

### Who says women can't fish? Stories of successful women farmers in Bangladesh and Nepal









#### WHO SAYS WOMEN CAN'T FISH? STORIES OF SUCCESSFUL WOMEN FARMERS IN BANGLADESH AND NEPAL

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#### INTRODUCTION

It is our pleasure to present several stories of women in rural Bangladesh and Nepal who are making positive changes in their communities. The stories have been collected from a variety of projects WorldFish has been implementing over the past nine years with support from partners and donors.

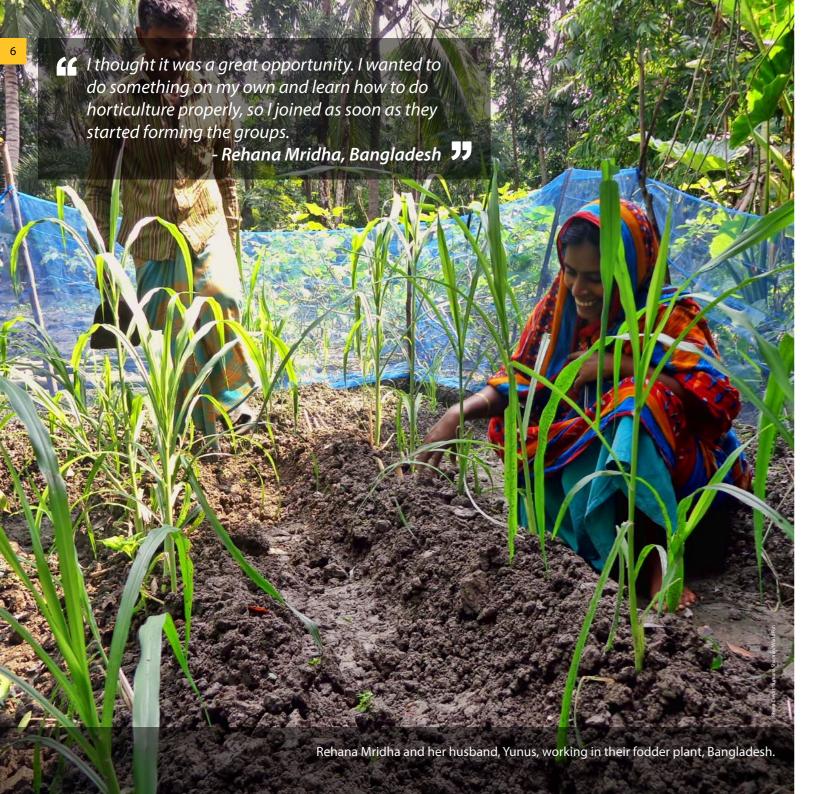
These inspirational women have undertaken new agriculture-aquaculture livelihood opportunities to better their lives and those of their family members. To get where they are now, these women have had to overcome many challenges. They stand out as examples to their communities, and their stories signal important directions for investment in women and aquaculture, which bodes well for the future.

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We invite you to join us in celebrating the success of these women.





#### Homegrown research reaps benefits for Rehana and her family

When Rehana Mridha told her husband, Yunus, about her plans to grow new vegetables on their land for research, he told her it would be a waste of time.

"I thought this whole thing was outrageous," Yunus says. "She's a woman. How can she do all of this by herself?"

Rehana and Yunus are from the village of Fultola in Bangladesh—an area not known for growing vegetables. The environment is too saline for large-scale vegetable cultivation, and the residents continuously struggle to get a steady supply of water for drinking, household use and irrigation.

To help households overcome these challenges, the AAS program, implemented by WorldFish and the International Water Management Institute and Bioversity in the southern polder zone of Bangladesh, invited farmers to do their own participatory action research on household horticulture.

Having struggled to grow vegetables on the family's plot of land, Rehana was more than happy to participate in the AAS program when it came to her village in 2013. She agreed to participate with the only plot of land she had access to—the small yard in front of her house.

"I thought it was a great opportunity," Rehana says. "I wanted to do something on my own and learn how to do horticulture properly, so I joined as soon as they started forming the groups."

The program involved farmers working with scientists to conduct their own research on projects they identified as the most important for improving their income, household nutrition and well-being.

The first research activity in these communities focused on improving household horticulture by identifying the seed varieties and management practices most suited to their location.

Rehana chose to plant kangkong, also known as water spinach, a nutritious green leafy vegetable that had never been cultivated in her village. She had a hard time trying to convince the people around her about the value of her project, but she carried on.

"This was the first agricultural venture that was completely my own," she says. "I was determined to see it through."

Rehana worked hard on her plot—measuring and preparing the beds, digging water channels between them and carefully planting the seeds in rows. Yunus started to take notice.

"The process was very organized and interesting," Yunus explains. "I also realized that she was taking it very seriously and was working really hard on her plot, so I started to help her out."

He began assisting Rehana, and when their plot flourished with kangkong shoots, Yunus proudly distributed the results of his wife's hard work among their neighbors. When the time came for the next research activity on fodder for livestock, Yunus eagerly participated and took much of the hard work on his own shoulders.

Yunus and Rehana now appreciate the value of a participatory action research approach to agriculture and readily share their experience with other community members. In 2014, they hoped to plant another kangkong crop and have inspired others to grow their own.

"I have people coming up to me, eagerly asking about the next research agenda and how they can participate," explains Sumana Sharmin, program officer with the AAS program. "The interest in joining the research groups is increasing every day."

#### Parona's success with a household pond

Parona Begum lives in the village of Taluke Shahbazli, Bangladesh, with her husband and three children.

Despite owning property and resources – 70 decimals (0.7 acres) of land, a house, a 25 decimal (0.25 acre) pond and a 25 decimal (0.25 acre) rice field – the family could not fully utilize them.

Parona's husband was disabled from an illness and unable to work on their farm, leaving most of the farming duties to Parona, who could not manage on her own. She knew she had to find ways to earn extra income to meet the growing expenses of her family, but didn't realize their pond could be a productive resource.

The pond was mainly used for household purposes, as water for cooking, cleaning and livestock. Although it was stocked with fish that the family consumed occasionally, they believed the pond had limited income potential.

All that changed in 2013 when two people altered Parona's outlook on her pond.

The first was Namita Bala, a community agriculture volunteer who told her about the techniques for small-scale aquaculture. Excited by the potential of these new techniques, Parona decided to adopt them, and seeing her interest, the village development committee members selected her as a fisheries demonstration farmer in June 2013.

The second was Sumitra Rani, an aquaculture officer with the USAID and Government of Bangladesh-funded Strengthening Household Ability to Respond to Development Opportunities II program, led by CARE Bangladesh and with WorldFish as a technical partner.

Rani provided Parona with two days of basic training on fish culture in ponds and vegetable farming on dikes. Armed with new skills and knowledge, as well as input support, Parona put her training to use.

She knew simple management techniques could yield high results, so she cleaned the aquatic weeds, removed any predatory fish, applied fertilizer and lime, and monitored the plankton in the pond water. With the pond properly prepared, she stocked 1625 high-quality fingerlings of different fish species in her pond, including an indigenous and highly nutritious small fish called *mola*.

Parona's training made her aware of the importance of consuming *mola* for good health and using the pond dikes to grow nutritious vegetables.

"We never considered any of these as important resources before," Parona explains.

Parona's husband supported her work on the pond, as it was close to the homestead and didn't affect her other daily household activities.

After 6 months, Parona harvested 315 kg of fish from the pond, leaving behind a stock of 45–50 kg. Her total expenditure was BDT 12,100 (USD 155), of which the project provided BDT 10,000 (USD 128), and she was able to save BDT 2100 (USD 27) from rearing livestock. By December 2013, her profit was BDT 33,100 (USD 426): BDT 32,500 (USD 418) from fish and BDT 600 (USD 7) from vegetables. Parona and her husband used this money for their children's education and other household expenses.

Parona is now a model fish farmer, and she is happy with her success. Many of the village women who have come to her for technical advice have also started fish farming.

"I received training, inputs and advice which helped bring about a remarkable change in my life for which I am grateful," she says.

#### Chitra turns fish farming into a successful business

Chitra Rekha Tharu, a mother of three, first began fish farming in 2011 to help support her family, who live together in the village of Sapahi, Pathkhauli 5, Nepal. With financial support from the Fish Mission Program of the Rupandehi District Agriculture Development Office (DADO), she constructed two ponds and began farming "table" fish that grow big enough to eat.

Eager to expand her business and acquire new skills, she joined the EU-funded Agriculture and Nutrition Extension Program, led by International Development Enterprises, to receive training in fish nursery management. During the training, which was supported by WorldFish, Chitra visited a number of nurseries and hatcheries in her area and in Bangladesh to see and hear other fish farmers' experiences. After learning about stocking and rearing hatchlings and other aspects of nursery management, she incorporated new technologies into her ponds. These helped increase her yield significantly.

Realizing there was greater profit potential from selling fingerlings instead of fish, Chitra decided to develop a nursery so she could supply quality fingerlings to her community while encouraging other members to engage in aquaculture enterprises.

Encouraged by her exchange visits, she began stocking carp varieties and set up her own nursery business in 2013, which quickly proved profitable. Through extensive research and networking, Chitra gained hatchlings of different carp varieties, which she raised and sold as fingerlings to 225 farmers in her region.

In 2013, her first year with the project, Chitra earned a profit of NPR 112,000 (USD 1163). She estimates that she sold approximately 1 million carp fingerlings and 40,000 rohu and naini (carp species) fingerlings in her first year of business.

"More than 50 farmers have come to me this season [2013] to buy my fingerlings," she says.

In the first half of 2014 alone, Chitra earned approximately NPR 129,000 (USD 1340) in profit from her nursery. She used these profits to construct three more nursery ponds.

In the future, Chitra plans to expand her business by constructing two new fingerling conditioning tanks and improving the water supply system to the tanks. She now has 410 regular clients and earns over NPR 277,252 (USD 2880) a year.

Her husband, America Prasad Tharu, is very involved with the nursery and has supported Chitra throughout her endeavors.

"We used to have chickens, but have closed the coop because we realized fish farming was far more profitable," he says. "We will use one section now to try growing mushrooms and maybe try for another, smaller stockpond for small indigenous species in the remaining area."

Seeing the benefits aquaculture can bring, Chitra has also convinced her mother to construct and maintain a pond.

With demand for fingerlings remaining high, Chitra hired a permanent worker in August 2013 to support the work on her farm.

"There was a huge demand for fingerlings in 2013, but we could only supply a small quantity," she says with confidence. "In 2014, we expanded and I hope to be able to earn as much as 10 lakhs [1 million Nepalese Rupees] from the enterprise."

With a locally run business, Chitra maintains strong links with the fishers and small tradesmen in her community. Her goal is to improve the quality of brood development in her region, and she has introduced new stocks of carp, including bighead from Janakpur to begin this process.

"There are so many possibilities; there is a lot to be excited about," Chitra says. "If we work hard and learn from others, we can make use of so many resources here in Nepal."



#### Sabita's climate-smart research garden yields promising results

In Bangladesh, many rural households rely on homegrown plants and vegetables as a source of food and income. But for residents living in the saline-affected areas of southern Bangladesh, growing crops on their land is often a struggle.

For Sabita Debnath and her family from the village of Chandipur, Sathkhira, the high salinity in the soil meant she could not effectively farm the small one decimal (0.009 acre) plot of land next to their house.

To feed her family, she relied on the income earned by her husband, Prosanto, who worked as a tailor and day laborer. Still, she could not afford to buy enough food to provide three meals a day for her family.

Faced with few options, Sabita joined WorldFish's SmartFarm project as a farmer-researcher.

SmartFarm, which is under the CCAFS program, used participatory action research that encourages local farmers to engage in the program as co-researchers.

The project targets households in southern Bangladesh, a region highly affected by climate change issues, particularly high salinity. Salinity in the river system of the southwestern coastal region increases steadily during the dry months, from December through February, and peaks in late March and early April. Around 20% of the cultivable land of Bangladesh's coastal region is affected by varying degrees of salinity.

Farmer field schools form an integral part of the participatory research process. Sabita attended learning sessions in 2012, which helped her initiate research into developing new methods to grow vegetables on her homestead.

Through the sessions, she learned that vegetables could still be cultivated during high salinity periods using vertical agriculture. She also learned that she could save vegetables from damage caused by heavy rainfall by cultivating them on raised garden beds or in gunny bags and that good yields can be produced from earthen towers.

Sabita has been testing the feasibility of these options against climate change issues affecting her area, such as salinity, flooding, water logging and storms. Prosanto has been very encouraging and supportive of her in carrying out these trials and helped her purchase the necessary locally available inputs. He even started participating in the research process himself.

"My husband discusses issues with me before taking decisions as a result of what I have learned," Sabita notes.

Along with her husband, Sabita's son and daughter also help by watering the vegetables and removing insects using integrated pest management techniques that their mother learned at the training sessions.

While engaging in this research, between 2012 and 2014, Sabita was also been able to add fresh vegetables to her family's diet and even make money by selling the surplus.

"It feels very good when someone comes to me to purchase vegetables," she explains.

The learning sessions have given Sabita confidence to be a researcher, and she is excited that her findings have the potential to improve her livelihood, even in challenging climate conditions.

## As a result of working with CSISA-BD, WorldFish, I have received social acceptance and an income increase from my fixed resource. I now feel less burdened when I think about my son's future. - Sonavan Begum, Bangladesh

#### Sonavan's success in fish farming stands out as an example to other women who are afraid to venture out in the traditional village of Patra, Bangladesh.

#### Sonavan takes the lead in fish farming

Patra is a traditional village in southern Bangladesh with a large Muslim population. Here, women are often unable to engage in non-conventional income-earning activities, such as fish farming.

Living in this village is Sonavan Begum, a 45-year-old widow who lost her husband in 2008 and has since been supporting herself and her school-age son.

After her husband's passing, she was left with a 42 decimal (0.42 acre) dike-surrounded gher (modified rice field) and 10 decimals (0.10 acres) of homestead land. Despite owning these resources, Sonavan's lack of technical knowledge, as well as the social barriers she faced living in a traditional community, restricted her from effectively farming them.

In 2013, the USAID-funded Cereal Systems Initiative for South Asia in Bangladesh (CSISA-BD) project, implemented by the International Rice Research Institute (IRRI), International Maize and Wheat Improvement Center (CIMMYT) and WorldFish, launched in her village. Sonavan met one of the field staff who told her about the project's technology on improved prawncarp polyculture and horticulture on dikes.

This technology suited Sonavan's gher system very well. The field staff encouraged her to attend the project's training sessions, but Sonavan was afraid that the community would not allow or accept her doing such training. Even if she did, they would not like her directly engaging in fish farming.

To overcome these barriers, the project staff talked to her and her neighbors about the benefits of women's involvement and the problems Sonavan faces as the head of a household. As a result, the men in the training group, with encouragement from CSISA-BD staff, slowly enabled Sonavan to attend the training without fear.

Sonavan was the only woman in a 25-member group to participate in the two-day training. Later, she showed leadership in demonstrating the technology to the community in a farmer field day, which was mostly attended by men.

By adopting the prawn-carp polyculture techniques she learned in the sessions, Sonavan made a profit of BDT 33,062 (USD 426), compared to only BDT 8300 (USD 107) before she joined the project.

Following Sonavan's success, her gher was chosen in 2013 as the participatory farmer trial demonstration site and was given a certain portion of the inputs by the project. The remaining inputs she managed through loans from relatives.

"Now I am not afraid to take loans because I am confident I can pay them off," she says.

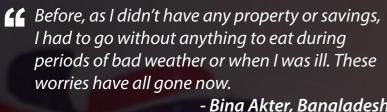
Since participating in the project, Sonavan has paid her debts and invested in other assets, including a cow. She can now afford home tutoring for her son, and she has saved money to invest in her future fish farming activities.

Sonavan has also noticed a change in her attitude. "Before I felt very shy to talk to outsiders, especially men," she says. Now, she talks freely with other people, instructs her hired labor, orders inputs for the farm and talks to the community with confidence.

Because of Sonovan's achievements, men and women in her village now seek her advice about fish farming and horticulture. During the government-organized National Fish Week 2014, she was awarded the upazila-level Best Fish Farmer Award for improved prawn-carp polyculture and vegetable horticulture on dikes in a gher system.

"As a result of working with CSISA-BD, WorldFish, I have received social acceptance and an income increase from my fixed resource. I now feel less burdened when I think about my son's future," she says.

Sonovan's hard work and perseverance have brought many benefits to her family and to the community, where she is inspiring others as a positive role model.



- Bina Akter, Bangladesh 🎵

#### Bina Akter on the dais at a profit distribution ceremony, Bangladesh.

#### Bina leads the way in fisheries resource management and poverty alleviation

Bina Akter is a determined woman. Over the past decade, not only has she pulled her family out of poverty; she has also become a successful businesswoman and community leader.

Like many families in Sunamganj, in northern Bangladesh, Bina and her husband depended on fishing in the region's floodplains during the monsoon season for both food and income.

When the monsoon water recedes from the floodplain, pockets of water called beels are left behind in low-lying areas or depressions in the ground. Beels contain wild fish and are an important natural resource for the surrounding communities.

However, these pools are generally leased out to the highest bidder who receives exclusive rights to fish there for three years. For resource-poor fishers like Bina, this means they are unable to access these vital fishing grounds to support their families.

Restricted by these policies and living on a small 2 decimal (0.02 acre) plot with no cultivable land of their own, Bina and her husband turned to selling rice bran to bring in extra money. Even with this additional income, however, they could barely afford two meals a day for their four children.

Determined to support her family, Bina joined the Beel User Group (BUG) in 2007. It was formed by the IFAD-supported Sunamgani Community-Based Resource Management project, implemented by research partners WorldFish and the Local Government Engineering Department (LGED).

Through an agreement with local government ministries, the project secured access to selected beels for group members to fish year-round and provided training to increase their ability to both sustainably manage the beels and fish them effectively.

Under the project, Bina learned conservation practices for managing the beels and received training in gender awareness and leadership development. Equipped with new

knowledge and skills, Bina represented her community at BUG coordination meetings. She regularly contributes to the beel management meetings and acts as a focal point for women's perspectives on fisheries management.

It was a big step for Bina to leave the home and speak publicly at meetings, but through her perseverance, and with support from her husband, her self-confidence grew. As a result, she now demonstrates her leadership at project workshops and seminars alongside government officials from local and district levels.

With the help of this project, Bina has realized her dreams. She now has access to beels, protection of fishing rights, recourse to financing and confidence in her leadership skills, which together have given her the ability to enhance her family income.

During the first year of the project in 2007, Bina and her husband earned BDT 7207 (USD 93) from fishing. In 2012 and 2013, this increased to BDT 18,000 (USD 231) and BDT 22,000 (USD 283), respectively. Between 2007 and 2014, the year the project ended, they earned BDT 101,912 (USD 1310), which paid for their children's education and enabled them to afford nutritious meals of meat, milk, fish and fruit.

Combined with their income from the rice bran business. the family was able to save BDT 20,000 (USD 257) by the end of 2013. From their earnings, they have been able to build a house with a tin roof and earthen walls, as well as a sanitary latrine, and the family now has access to safe drinking water and solar power.

"Before, as I didn't have any property or savings, I had to go without anything to eat during periods of bad weather or when I was ill," Bina says. "These worries have all gone now."

#### New skills help raise Liza and her family out of poverty and malnutrition

Liza Begum, her husband, Salam, and their three young children live on a small piece of land with a 10 decimal (0.1 acre) pond in the village of Singerkati, Barisal, Bangladesh.

Salam works as a laborer, ploughing land for rice and vegetable cultivation in a nearby town. But like many resource-poor farmers in his village, Salam's income is not enough to cover his family's expenses.

The district of Barisal in southern Bangladesh has the country's highest rate of child malnutrition. In an area heavily dependent on fish for nutrition and prone to natural disasters, aquaculture and vegetable farming have a key role to play in providing a balanced diet for the region's resource-poor.

The Save the Children's Nobo Jibon program (2010–2014), funded by USAID and with technical partnership from WorldFish and others, works to reduce food insecurity and vulnerability in Barisal by providing training and support for fish and vegetable farming to more than 16,000 rural resource-poor like Liza and her family. When Liza learned the Nobo Jibon program was offering free training sessions in her village, she went along to find out how to better use her small pond and garden.

The sessions focused on how to farm *mola*, a micronutrient-rich small fish, as well as carp, and the best methods for growing vegetables on pond banks. Liza was also introduced to orange sweet potato, a nutritious vegetable fish farmers can easily add to gardens on pond dikes.

Equipped with new skills and easy-to-use guidebooks for reference, Liza stocked 360 carp fingerlings in her pond.

After the 9-month production cycle, she harvested 145 kg of fish, with a gross market value of BDT 14,500 (USD 187). Deducting production expenses of BDT 5275 (USD 68), Liza's profit was BDT 9282 (USD 119). On top of this, her vegetable crops produced BDT 6396 (USD 82) in profit.

"From the fish we produced, I ate some with my children and sold the rest, using the money to pay for my sons' school fees," Liza says. "My neighbors noticed my fish cultivation, and seven other households from around the area have now started farming like I am."

In 2013, Liza expanded her farm by leasing two ponds for *mola* and carp polyculture, which she expected to yield a profit of BDT 50,000 (USD 645). She is also rearing ducks and cows at her home and growing vegetables around the banks of her new ponds.

By adopting better fish and vegetable farming techniques, Liza has transformed the fortunes of her family, who now have more nutritious food to eat and enough money to cover their household needs.

# We started with nothing. I have become a businesswoman from a day laborer. - Rawshan Ara, Bangladesh 😯 Rawshan Ara in front of her pond, Bangladesh.

#### Rawshan's journey from laborer to successful business owner

In 2011, Rawshan Ara and her husband, Md. Khalilur Rahman. had an experience they will never forget: watching 400 kg of fish in their ponds die in a single day.

Her husband, without knowing how to correctly use fertilizer, had applied 100 kg of urea, a lethal amount of fertilizer given the 40 decimal size of their ponds.

"The fish started dying within a few hours," explains Rawshan, who lives in the sub-district of Babuganj in Barisal, Bangladesh.

By the end of the day, Rawshan and her husband had lost all of their fish, which represented wages they had received from their jobs as day laborers at a fish nursery.

"We used stock fingerlings in our pond that were given to my husband instead of cash," she says.

The devastating incident motivated Rawshan to attend workshops on becoming a local service provider (LSP) as part of the AIN project.

In 2014, Rawshan attended eight training sessions that covered topics such as good aquaculture practices and growing vegetables on pond dikes. The training helped boost her production yields, and after receiving training on nursery management, she decided to establish her own nursery and sell fingerlings as an income. Now, as an LSP, she provides training to other farmers in the same position she once was in.

"Before, despite raising carp in our ponds, I didn't know about pond preparation, feed and water management," she explains. "Our production was hardly optimal, but we didn't know that."

"Through the training, I am helping farmers with technical knowledge and quality fingerlings. It is also helping me market my products to the farmers and expand my business."

Because Rawshan follows good aquaculture practices, the fingerlings she produces are high quality, making happy customers out of people like fry hawker Alam Sheikh, who has been in business for the past 10 years and seen varying levels of fingerling quality.

"I am back again to buy her fingerlings this year, because I am confident about getting good fingerlings," he says.

Rawshan is grateful that becoming an LSP has helped turn her life around, and she can now help others improve their fish farming, too.

"We started with nothing. I have become a businesswoman from a day laborer," she says with a smile.





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