

## Where Women Are Experts Too



In the courtyard, the family gathers for a formal group photo. Though the afternoon is hot and humid, the youngest kids have been made to slip into something a little less comfortable than their loose 'lungi' skirts. The husband though, having just fed the cow, is still in his working clothes. But, while the whole family should be ready, the eldest daughter is missing. Still, although the 15 year old will be missed in the picture, the reason for her absence makes the whole family happy. Why? Because she is sitting in class IX of the nearby secondary school. This is an experience her parents never had; both of them left school to start work after only three years. Now they work hard to make sure that all four of their children will receive an education, and have an easier life than their own. That is why their two other girls are in classes VIII and III, and why their five year old boy will start school very soon.

Through their hard work Sumitra Biswas, 32, and her husband, 42 year old Gopal Biswas, have given their children a brighter future to look forward to. Perhaps they'll tell us more about this as we inspect their small roadside farming plot.

Both Sumitra and Gopal were born in this village, Goakhola, in the Narail district in the south-western corner of Bangladesh. When they

married they had no land of their own. Gopal, who came from a family of eight sisters and brothers, could not take over any of his family's land. So, he and his wife worked with their families at the kind of agriculture practised here, growing rice, which is the dominant crop, and jute, which is also a good income earner.

Sumitra, being one of two sisters, was given a small piece of land by her father in 1998, since there were no boys to take over his farm. The land was just about enough for a homestead. They managed to save for another small piece, taking the amount of land they owned up to around 0.2 acres. Not a lot. In fact, probably only amateur soccer players would regard this as enough ground for a game.

But there is not much room for playing around here. The first thing you have to do if you want to live in this part of Bangladesh all year round is raise the land enough to protect it from the annual monsoon flooding. There is one simple way to do this. You dig a big hole, which turns into a small lake when the rains start, and build a small platform for the house, people and animals. Once the floods start, the amount of land covered by water and the amount that stays dry will be about the same size.

A walk around this farm will not take you far. In one corner, near the raised road, is a cowshed: in the other corner is the kitchen house. There is also a bedroom house, which has a protected veranda, and near this is the chicken coop and a straw-stack, which signals that the cow lives here. There is also a pond, which is surrounded by a dyke. Walking on this dyke is difficult, because it is crowded with fruit trees, banana and papaya amongst others. The dyke is broken in one place, and the channel out leads to small irrigation canals and then to a beautiful, high stand of taro plants. The real beauty here, however, is underground.



*The Biswas family's farm is only big enough for one cow. But this single animal produces plenty of milk, and enough manure for both their garden and their fish pond.*

The giant roots of this plant provide a good cash income when sold at the local market.

The plot of land is so small that it is hard to believe that anyone could live off it. But this family does. What is more, as we have already said, they are doing even better than their parents' generation. How can this be? Well, for the explanation, we need to travel somewhere else.

### *A long journey*

Early one morning last March, just after the Bangladeshi winter ended and months before the monsoon started, Gopal met with four or five other men from the village, and boarded a lorry they had rented—with driver—for two days. They stood on the back of this lorry for hours on end while they rode south, watching the green rice in the fields growing in water left over from the rains and the flooding, which end around New Year. Their destination was the mysterious Sundarbans. This is an enormous delta, much of it protected as a nature reserve, which contains mangrove trees, swamps and other unspoilt areas, and, of course, the fabled Bengal tiger, which is still found there in dwindling numbers.

But Gopal and his neighbours were not interested in sight-seeing. Right after their arrival they contacted a professional fisher: they had come to trade. During the night, while they waited for the fisher to arrive with his catch, they watched over the cash they had brought with them. Then, when the morning came, they loaded their truck with heavy blue plastic drums bought from the fisher. Each drum weighed more than 50 kg, and contained brackish water from the delta and, more importantly, shrimp fry.

*The fisher who bargled with Gopal and his neighbours over the price of his catch had only collected these baby shrimp the day before. At this stage, the individual fry were too small to recognise as anything other than 'something' moving around happily in their temporary homes during the long trip back to Goakbola, their new permanent home. In Goakbola they were kept in saline water for a few days and then, when ready, they were moved to freshwater feeding grounds. Gopal has heard that soon, a hatchery could be opening nearby to produce the baby shrimp.*

### *A hearty welcome*

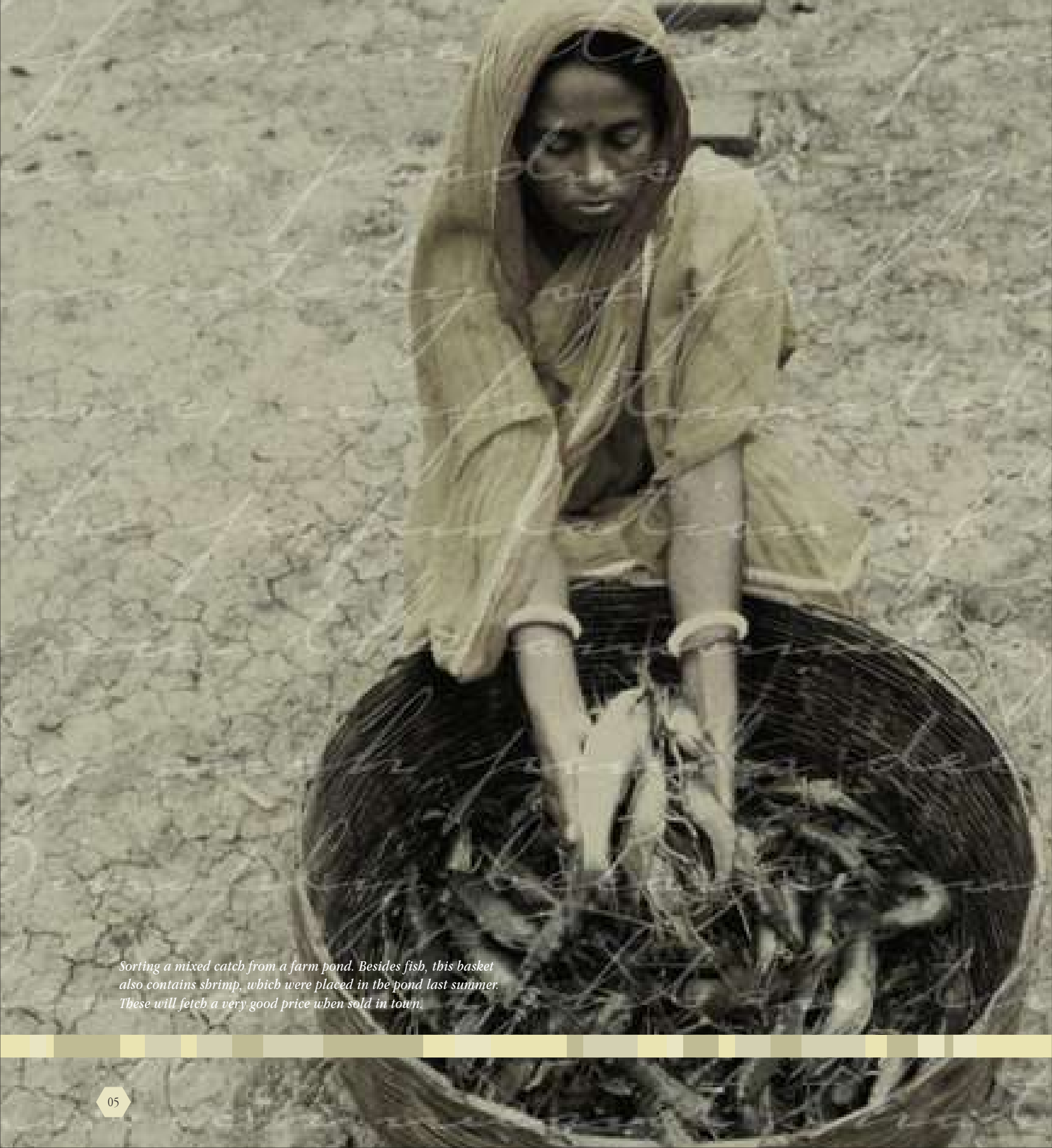
All this happened back in March. Now, in late July, Sumitra is happy to welcome us in the family's courtyard and take us to her husband. Gopal is standing in the water of the nearby pond with a relative, showing him a basket trap with some of the contents from those blue drums. Only, they are hardly recognisable. The trap is full of shrimps. Most are 5-6 cm long, but some from last year's stock are giant sized, more than 25 cm long and pretty fat. Four of them could make a full meal.

As you can see, the young shrimp were welcomed here, and no effort was spared to make them feel at home or, in fact, rather more comfortable than they would have been in the wild waters of The Sundarbans. But all this care was not lavished on the baby shrimp by Gopal alone.

Sumitra did not travel down South in the truck, and she will not be able to wade through the water to catch shrimps when strangers are nearby. But, for good reasons, these are the only things she refrains from when it comes to farm and pond work. It takes two to run the place and make a profit. What is more, it is Sumitra who is actually the person 'in-the-know' when it comes to running the fish farm.



*Sumitra Biswas takes pride in this poster on her veranda. It states that she was one of the first people in the area to join the local fish-farming project.*



*Sorting a mixed catch from a farm pond. Besides fish, this basket also contains shrimp, which were placed in the pond last summer. These will fetch a very good price when sold in town.*

## *There's fishing and fishing*

Both Sumitra's parents and Gopal's parents had small ponds producing fish on their farms, mainly different types of carp. But there, the whole process was very much left to nature. The fish were washed in during the flooding season, and some were left behind to grow when the water pulled back. These were taken by Sumitra's and Gopal's parents when they had grown to a sensible size. Not a bad process. It gave a small income now and again or, if the families could afford not to sell the fish, provided a very valuable addition to their standard diet of rice and vegetables. Fish are rich in vitamins and iron, and in other minerals that people need. And, of course, they also provide animal protein, which is often missing from the diets of people living in developing countries.

Of course, these ponds never produced a great quantity of fish. What is more, unfortunately, as the population of the country grew the amount of fish produced by such ponds decreased. Why? Simply because more fish were being caught in the wild, which meant that fewer would travel with the floods and end up in the ponds. It seemed to the people who owned these ponds that there was very little they could do about the situation.

Sumitra, however, learned that there was, actually, quite a bit that could be done to improve the amount produced by the ponds. Being a woman, she was approached by a non-governmental organisation (NGO) working in the district to improve women's welfare. This NGO ('Banchte Shekha', which translates as 'Learn How to Survive'), had been working in the area since 1976. It ran a lot of activities for groups of women, most of which were intended to teach women new skills and so lead to higher



*Members of the team from WorldFish Center inspect fields in the project area. They regularly travel to different farms to discuss any problems the farmer might have and suggest possible solutions.*

incomes for their families. So Sumitra, during the training courses she took on fish ponds, gained totally new knowledge and shared it with her husband. First of all, she found out that it made a lot of sense to interfere in the pond and not just leave things to take their course.

The biggest eye-opener, Sumitra recalls, was learning that the pond should be fertilised to promote the growth of life in it. At hand she had cow dung, an excellent material for that purpose, but she also learned that chemical fertilisers, of the types used in the fields, were also useful. What is more, she also found out that, in terms of the money made, it is worth giving the fish some additional feed to make them grow even better. So, besides what the pond itself produced, using the fertiliser she gave it, she learned that she should also feed the fish with things such as wheat and rice bran, cheap leftovers from threshing. Even a small bit of oil cake, which would hardly be missed by the livestock, would help as well.

With the support of Banchte Shekha's people, who frequently come to follow up on her training courses, Sumitra has thoroughly calculated her household accounts. She now knows that the household income from the pond has more than doubled in the first full year of using the new methods. The new cowshed is a visible result of the family's increased income.

### *Training the trainers*

Banchte Shekha covers a whole range of activities, and the group definitely does not know everything there is to know about modern pond cultivation. But, though the members of this NGO lack individual expertise, they have behind them a strong combination of world-class expertise in the form of the WorldFish Center and Bangladesh fisheries

*officials, as well as US monetary aid. Together with its partners in Bangladesh, a group which includes the Bangladesh Fisheries Research Institute, and the WorldFish Center has undertaken research in Bangladesh for 12 years. During that time, we have taken a special interest in turning pond culture into a more productive trade.*

*Findings from the WorldFish Center's research partners have been analysed and discussed, to see what methods work for the resource poor in Bangladesh. From the mid 1990s, new ideas were tried out and adopted by a lot of farmers in that country. What is more, since 2001, a new and expanded phase (named the Development of Sustainable Aquaculture Project or DSAP) has begun.*

*This project has set itself very ambitious goals. The first year of the project is to be spent finding the right kind of partners. Once this has been achieved, the WorldFish Center expects to involve 7,000 new pond families each year, winding up this process of expansion in 2005. During 2001, before the training course started, NGOs like Banchte Shekha identified suitable families throughout the country. But of course, before the representatives of the NGOs could go into the field they had to be taken to school to learn not only the basics but also the practical aspects of modern fish pond culture.*

### *And it works*

Mohammad Zulfikar Ali travels to attend meetings in the district capital of Jessore in south-western Bangladesh from the nearby village of Pazia. He will also tell you that he has learnt much since he first met with Jagarani Chakra, another NGO and a partner of the WorldFish Center. Zulfikar Ali comes from a background different from that of Sumitra and Gopal. His father was a trader who moved from India to Bangladesh with



*Mobammad Zulfikar Ali, who left India with his family to start a new life in Bangladesh. With the help of the training he has received, he is now a very successful fish farmer.*

*his family back in 1965. By then tensions were growing between the two nations. So, being a Muslim family, they exchanged land with a Hindu family from Bangladesh who wanted to move to India.*

*So, Zulfikar Ali went into farming. He soon opted for fish culture, but now refers to 2001 as the decisive turning point, when 'scientific fishing' came into his life. He has far more land than Sumitra and Gopal. In fact, owning 4.5 acres, he has more than is usual in this area. He shares this land with his extended family: his mother and his two brothers and their wives and children. Virtually all the land has been turned into fish ponds, at least for part of the year.*

*Apart from the amount of land he owns, Zulfikar Ali's story is much the same as Sumitra and Gopal's. In this case, it was Zulfikar Ali who received the intensive training, as much as three full days. What is more, he has taken the opportunity to attend other public courses over the last year, in order to learn more. What was really new to him was the importance of having the right combination of fish in his pond. He used to buy what the fish seller had to offer when he came by, then he would just wait to see how things turned out. Now he knows better; some fish feed near the bottom and find nutrition there, others feed nearer the surface. Some will take part of any additional feed given, others will swallow the rest: nothing goes to waste.*

*So now Zulfikar Ali takes the trouble to travel some distance to buy just the right number of the correct fish needed to properly stock his ponds. He sells most of what he produces, but some is eaten by the family, whose diets are now much better. They take what they need as the fish grow, and take a big catch a few times a year to sell to the wholesaler. They rarely put the shrimps they produce on their own table, however. Now that he can grow them to a high quality using his new skills, they sell for too good an export price for the family to eat them themselves.*

## *All the links*

The local fishery and agriculture authorities participate in this project by providing advice and support, by taking a keen interest in what goes on, and by sending representatives to meetings and workshops. But much can be left to private initiative. For example, people can get the feed for their ponds themselves: the feed needed for the fish is available, transport is to be found everywhere and the roads are improving year by year. For example, only four years ago the road near the Biswas family's house was a muddy track, now it is made of asphalt.

In most places there are fisheries specialists who produce young fish to be fattened by the farmers. In the village of Bhaturia, near Jessore, Salma Yasmin, who graduated in the arts some few years back, has taken up just such a specialist role. After she was trained by Banichte Shekha, Salma opened two ponds in 1997. She uses them about six times a year for two-week periods of intensive production. During those periods, she buys 100 g of tiny fish just out of their eggs and puts them into the ponds. They grow fast during the hot season, and soon reach a size at which you can actually see that they will one day become fish. But at that point it is 'goodbye', as Salma ships them off to the farmer who will take over the rest of the work of raising the fish. Calculating prices at buying and selling time, and factoring-in feed and labour costs is, in itself, hard work. But, in return, the fisheries' economist and Salma calculate that she will make a net profit of 36,000 taka, which she can share with her extended family. The figure might not tell you much, until we tell you that a farm labourer will earn 50 taka a day.

The NGOs who carry the message are sometimes the weak link here. They are not always very keen on the work, though they are pleased with the payment they receive for their services. So, over the year during



*Salma Yasmin and her younger brother, who helps her raise fish fry in her two ponds. Salma is now making a very good living, by selling the fry to neighbouring fish farmers.*



*The Biswas family takes a moment to pose in the courtyard outside their house. Only the eldest daughter is missing—she is attending school paid for by the newfound prosperity of the farm.*

*which the project runs, some of them will be replaced by others. As the work grows, more will be taken on. The operations work like this: in the first year a farmer will be given a small amount of cash to invest, once she or he is trained. The NGO will undertake follow-up visits and will provide technical support over the next three years. Every year, new families are taken on by the project. So, as the project runs, at any given time several thousand families will be involved, while around 30 NGOs will do the field work.*

*But the real numbers of those who benefit from the project are higher. Neighbouring families are also given advice, but not training courses or cash, and come along to see any new developments for themselves. A large number of other NGOs are trained in the basics of the new production methods, so that they, too, can tell any interested farmers who are not in the programme. Then, more NGOs can be taken on from this group as the project expands.*

*Only at the end of the programme in 2005 will the WorldFish Center and its partners know the exact number of fishers and NGOs who have been trained and have qualified as a result of this work. But you can be sure that we will know, because working alongside the fisheries experts are people with backgrounds in sociology and economics, and they have counted and interviewed the people involved ever since the project 'warmed up' in 2001. And do not forget the many other farmers and NGOs who have already been trained, in previous phases of the project, since it began in the mid-1990s. They know the figures, and they are optimistic. The Biswas, Zulfikar Ali and Salma Yasmin are not the exceptions in this programme. They are typical, according to the project's numbers and statistics.*