

BANGLADESH

FROM GREEN TO SILVER

Shila Fatema Wadud National Innovation Facilitator for the fish partnership

Mohammed Moshir Rahman National Innovation Facilitator for the fish partnership

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Today, entering Trishal, Mymensingh on the road from Dhaka, one sees rows of fish ponds. One after the other, they show the massive diversification in recent years from traditional rice cultivation into investment in aquaculture and the intensification of fish production. And the trade-offs between green crops and silver fish appear to be increasingly clear to smallholders and family farmers, as they move to become family fish farmers. They see the benefits in terms of profits and returns, and are increasingly making the move into fish farming.



Fish farming is becoming a family affair, and a mainstay of local livelihoods and the national economy.

“The CDAIS approach provides opportunities to participate, learn together and formulate joint solutions,” explained Ritish Pandit of Ukilbari, Boilor, Trishal, after attending the capacity needs assessment workshop in February 2017. “And this will usher in new horizons for fish farmers, working with stakeholders, and will surely help in successful implementation and achievement of the desired results.”

Pandit started his fish farming and hatchery business in 1982, called Reliance Aqua Farms, and thanks to his forward-thinking approach, supported by training and access to credit, he quickly expanded. In 2016–17, he sold almost 50 tonnes of fish, mostly tilapia and panga (catfish), making a profit of 1.5 million Bangladeshi taka (US\$18,000) including sales of fish fry and spawn. “And my business now employs four permanent staff and 16 temporary workers,” he added.

“I was impressed with the innovative approach of CDAIS in bringing together fish farmers and organisations that support us, to find ways to overcome challenges we face in producing quality fish for local and overseas markets.”

Ritish Pandit fish farmer, Trishal, Mymensingh

Great advances and glass ceilings

Bangladesh is proud of its achievements in achieving self-sufficiency in food production, and is now the fourth largest producer of fish in the world, but only contributes 4% to gross domestic product (GDP). In recent decades there have been major advances in fish culture in ponds and tanks, rather than from rivers and natural open water. This was made possible by new knowledge and technology transfer from international projects, conducive government policies, and support from the Department of Fisheries, the Bangladesh Fish Research Institute and the Bangladesh Agricultural University Faculty of Fisheries. And, now, through new CDAIS participatory approaches.

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In Trishal and Mymensingh, the potential of fish farming arose in the 1990s with the introduction of tilapia and panga that proved easy to raise, fetched a high price and for which there was high export demand. Mymensingh is the source of more than half of national panga production, and one-twelfth of all tilapias. But this emerging sector faces difficulties in fully realising expected profits due to the complex nature of fish value chains, poor availability of much-needed inputs, low-quality feedstuffs and challenges with market access.

“ I look forward to working with CDAIS, building functional capacities – soft skills such as the ability to collaborate, navigate difficulties, reflect and learn, and be a part of strategic processes. ”

Golum Hossain Chair of the Tilapia Foundation

CDAIS, building a base in Bangladesh

Work began in 2015 after a scoping study to identify the most innovative approaches, and fish farming was one of the innovation partnerships selected. Appointed to each is a dynamic and specially trained ‘national innovation facilitator’ who delivers quality coaching and advisory services to farmers and other value-chain stakeholders. The fish cluster in Mymensingh, like others, is further supported by the CDAIS Country Project Manager, Agrinatura and Food and Agriculture Organization of the United Nations Bangladesh. The approach is based on the Tropical Agriculture Platform Common Framework on Capacity Development for Agricultural Innovation Systems, galvanising commitment, visioning, assessing capacity needs, and developing and implementing strategy.

This partnership chose to focus on the tilapia and panga culture due to demand and export potential. Initial visits involved discussions with fish farmers and those working in and around the value chain, learning about existing issues, platforms and potentials. Following further discussions with



Mr Pandit's fish farm, Trisal, Mymensingh

government officials and other experts, key stakeholder groups were identified, with gender balance emphasised. The capacity needs assessment workshop was then organised with four main aims – to review the status of fish farming, problem analysis, strategic action planning, and policy recommendations for win-win solutions for smallholder producers.

Unexpected benefits

Participants discovered that the Department of Fisheries is developing a mobile-phone app to provide all kinds of information relevant to fish farmers. Also, during the workshop, participants became aware of the existence of a recently formed association working towards



similar goals – the Tilapia Foundation – comprising of 15 farmers, 8 hatchery owners, and the National Hatcheries Association. The chair, Golum Hossain, former director general of the Fisheries Research Institute, told participants that he helped to establish the foundation after a visit to a tilapia foundation in the Philippines, supported by the Katalyst project and WorldFish. The historical ‘timeline’ exercise showed that the development of fish farming in Mymensingh was due in part to there being many well-educated young entrepreneurs who took up fish cultivation. Also, government support and help from universities and other farmers, has facilitated growth, and increased consumer preferences for cheaper and tastier tilapia and panga. Also, a lot of interest was shown in a new variety of Vietnamese panga, and in the production of indigenous fish species that are on the verge of local extinction.

Remaining challenges, and overcoming them

However, production is not rising fast enough to meet increased demand, because of high input costs for feed, fry, labour, loan interest, drugs, etc., lack of knowledge on modern fish-culture technology, lack of marketing support, and few opportunities for making and building partnerships. Workshop participants prepared a ‘capacity-development action plan’ to be adapted and implemented. Larger-scale farmers are accustomed to working with each other and with government officials, researchers, universities and extension services, but they are not representative of marginal smallholder farmer groups. To make this crucial link, developing partnerships is key – facilitating local market links and opportunities for processing for export.

Meeting capacity needs

In February 2017, a CDAIS capacity need assessment workshop brought together different stakeholders, allowed many new contacts to be made, and led to new 'discoveries'. It was organised around a series of innovative tools to stimulate thinking and help to understand the complex interactions within the network of actors in fisheries in Mymensingh. These included timeline analysis, problem-and-solution trees, net mapping, combined visioning, and action planning. The aim? To identify a common vision for fish cultivation, capacity gaps, and innovative technical and functional capacity interventions. Half of the participants were fish farmers or hatchery owners from one of three unions in Trishal, Boilor and Balipara. Others included feed dealers and feed-mill owners, aquaculture drug and equipment dealers, fish-fry suppliers, input dealers, processors and retailers, and representatives of the government fisheries

and marketing departments, the Bangladesh Fisheries Research Institute, Bangladesh Agricultural University and several non-governmental organisations.

And after many intervening meetings, a two-day kick-off meeting of the Trishal Fish Innovation Platform was held in Mymensingh on 6–7 December 2017, to identify the key problems, find feasible solutions and develop a nine-month action plan to implement these. It was facilitated by Moshir Rahman of the Bangladesh Fisheries Research Institute who was positive about the changes this had also had on himself: "I am a technical fisheries research officer working on fish breeding, but now also a CDAIS national innovation facilitator. In this role I am learning how to encourage actors in the fish value chain to work together to overcome the problems faced in their sector. And through this series of events organised by CDAIS, I have learnt about better ways to facilitate sessions, and how to validate and implement the coaching plan."



CDAIS has helped to bring together fish farmers, fish processors, feed suppliers, hatchery owners, traders, government fisheries officers at district (Upazila) level, and professors from Bangladesh Agricultural University.



“My business now employs four permanent staff and 16 temporary workers.”

Ritish Pandit fish farmer, Trishal, Mymensingh



Ritish Pandit, fish farmer from Mymensingh, teaches others about his approach.

However, as was seen at the workshop, the concepts of ‘functional skills’ and ‘thinking in partnerships’ were not fully understood. Smallholder farmers are not used to working in partnerships, thinking that they must first face up to more pressing challenges. But, experiences so far give the team confidence, and all participants saw that CDAIS facilitators and staff were involving them from the very beginning, which had a positive effect. The workshop also helped to forge links that will help to directly respond to the most immediate issues, with contacts made with hatcheries, input stockists, producers and processing plants.

The sharing of skills will go on. Pandit offers regular but informal training to an ever-increasing number of other smallholder fish farmers in the hope that they can replicate his success. He is happy to share his experiences to help other farmers through the CDAIS project. And, because demand is so huge, he has no fear of competition – rather, that additional production can only attract more buyers to the area.

“Through the CDAIS project we now work together and will find paths to solve our problems. CDAIS means motivation, CDAIS means ties, CDAIS means mutual cooperation, CDAIS means production... CDAIS means development.”

Ritish Pandit fish farmer, Trishal, Mymensingh



Tilapia from Pandit's fish farm, Trishal, Mymensingh

Prepared by

Shila Fatema Wadud, National Innovation Facilitator for the fish partnership (shilawadedgp@gmail.com, +88 1711527865), and Mohammed Moshir Rahman, National Innovation Facilitator for the fish partnership (riad242@gmail.com, +88 1717013264)

Fish is one of three innovation partnerships in Bangladesh, identified during the scoping study of the CDAIS project. For more information, visit www.cdais.net/home/pilots-countries/bangladesh. CDAIS is implemented in Bangladesh by Agrinatura (represented by NRI - the Natural Resources Institute, part of the University of Greenwich, UK), FAO Bangladesh and the Bangladesh Agricultural Research Council (BARC), in partnership with other institutions, depending on the innovation partnership.

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