro currently provides information solutions to approximately 1,000 farmers each month, a number which is steadily increasing. To accommodate more calls,

Metal Agro has invested in additional resources as part of their scale up plan. At the pilot stage, the company featured the helpline number on five of their most popular packets of seeds; following the pilot's success, it has printed it on five additional products, promoting the service to an increased number of customers. The success of the Metal Agro customer care solution has not only benefited farmers but has also convinced four other private sector partners from the agriculture, aqua chemicals and fish feed industries to replicate it, promising to reach a larger number of smallholder farmers.

NURUL ALAM

“ Advice on balanced fertiliser use from the Union Digital Centre helped me increase my income ”



One of the major factors inhibiting economic growth in Bangladesh's agriculture sector is farmers' lack of access to relevant agriculture information. Both the public and private sectors have a competent extension workforce and distribution channel systems in place; however, resource limitations mean a vast number of farmers still are not being included in the information loop. Katalyst has been working with public and private actors in Bangladesh's ICT sector to address this market constraint. Utilisation of rural digital centres (known as Union Digital Centres, or UDCs) to disseminate agro information to farmers has been one notable example.

In 2015, Katalyst partnered with Access to Information (A2I), a government programme based at the Prime Minister's Office, which has established UDCs, one-stop ICT service outlets operating in all 4,547 union parishads of the country. The centres are owned by the government but run privately by rural entrepreneurs. Generally, each UDC has a dedicated broadband internet connection connected to a computer, along with other hardware support such as projectors and a photocopier. The entrepreneurs offer a wide range of online and offline ICT-based services, which include government services (for example e-passport, national ID card registration), livelihood information,



computer training and mobile banking. These digital centres are located at union parishad level, the lowest tier of local government, making the service easily accessible to all the farming households in that union. Each union in Bangladesh has an average 25,000 inhabitants, any of whom can access the services offered by the local UDC.

Fifty UDCs in the Rangpur division were shortlisted for Katalyst's pilot, based on farmer footfall in these centres, with the objective of equipping them as effective sources of agriculture information dissemination. Katalyst established a linkage between A2I and digital content provider WIN Inc, to develop a website with comprehensive agriculture information solutions which could be accessed by the UDC entrepreneurs to help farmers with a range of agriculture-related queries. The UDC entrepreneurs were then trained to use the website and other sources of agriculture information (such as the fertiliser recommendation software (FRS) operated by the Soil Resource Development Institute) effectively, to provide agriculture information solutions to farmers. In addition, A2I and Katalyst collaborated in organising farmer-focused awareness activities to educate farmers about the newly introduced service in UDCs.



Md. Nurul Alam is one of the many farmers who has visited a UDC to get agriculture information and who has benefited through improved productivity. Nurul is a 36-year-old farmer who lives with his wife and two children in Bondorpara village, Kochukata union. His father was also a farmer, and Nurul was involved in farming from a very early age. In November 2015, Nurul attended a courtyard meeting, part of the awareness campaign driven by A2I and Katalyst. The very next day he decided to visit his local UDC. He was planning to grow maize, and was concerned that his knowledge about the proper application of fertiliser dosage may not be up-to-date. Mr. Razzak, the UDC entrepreneur, accessed the FRS to advise Nurul on the best dosages relevant to his land. Nurul took a printout of the advice away with him, and later applied it in his practice.

Nurul used the information to grow maize on his 30 decimals of land. His yield increased significantly, from 800 kgs in the previous season to 1,120 kgs, giving him and his family an increased income of BDT 4,000 (USD 50). Nurul is clear about the reason for this success. He says, "The information I got from Mr. Razzak was really helpful – it was the first time I'd learned about the practice of balanced fertiliser usage. It gave me better productivity and a reduction in my production costs. Following my success growing maize, I've already visited the UDC again to get information on potato cultivation, which I'm engaged in at the moment – and I'm hoping it'll bring me similar results."

