

# **Learning by Doing in Bangladesh**

**— Extension systems development for  
coastal and estuarine fisherfolk communities**



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**LEARNING BY DOING IN BANGLADESH**

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**for Coastal and Estuarine Fisherfolk Communities**

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by

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This report describes the process, achievements and learnings of a subproject which set out to learn by doing pilot extension activities, and give direction to the development of a fisheries extension service aimed at the coastal and estuarine small-scale fisherfolk of Bangladesh. The subproject was cleared by the Government of Bangladesh (GOB) in April 1989 and was initiated in the two target districts of Borguna and Patuakhali in July 1989. Along the way, the UNFPA proposed a component aimed specifically at enabling the development of women in fishing communities. However, the main phase of the activity could not be funded by UNFPA, and a scaled-down version was incorporated into the subproject in July 1991 by the Bay of Bengal Programme (BOBP). The main component of the subproject, consisting of 19 pilot activities, came to an end in December 1992 and the women's activities came to an end in September 1993.

The Bangladesh Department of Fisheries (DOF) was responsible for the execution of the subproject. BOBP provided technical assistance, expertise, training inputs, support for training, grants to establish revolving funds for enterprise development, equipment and monitoring. The training was designed and coordinated by Mr. Md. Shahid Hossain Talukder and provided by a group of Bangladeshi trainers drawn from various nongovernmental organizations.

The Bay of Bengal Programme (BOBP) is a multiagency regional fisheries programme which covers seven countries around the Bay of Bengal — Bangladesh, India, Indonesia, Malaysia, Maldives, Sri Lanka and Thailand. The Programme plays a catalytic and consultative role: it develops, demonstrates and promotes new technologies, methodologies and ideas to help improve the conditions of small-scale fisherfolk communities in member countries. The BOBP is sponsored by the governments of Denmark, Sweden and the United Kingdom, and also by UNDP (United Nations Development Programme). The main executing agency is the FAO (Food and Agriculture Organization of the United Nations).

This document is a technical report and has not been cleared by the FAO or the Government of Bangladesh.

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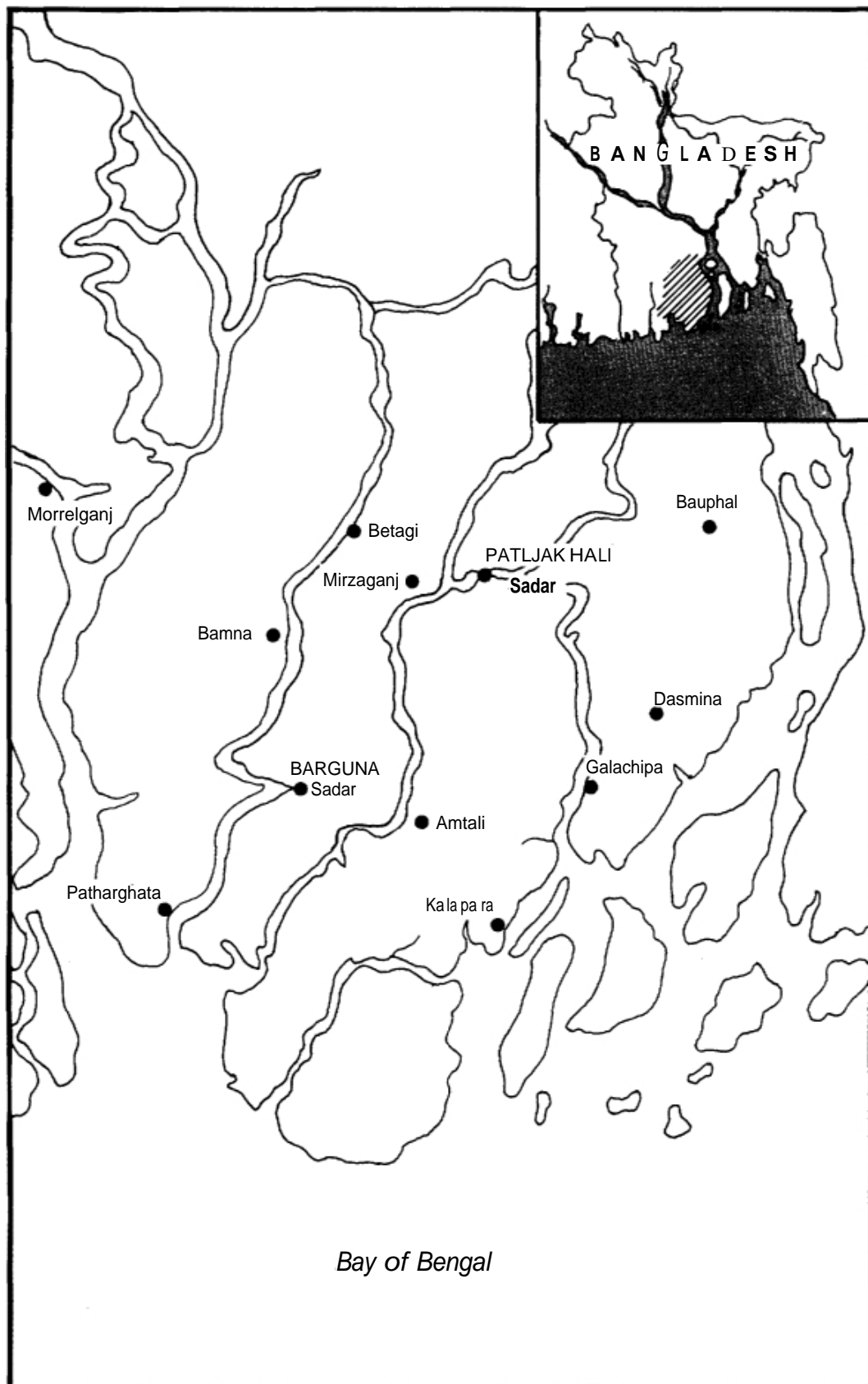
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Fig. 1. Project area, Bangladesh



## 1. GENESIS

### 1.1 *Background and justification*

Late in 1986, as the first phase of the Bay of Bengal Programme (BOBP) was drawing to its close, discussions were held with member-countries to give direction to the formulation of the second phase of the Programme (1987-91). Bangladesh identified, among other concerns, the need to develop its Fisheries extension services to address the needs of the coastal and estuarine small-scale fisherfolk.

It is important to understand the context within which this need was identified. The fisheries sector represents an important source of rural income, employment, nutrition and foreign exchange earnings in Bangladesh. The main challenge for the country is to feed its growing population and to earn foreign exchange to fuel its economic development. While rice is the staple foodgrain, fish contributes over 80 per cent of the animal protein intake and is, thus, of extreme nutritional significance. Over 11 million people are estimated to be engaged, one way or another, in fisheries production. Except for a small minority of them, the fisherfolk can be classified as being part of the small-scale and artisanal sector.

While the importance of small-scale fisheries has long been recognized in the Government of Bangladesh's (GOB) policies, measures to increase productivity and the quality of life of the fisherfolk have not met with the expected success.

The effectiveness of several well-meaning efforts have been limited by these reasons, among others:

Difficulties fisherfolk have in adopting technologies and absorbing resources and services meant for them;

Overfishing due to increased fisher population;

- Increased intensity of fishing and restricted fishing grounds; and
- Institutional and administrative constraints.

Bangladeshis', given a choice, prefer freshwater fish, and, until recently, marine and brackishwater fisheries remained largely undeveloped and serviced to a lesser extent than the dominant freshwater fisheries and aquaculture. All this changed in the 1970s with the private sector cashing in on shrimp and other marine fish exports. Exports of marine products not only provide a major source of foreign exchange earnings but, over the last decade, have grown at the rate of 25 per cent a year. Taking cognizance of this, the Government, particularly in its Third Five-Year Plan, adopted a clear stand on redressing this imbalance and developing the marine and brackishwater fisheries sector through research and development, which was intended to be taken to the fisherfolk through an amplified extension service. The request to BOBP to help give direction to the development of extension systems to address the needs of coastal and estuarine fisherfolk evolved out of this commitment of the Government.

The success of any programme for development of small-scale fisheries and fisherfolk largely depends on the ability of fisheries agency extension staff to inform, communicate with, motivate and mobilize fisherfolk communities. In Bangladesh fisheries extension staff, particularly in the marine subsector, were

few in number.

inadequately trained and equipped in developmental and community mobilization skills, and

carried varied and heavy workloads, often of a nonfisheries nature.

All this made it difficult for them to translate the intentions of the government into reality. Typically, extension staff lacked

transportation to reach remote fisherfolk communities,

the equipment, teaching aids and skills to communicate and extend technologies, and

access to institutional credit

The last, particularly, aggravated the situation

The real problem, however, was that nobody, neither the Department of Fisheries (DOF) nor BOBP, had a clear understanding of the status and dynamics of coastal and estuarine fisherfolk of Bangladesh, nor of their needs and problems, as they (the fisherfolk) perceived them. Therefore, the issue at hand was not so much having an off-the-shelf answer but to learn about extension needs and approaches that would work and would be sustainable.

## 1.2 The objective and the approach

In approaching the formulation of a subproject to answer the need expressed by the Government, the problem was viewed at two levels:

First, because the problems and needs of the fisherfolk were not precisely known, there was no way to come up with the solution; and,

Second, there was the question of convincing the Department of Fisheries that the solution, when found, was really the right one and one they should implement.

The first level suggested that the activity had to learn, and do so through action. The second level required that both, the problems to be addressed and the means to do so, had to be articulated in actual practice by the departmental staff involved, in order to ensure the credibility of the learning.

Central to the approach was the idea of participation. It was agreed that both fisherfolk and Department of Fisheries staff should actively participate at every stage of the project. The programme's content and the methodologies would be evolved in a participatory and need-based manner, on-line.

The long-term objectives of the subproject were that of the Bay of Bengal Programme's, which sets out to enable the "socioeconomic betterment of fisherfolk communities". The more immediate objective was "to demonstrate extension support to fisherfolk communities through training, technology transfer and support of pilot extension schemes". Therefore, at the end of the subproject, there would not be an extension service for coastal and estuarine fisherfolk, but, rather, learnings that would guide the development of an extension service. The learnings would be evolved by the DOF staff and the fisherfolk, based on real, hands-on efforts.

Since the need related to coastal and estuarine small-scale fisherfolk of Bangladesh, the target areas had to be along the coast. The precise determination of the locations came about due to two considerations:

First, the DOF felt it would be useful to undertake the effort in locations where there were no major fisheries development activities already underway to distort the learnings. The only two districts that had been left out of the major World Bank- and Asian Development Bank-funded activities were Patuakhali and Barguna.

Second, Patuakhali and Barguna Districts are perceived by the DOF staff and by most other Bangladeshis as being “the back of beyond”. They are remote, relatively less developed, and most officers would privately consider it almost punishment to be posted there.

The thinking was that should an approach succeed in these two districts, it would succeed just about anywhere else in Bangladesh.

With implementation being the responsibility of the district level of government, selecting two districts would also test the apparatus of government, while still of being of manageable size for a project. The target group for the subproject was, therefore, agreed to as the fisherfolk communities of the Districts of Patuakhali and Borguna in coastal Bangladesh.

### *1.3 Project acceptance*

A working document of the project, describing the background, justification, objectives, approach, a tentative work plan and a budget were submitted to the GOB late in 1987. Due to various reasons, mostly procedural delays, the project was finally cleared for implementation only in April 1989. Work was initiated in July 1989.

## *2. THE IMPLEMENTATION PROCESS*

The implementation of the subproject can broadly be considered in three phases.

The first phase built up the capacity of the district and *thana* level DOF staff and the staff of the participating NGOs through a series of training inputs. Simultaneously, in the process of putting their training to test, they took the participating fisherfolk community groups through community analysis, needs analysis, problem analysis, planning of pilot activities and development of detailed project proposals for the activities.

The second phase involved the implementation of the pilot activities by the fisherfolk groups, and included credit support.

The third phase, which was an activity on-line from the very beginning, focused on extracting the learnings from the subproject and sharing it with policy-makers and DOF staff involved (See Appendix I).

### *2.1 Project organization*

Technical assistance and investment projects in the development sector in Bangladesh are basically implemented in two ways. The preferred option is to create a project, depute staff from the government cadre (and, where necessary, hire staff from the open market) and fund the operation with development funds. The other option is for the cadre staff to take it on as a part of their ongoing activities. In this case, BOBP and DOF selected the second option. There were several reasons for this choice. Specially created development projects function ‘better’ because the allotted staff often have no other duties and can focus on the task at hand. However, when the project ends, the deputed staff return to their cadre, the hired staff leave and, with funding terminated, the Government has to find funds within the revenue budget to continue, or replicate, the activity, which, given budget restrictions, is often impossible. Keeping in mind sustainability, it was felt that the project should be implemented by those in government service who have the responsibility of implementing fisheries extension and fisherfolk development efforts, which, in this particular case, was the DOF staff at the district level.

The extension subproject, for administrative reasons, came under the purview of the Khulna Division of the DOF and was headed by the chief of the division, an officer of the rank of Deputy



Director. The implementation responsibility fell upon the DOF staff of Patuakhali and Borguna Districts, headed by the respective District Fisheries Officers (DFO). Each district is subdivided into thanas, each with an official staff status of three professional officers and one support staff. The professional staff consist of the Thana Fisheries Officer (TFO), who heads the team, an Assistant Fisheries Officer (AFO) and a Fisheries Assistant (FA). At the district level, there is a Fisheries Survey Officer (FSO), who is an officer of the rank of a TFO, and focuses on data collection and special projects. The subproject, therefore, had participating in it two DFOs, two FSOs, and all the TFOs, AFOs and FAs working in the 11 thanas that constitute Patuakhali and Barguna Districts. In addition, the project had participating in it two nongovernmental organizations (NGOs), one a service NGO called (CODEC) and the other a people's organization, turned fisherfolk cooperative (New Market Matsojib Samiti). One staff member from each of these NGOs participated as part of the implementing staff. The total staff complement of the project added up to 26, as some of the government positions were not filled.

BOBP appointed on a full-time basis one national consultant, M A Razzak, a trainer from a national NGO, to monitor activities and assist the participating staff on a day-to-day basis in tasks which were basically very new to the staff.

The activity focusing on women in fishing communities, which was incorporated into the project approximately half way through the cycle, required BOBP to hire two national staff to look after it: a national consultant, Syeda Salma Begum, from a leading national NGO, and Md. Wajed Ali, to assist her. This was necessary as the DOF had neither the staff nor any experience in dealing with women's activities. And, given the social situation in predominantly Islamic communities, male staff of the DOF would have found it impossible to interact with the womenfolk.

BOBP's staff involvement included coordination undertaken by its Programme Officer, based in Dhaka, and short visits by the Senior Extension Adviser and Socioeconomist (APO), BOBP headquarters in Madras.

#### **Project Organization Chart**

<i>Level</i>	<i>DOFINGO</i>	<i>BOBP</i>
<b>International</b>		Senior Extension Adviser; Socioeconomist (APO),
<b>National</b>	Dy. Director (Khulna Div./Project I/C).	Programme Officer BOBP, Dhaka.
<b>District</b>	DFO/Project Director; FSO.	Extension Coordinator; Extension Coordinator (Women); Asst. Extn. Coordinator (Women),
<b>Thana</b>	TFO; AFO; FA; NGO Staff.	

## *2.2 Training to build capacity*

The purpose of the subproject was to take the officers of the DOF and the participating NGO staff through an exercise in learning and doing extension and development. This would require the staff to

first, learn about fisherfolk communities and their needs,

then prioritize the needs and problems and understand them in terms of their causes, next, plan activities that would address the needs and problems, and finally, design pilot projects to actually translate the plans into action.

Along the way, they would have to develop and build capacity to

- work with fisherfolk,
- mobilize them into groups,
- encourage them to save and manage credit,
- transfer technology where needed, and
- manage the activity.

To get the **most** out of the activity and ensure sustainability, they would, above all, have to do all this in a participatory way.

DOF staff have almost no opportunities to encounter such concerns and pick up the necessary information and skills to undertake such efforts. DFOs and TFOs usually have a first degree in either Fisheries or in Zoology; AFOs come into the department with qualifications equivalent to 'A Levels'; and FAs usually with 'O Levels'. A few officers receive induction training, which focuses mostly on technical fisheries matters. Nothing in their day-to-day work prepares them for such tasks, either. The NGO staff usually have an edge over the DOF staff, both in terms of their educational backgrounds and in terms of the work they do with communities. However, they often lack the technical fisheries knowledge that the DOF staff have.

The other issue in building capacity is motivation, or, rather, the lack of it. Organizational cultures in government agencies are often not performance based: staff are driven to work not so much by achievement and quality but more often by the administrative fallout of not achieving this or that target. Further, there are several routine tasks like reporting and assisting in various 'drives' to implement development schemes, which take up time and distract. In these circumstances, motivating the staff to do the tasks of the subproject, and to do them well, was an important factor. In fact, the then Secretary of the Ministry of Fisheries and Livestock, while agreeing with the project's general approach, expressed his concern by questioning whether 'junior government staff would be capable of learning and doing what was required'.

The training package, the details of which are in Appendix IV, involved building skills in eight different areas and orienting the staff to technical areas in fisheries. It was estimated that 48 days of training would have to be provided to the DOF and NGO staff. Since the project was being implemented as a part of the Department's routine activity, it was impossible to take out the entire fisheries staff of two districts for a month and a half. It was also impossible to find trainers who could continuously spare so long a period of time. So, the training was taken up in steps, each one building on the previous, taking up four or five days at a time. **Each** training-session was followed by the staff returning to their thanas and putting their learning to test. This was facilitated by the trainers holding two-day follow-up workshops every month, to monitor the action and to provide training inputs as required. At the end of the 2-3 month period of field work, which followed each training session, a workshop was held which gave all the officers the opportunity to present their findings and learnings to the trainers and their colleagues. The regular meetings built up a strong team spirit, and a very positive sense of competition among the staff. They also provided opportunity to provide performance feedback to the staff, which was an important ingredient in motivating them. The trainings were conducted entirely in Bangla, using a team of NGO trainers led

by Md. Shahid Hossain Talukder, who designed the programme, documented it and produced a manual which could facilitate expansion and replication by DOF. Using local trainers

reduced the cost of the activity,

— made the whole process more locale specific, and

increased the possibility of low-cost replication by the DOF.

The attendance at the training sessions, the enthusiasm of the staff, their involvement in the field work, and the quality of their work, particularly in terms of written and verbal presentations of their findings. were good and uniformly surprised senior department, ministry and BOBP staff. Most importantly, it surprised the staff themselves.

While the subproject was being formulated, the DOF had requested that the focus should be on building extension skills, because the Department felt reasonably confident about the technical knowhow of its staff. In practice, things turned out quite differently. As the pilot activities took shape, it became obvious to the participating staff that they would have to brush up their technical knowledge and skills if they had to support the fisherfolk, hands-on, in their efforts. The subproject organized orientation workshops for the DOF and NGO staff in the areas of freshwater culture, post-harvest fisheries technologies and marketing, concentrating on the practical aspects..

Training, in the best of times, is tricky business: easy to provide, but difficult to assess the impact of. The staff of the subproject, given the circumstances, did relatively well. They

mobilized 18 fisherfolk groups,

helped them to build savings,

took them through a planning process, and

sustained and supported them through the pilot activities.

All these activities require new skills. While there were problems, and even some outright disasters, the staff can be proud of the fact that 13 of the 18 pilot activities were clearly successes. The repayment of credit was a hundred per cent. And while it is too early to talk about long-term sustainability of the groups or their enterprises, at least 60 per cent of the groups were functioning nine months after the termination of the subproject.

What was it that made this training effort successful? Two factors seem obvious:

One, the participatory nature of the effort.

Not only did the training build participatory skills, but it actually put it to practice in the implementation of the project. Perhaps for the first time, the staff were able to evolve an idea into action and work their way through the entire project cycle, on their own, taking decisions, taking responsibility, and facing the consequences of failure and success.

Secondly, there was the performance-orientation of the training and the implementation of the project.

Good performance was noted, publicized and awarded; poor performance was also noted, publicized and criticized, but not punished. Rather, it was seen as a learning to improve performance.

The staff took up the responsibility and performed. More importantly, they were motivated by their Success and by the visible response to it. By putting into practice what it preached, the subproject was able to build an *esprit de corps* rarely seen in such efforts. This needs to be pointed out, as training is often seen, in a narrow sense, as transferring information and skills and not as a way of developing human resources and organizations, which it should be.

## 2.3 The journey from needs to answers

The subproject began in July 1989 with a training session on rapid appraisal methods which would enable the staff to better understand the fisherfolk, their status and the dynamics of the communities, and to get a feel for their needs and problems. The staff were a little surprised that the project was asking fisheries staff, who lived in the *thanas*, worked with fisherfolk, and who had, between them, several years of work experience to actually go out to learn about fisherfolk.

Three months of fieldwork and three field meetings later, the team gathered again in a workshop to present their findings. And they were even more surprised at how little they had known about the fisherfolk and their communities. This was partly due to the fact that this was the first time they had gone about systematically trying to learn about their clients, and partly because the RRA approach through fisherfolk participation enabled them to look at things and problems through the eyes of the fisherfolk. With the findings about their *thanas* and in-depth profiles of a few selected communities documented, the next stage was to understand needs and problems.

A three-day workshop followed, which gave the team skills in participatory needs analysis, problem analysis and involving the community in beginning to think about how they would like to address the more important needs. The idea was to get to know the entire problem map and fisherfolk priorities before talking about what the project could, or should, do about them.

Follow-up meetings by the trainers were held monthly during the fieldwork which followed the training. As the team members got to know the communities they were going to work in and rapport was built, the quality of the information gathered improved. Even as the process was underway, some issues came up. The DOF staff and the NGO staff realized, and expressed their concern, that their education and experience was not enough to do justice to the problem analysis, particularly, and surprisingly, in fisheries-related matters. This finding was contrary to the initial understanding of DOF, who had felt the need to be more for extension methods rather than for the technical content of fisheries.

Two orientation workshops were held. One was on freshwater culture, whose potential is considerable, given the large numbers of perennial ponds in the area. It was arranged using NGO trainers. The other was on the post-harvest and marketing aspects of fisheries and was organized in cooperation with the Post-Harvest Fisheries Unit of BOBP. The focus of both these workshops was on:

The field and practical aspects;

Identifying what the staff should look for;

How they should understand the processes at work; and

— The types of questions they needed to ask to better understand the problems

Another workshop on fisheries management, which the fieldwork had identified as a critical need, because fisherfolk felt there was no fish to fish, had to be postponed because the project could not identify suitable resource persons who also knew Bangla. Instead, management issues were raised and discussed during later trainings. With this technical orientation, the team continued their needs analysis and, early in 1990, came together to present their findings.

The needs, problems and the priorities that emerged from the fisherfolk and from the team were surprising and posed the first serious dilemma for the project. In an activity which set out to learn about doing fisheries extension, there were hardly any real fisheries problems or needs. Poverty was the problem. A depleted fishery resource in the rivers and estuaries was the next most serious problem. But given the fact that the project's target group were small and marginal fisherfolk using traditional craft and gear, the question of going out further to sea to tap the lesser utilized species just did not arise: they did not have the means and the skills.

A lack of access to reasonably priced credit and to social services like health were other important problems.

In analyzing the problems with the fisherfolk, the team came to feel that the only real fisheries option was to enable fisherfolk to undertake aquaculture in freshwater ponds, an ironic choice, given that the area was estuarine and marine. Aquaculture would provide incomes and protein for local consumption. Several enterprise options were also identified which could increase incomes, among them fish trading, salting of Hilsa, mat-weaving, homestead poultry and vegetable gardening. The problem was not a lack of skills or technical extension, though these were also necessary, but really one of having the capital to start up or expand existing activities.

The women in the communities, concerned with the quality of life of their families, were interested in health and nutrition education and in learning about practices which would enable them to contribute to the wellbeing of their families. They were also interested in poultry and planting different varieties of trees, both for the fruit as well as for the timber.

Given this configuration of needs, the central question was: What could fisheries extension staff do? The team felt strongly that the needs of the fisherfolk, as seen by them, needed to be addressed. And in order to do so, they, the DOF and NGO staff, should develop the necessary skills and seek the cooperation of other government line departments who had the particular skills.

Immediately after the needs and problems had been mapped, the team underwent training in participatory project formulation and planning. They then returned to the field to work with fisherfolk groups and come up with pilot project proposals which the subproject could consider for funding. By May 1990, preliminary proposals were in and were discussed at a workshop. The planning and design was not up to expectations and, with further training, the team returned for two more months of discussions with fisherfolk to refine the project proposals.

Detailed proposals were received in July and, in discussion with the DOF and BOBP, 18 of the 36 proposals were selected for support and implementation. In October 1990, a review workshop was held to initiate the implementation of the selected pilot schemes. Broadly, the pilot schemes fell into the following categories:

Aquaculture .....	6 schemes
Credit for trades.. .....	3 schemes
Poultry-rearing.. .....	3 schemes
Homestead forestry .....	2 schemes
Health education .....	4 schemes

The 18 pilot schemes were to be undertaken by twenty groups of fisherfolk in the 11 thanas of Patuakhali and Barguna Districts. All the pilot projects involved group formation and savings mobilization, and 12 schemes had a credit component to enable enterprise development. Six schemes, dealing with homestead forestry and health education, did not have a credit component as they did not have enterprises to support. Seven of the schemes were proposed to be run by women (three dealing with poultry-rearing and four with health education). The aquaculture projects included carp culture, carp and macrobrachium polyculture and nursery schemes to produce carp

fingerlings for sale to other culturists. The credit schemes included support for small fish trade, boat and net repair and Hilsa salting.

The Director of Fisheries attended the workshop in July when the 36 proposals were presented, and he not only expressed satisfaction with the progress of the subproject but particularly mentioned that he was surprised at the quality of the proposals and the presentation skills of the DOF and NGO staff. Immediately after the October workshop, where the decision had been taken to support 18 pilot schemes, the team went into training over five days on group mobilization and on enabling group management, in preparation for initiation of the pilot activities.

## *2.4 Group formation and implementation of pilot projects*

Implementation of the pilot projects included:

- Forming the groups;  
Training them in group management, particularly conflict resolution and leadership;
- Initiating regular savings schemes, on a weekly basis;  
Training inputs of various kinds, both technical and managerial to enable setting up the enterprises;  
Supply of credit by development of group revolving funds; and
- The actual implementation of the particular activities.

Three months into the activity, the team were provided a further training input of four days on savings and credit management.

The details of the fisherfolk groups, their locations, activities, savings generated, credit received and an indication of their overall performance are provided in Appendix II. The training inputs received by the fisherfolk groups are described in detail in Appendix IV.

During the implementation process, the DOF and NGO extension team met with the trainers and BOBP staff for regular review workshops of four or five days each, every three months, to present their reports and plan for the next period, to share learnings and to receive training inputs as necessary. These gatherings were important because they gave an opportunity for feedback, for motivation and to build a healthy competition amongst the thana and NGO teams. They also allowed mid-course corrections to be made. In retrospect, the review meetings were perhaps the most important mechanism of motivating the staff and building in a performance orientation.

The performance of the fisherfolk groups and their activities depended on several factors, such as

- The cohesiveness of the groups;
- The quality of leadership they had;  
The quality and regularity of the support they received from the thana level and NGO staff; and  
A generous amount of luck (a factor not to be discounted given the difficult circumstances the coastal fisherfolk live in and the proclivity of the region for natural disasters, such as cyclones and floods, which are a regular annual phenomena).

The one factor that stood out was the quality and commitment of the team members who supported the activity at the field level. There was one total disaster, primarily due to the indifference of the concerned staff, but 13 of the projects performed above average, with at least three doing excellent work. Given the earlier expectations of the DOF and BOBP, where it was hoped that about 50 per cent would succeed, the actual performance was heartening.

In terms of the types of activities, the most successful ones turned out to be the fishery-related ones—aquaculture, small fish-trading and Hilsa salting. Next in order came homestead forestry and poultry-rearing. And health education came the last. The activities wherein the Fisheries and NGO staff had the technical knowledge and skills did better than those that required collaboration with other departments, though the cooperation with the Forest Department in homestead forestry was good. In general, given the mandates of each department and the lack of coordination between government agencies, the catalytic role played by the team in health education and poultry-rearing suffered. The women's groups were found to be more cohesive and less prone to conflict than the men's groups.

The savings generated were very regular (except for a short while after the disastrous 1991 cyclone) and high, keeping in mind the economic conditions of the fisherfolk. By the end of the project, the fisherfolk groups had generated almost 40 per cent of the credit they had been provided through the revolving funds. The repayment of credit, with near-commercial interest rates, had its ups and down, but at the end was one hundred per cent, an extraordinary result, given the situation in Bangladesh.

After the completion of the varying project cycles, all enterprise-based groups continued their enterprises, group activities and savings. The nonenterprise groups continued to meet regularly and save. An interesting development seen across the board was that groups started to provide credit to their members from their savings and used their groups to occasionally address other issues in a collective manner.

A drawback was that many of the groups did not build sufficient managerial skills. Their ability to sustain their efforts without the constant and regular supervision and support of the extension team has also not been proved. However, considering the effort was less than two years, this would, in development terms, be too much to expect.

The pilot project activities were terminated in September 1992 and the DOF and NGO staff took them over to run on their own. By the end of the subproject activities in September 1993, twelve of the groups were still continuing their enterprises, but attendance had slipped, group cohesiveness had suffered and savings had not kept pace. Central to the problem is the managerial cultures in the DOF and in the NGOs, which do not motivate and support their staff to get the best out of them.

## *2.5 Credit*

All things said and done, the one factor that fuels economic and social development is the availability of credit at reasonable rates. In Bangladesh, institutional credit for small-scale fisherfolk is practically nonexistent. Even the Grameen Bank, which has made dramatic inroads into banking for the poor, has limitations because the ceilings of credit made available is often not enough for the enterprises. The project also could not persuade the nationalized banks to support the fisherfolk groups. It finally set up its own revolving funds, with Taka 227,962\* being disbursed to the 12 groups who were involved in entrepreneurial activities. Each group set up its own credit account, in a local bank, separate from their savings accounts, and repaid funds with near-

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\* US\$ 1 = Tk 32 appx

commercial interest rates. Flexibility in repayments, peer pressure from group members to repay on time, motivation and monitoring by extension staff, and well-managed and viable enterprises were crucial to recovery being a hundred per cent.

At the end of the project, to give a performance orientation to the effort and to enable the fisherfolk to continue their efforts, fixed multiples of their savings were handed over to the groups, based on performance, to create their own revolving funds. The performance appraisal was done independently by the fisherfolk groups involved and by the extension staff of their *thanas*. Interestingly, the fisherfolk were more conservative and realistic in judging themselves and their performance than the extension staff, who tended to be more generous and optimistic. In determining the scale of the enterprises and the credit, the guiding principle was to keep in mind what the DOF, given present budgetary allocations, could possibly afford to invest in each *thana*. It was hoped that if the activity was a success, then this approach would enable easier replication. The savings schemes did generate considerable amounts, but they were not enough to develop enterprises, thus eliminating the possibility of self-financing development. The savings and credit schemes did familiarize the fisherfolk with maintaining and running bank accounts, keeping books and managing their funds. It is to be hoped that their excellent credit recovery may change the thinking of banks in future.

### *3. WORKING WITH THE OTHER HALF*

#### *3.1 Getting into women's development: An approach*

In July 1990, approximately a year after the extension subproject had been initiated, BOBP was approached by the United Nations Population Fund (UNFPA), through the FAO, to formulate a regional activity to facilitate the development of women in fishing communities and, in the process, to build awareness about health and population issues. BOBP decided that, ideally, such an effort could be incorporated into the various extension development activities which had substantial fisherfolk development components. In Bangladesh, the formulation of a women's activity was set in motion by a FAO staff member from the Population Unit in Rome, who visited Patuakhali and Barguna Districts, met with the DOF and NGO staff participating in the extension subproject and held discussions with the women in fisherfolk communities.

A national consultant was assigned to undertake rapid appraisals in selected fisherfolk communities and, based on the needs analysis and discussions with women, to propose an activity. From the very beginning, keeping in mind the thinking and approach of the extension subproject, it was felt that such an activity should be not only implemented by line staff but also be implemented as a part of the routine tasks of the DOF. This proved problematic: in traditional, Islamic communities in Bangladesh it is almost impossible for men to work with, and for, women, due to cultural hurdles, and the DOF has almost no women staff at *thana* and district levels. But the needs and concerns that emerged from the appraisals showed that the problems were severe and there was a great need for activities which target women. The thinking that then emerged suggested that, if an activity could be run with human resources and other inputs, which would be within the realm of possibility of the DOF, and shown to be successful, then, perhaps, the DOF would be tempted to consider the option and build into its organization the women staff and the directions and inputs which could do justice to such an important need.

In January 1991, a proposal for action in Bangladesh was prepared and incorporated into a regional document and presented to the FAO and the UNFPA for consideration. The proposal recommended a pilot activity in two *thanas* of Patuakhali District. Women in ten fishing communities would be mobilized into groups and helped with training, awareness building and inputs to:

Increase their incomes through development of microenterprises;



Increase their awareness of health and population issues, and, where necessary, have increased access to services through the catalytic action of the project with the government departments concerned;

Increase their savings;

- Increase their awareness of women's social and legal issues; and

Through all of the above, hopefully, be able to collectively address the primary needs and concerns that women in fisherfolk communities face.

The proposal envisaged a small activity run by a woman staff member based in Patuakhali, assisted by one other person. Such a staff configuration would be possible for the DOF, even in the circumstances prevailing in Bangladesh.

In July 1991, the UNFPA informed BOBP that they would be unable to support the planned-for 3½-year main phase of the proposed regional project, as funds for regional activities had been "over allocated above existing fund ceilings"! BOBP was in a dilemma; the long and participatory nature of the preparatory phase had not only established rapport with the women in the fishing communities, but had also built up a certain enthusiasm among the women whose aspirations had been raised. To walk out with an excuse would be going against the very grain of development! BOBP, in consultation with the DOF, and with its full approval, decided to go ahead with a women's activity, albeit at a lower scale, with funds from the SIDA-DANIDA project, GCP/RAS/118/MUL.

### *3.2 Group formation and savings*

In late July 1991 a national consultant was assigned as the Extension Coordinator for the women's activity, and she moved to Patuakhali. She was assisted by a Project Assistant, a young man fresh out of university. The team set about mobilizing the groups and 364 women were formed into 15 groups in ten villages of two thanas, Patuakhali Sadar and Mirzaganj. With the help of the women, and in discussion with the menfolk and village leaders, a young woman, with some school education and leadership qualities, was identified in each of the ten villages and each was assigned as a group supervisor, on a small allowance of Taka 500 a month. The idea was to build up leadership and skills which would remain behind after the end of the project. The entry into the villages, in spite of the preparatory discussions and appraisals, was not easy and was facilitated only by long and detailed discussions with the village leaders and menfolk.

The group supervisors were regularly trained, one day every week, for the entire duration of the project, which lasted until September 1993. The group supervisors, in turn, worked with the women's groups and trained them. This was supplemented by regular field visits by the coordinator, the project assistant and, on occasion, resource persons from government departments and NGOs. Details of the training provided to the group supervisors and, through them, to the women's groups are listed in Appendix IV. The regular training visits were used to review activities, share learnings and plan.

The first activity the groups started was to build up savings. All members decided to set aside two takas every week, and these were put into savings bank accounts opened by the groups. As the activity progressed, particularly after the enterprise development started to generate incomes, several of the groups voluntarily increased their weekly savings. Small as these savings were, by the end of the project, the total savings amounted to Taka 78,064, which was a third of the total revolving fund created to enable the enterprise development. The women saw the savings as an important aspect of their work, for it gave them security and something to fall back on. It also gave them the confidence in the fruits of collective action. Several of the groups, in addition to

their enterprise activities, used their savings to give loans to their members for both other enterprises as well as for consumption needs.

Appendix III gives details of the 15 groups, the location of each and its number of members, their savings, the enterprise activities they undertook, the credit they received, the repayment of the credit, which was an incredibly high 97.08 per cent overall, and the performance rating of each. The performance of the groups was judged, first, by the women themselves and, secondly, by the staff. Appendix III gives the combined ratings on a scale of 1-5. At the end of the project, a senior officer of a fisherfolk NGO informally evaluated the groups, with a special eye to sustainability. His findings were that the groups were cohesive, enthusiastic and very committed to continuing the work they had begun. He also found them very aware of health, nutrition and women's issues that had been a part of the activity's educational effort. This was reinforced by the fact that the awareness had been put into practice.

The evaluation, however, raised a question: the managerial capacity of the groups was still not enough to sustain their enterprise and credit efforts. BOBP, then requested the NGO, CODEC, to provide training and assistance to the groups in these areas and also to support the groups; it also provided the funds for CODEC to do so. As a consequence of its interaction with the women's groups, CODEC, as this report goes to print, is seriously considering incorporating the 15 groups into a much larger integrated development project that it is implementing in the districts of Patuakhali and Barguna.

The overall performance of the group supervisors, their ability to analyze problems and plan action, and their presentation abilities need special mention. They were excellent, and the project staff were surprised at what was possible by young women, most of whom had never even stepped out of their villages until the project came about.

### 3.3 Education and awareness building

The needs analysis had shown that, other than income-generation to alleviate poverty, the major need the women had was to improve their health situation. The project provided training and awareness inputs in health, nutrition and family planning. It went further by facilitating access to services provided by other government departments and by motivating the women to take up self-help schemes. These included:

- Building, with aid from the Public Health Department, sanitary pit latrines away from the vicinity of water sources;
- Using deep tubewell water for drinking, cooking and washing utensils;
- Getting themselves and their children appropriately immunized, with the help of the Public Health Department;
- Setting up homestead vegetable gardens to supplement their diets and to, occasionally, earn small incomes;
- Planting trees in their homesteads;
- Getting access to contraceptives;
- Getting access to ante-natal care; and
- Using rehydration therapies to overcome dehydration due to diarrhoea.

As more and more women began to utilize existing government services in these areas, they became, in the process, familiar with, and gained confidence in, dealing with government departments.

An area of need that emerged during the activity was the need for knowledge of women's legal and rights based issues: a reflection of the extremely problematic circumstances women find themselves in Bangladesh. The poor social status of women, violence against women, unilateral and easy divorce and outright desertions were all common, and the women wanted to know about their rights and what, if anything, they could do to protect and defend themselves. The project provided several training inputs, using the services of activist women lawyers from local and national NGOs. Knowledge does not necessarily lead to resolution of problems, but it helps — and a small beginning has been made to that end. To mention a case: a woman, who was regularly illtreated and beaten by her husband, brought the matter up with her group members. The group not only applied peer social pressure but collectively confronted the man and threatened him with “legal action through their friend, a lawyer”. The action did stop the man! If nothing else, a small group of women are not taking the world around them for granted, but actually believe that together they can think through problems and do something, however small or insignificant, about changing things around. A small beginning.

Routing the training and awareness through the group supervisors and supplementing the activity with the staff and resource persons definitely seems to have improved communication and credibility. Low levels of literacy did not prove too serious a hurdle to overcome. Almost no aids and materials were used, and the primary mode of communication was long, discursive discussions. The messages were repeated several times and put into everyday context. This seems to have been effective. Over the project period, the group of women were seen to slowly transform themselves from shy, silent and noncommittal persons to vocal individuals slightly more sure of themselves and their abilities. Another small beginning.

A study tour was arranged for the group supervisors, which took them to Dhaka and a few surrounding locations, to visit other NGO projects and to learn how others in similar situations were tackling their problems. This was quite a social event, and the exposure did more for them than any real learning acquired in the process. BOBP can only hope that wherever these women are and whatever they do, their experience in the project will make a difference to the way they perceive the world around them and the way they act and respond.

### *3.4 Enterprise development*

The key to women's development, both social and economic, perhaps lies in becoming economically useful. Earnings of women are not only invested in bettering the quality of life of the family (more so than the earnings of men!), but also add to the status and esteem of the women in the eyes of their menfolk. That is not social and economic theory, but what some of the women felt about their enterprises. When asked about how the women could add to their earnings, almost all felt, and felt strongly at that, that they would like to continue and expand economic activities they were already performing, the skills for which they had and the markets for which they knew and had access to. Sound advice, which kept the project away from frivolous and less feasible ideas, like tailoring or handicrafts, which seem to be popular in development work. The women opted for paddy parboiling and husking and small trade.

But what the women really wanted was easy credit to expand their activities and earn more. While the savings were good, they were not enough, so the project set up a revolving fund with Tk 190,000. Each woman was allowed to take a loan of 1,000 Tk, repay it interest-free and take it again. Over the time period of the project, the credit fund was utilized (or circulated) approximately 2.45 times. The repayments were good, at 97.08 per cent, but not perfect.

The one question that continues to nag is the question of interest. Should the project have provided interest-free loans, which are obviously not viable or replicable. Perhaps not. Perhaps it was misplaced kind-heartedness. It is a relief to know that when CODEC had discussions with the women's group regarding the possibility of incorporating them into the NGO's own project, the women had no objections to receiving and repaying loans with near commercial interest rates.

The women's activity was terminated in September 1993, and it is hoped that CODEC will take over the responsibility and support the groups till they can sustain themselves on their own. To help the groups to continue their efforts, and as an incentive award for their overall good performance, the project handed over to each group twice the amount they had saved to use as a credit revolving fund. The involvement of the DOF, particularly of the thana and district level staff, was very little in the activity; they did participate in all review meetings, and while it is hoped that the results and learnings from the effort will motivate the DOF to replicate the activity with their own cadre of women staff, nothing in the present thinking and actions of the agency suggests that they actually will.

#### *4. GIVING DIRECTION TO FISHERIES EXTENSION*

The primary objective of the subproject was to learn about providing fisheries extension services to coastal and estuarine fisherfolk communities of Bangladesh, by doing pilot extension activities. The learnings generated were intended to give direction to the extension efforts of the DOF. When the subproject was formulated and initiated, very little was known of the fisherfolk communities and their needs and concerns, and so it was difficult to come up with a model or a strategy which could be readily implemented. A learning approach seemed the obvious choice. The rationale was that, should the DOF want to provide extension services, they would benefit from the learnings that would emerge from actually trying out techniques, methods and approaches. It was also felt that field-tested learnings extracted by the participating DOF staff would be more acceptable and credible than those from 'outside experts'.

As the learnings emerged, several methods were used to share them with the participating staff, senior DOF staff and policy-makers from the Ministry of Fisheries and Livestock. The staff from the DOF and NGOs participating in the activity had an opportunity to extract, reflect on and share learnings during the quarterly review workshops that were held throughout the entire project period. Inviting senior staff to attend these review workshops provided opportunities to the junior staff to share their learnings with senior staff.

At the senior and policy makers' level, the biannual review meetings of all BOBP activities in Bangladesh and the annual BOBP Advisory Committee meetings were the fora where learnings were shared and discussed. In addition, two workshops were held with co-sponsorship from DANIDA, Bangladesh, one a national workshop on fisheries extension and the other a national consultation on fisheries extension. These workshops brought together not only all governmental, donor and NGO agencies concerned with fisheries development in Bangladesh but also representatives from all levels within these organizations. The workshops provided opportunities to the participants to think through the needs of fisherfolk, the objectives of fisheries extension, the techniques, approaches and methods of fisheries extension, and the manpower and organizational aspects to facilitate extension in the context of the national development plans and fisheries development policies of the country. What emerged from the meetings could almost be considered as consensus documents that set the guidelines for fisheries extension. They were considered particularly valuable because they had emerged out of a sharing between different levels, some concerned with policy, others with technical and administrative matters and, most importantly, those whose task it was to actually implement programmes at the field level.

Finally, there were publications that emerged from the meetings and from the project which

disseminated the experience and learnings of the project. Appendix V lists the documentation that emerged out of the subproject.

## *5. SUSTAINABILITY AND REPLICABILITY BEYOND BOBP*

With the termination of the subproject, the activity has ended. The question of the sustainability of the project, therefore, does not really exist. However, the fisherfolk groups involved in the 18 pilot activities and the 15 women's groups are there and the question of the sustainability of the groups and their enterprises does exist.

As regards the women's groups, it is still too early to say whether they will survive the closure of the subproject. An evaluation undertaken by a senior fisherfolk NGO staff member in September 1993 showed that the groups were enthusiastic and committed to continuing their enterprises and savings. However, the same evaluation pointed out that the managerial capacity of the groups was low and, without further training and support, they would have difficulty in managing their savings and credit activities. BOBP has arranged for further training inputs and support to the groups through arrangements with CODEC, an NGO that is implementing an integrated development project in the same area. This may help matters; only time will tell. But it is clear that the time period of the subproject, a mere two years, was too short; experience in the region suggests that longer periods may well be necessary to give groups the strength and confidence to go it on their own. The silver lining is in the fact that CODEC is seriously considering absorbing the groups into their project and, if that happens, and it does seem like it will, the groups may get the time they need.

The story of the 18 pilot activity groups is quite different. A brief review a year after termination of their activity found a less than happy picture. Of the 18 groups, the 13 who were involved in enterprises, are continuing their enterprises but the cohesiveness of the groups and their savings have suffered. This could partly be because of reduced follow-up and support received from the DOF staff, some of whom have been transferred out of their posts, an occupational hazard which is difficult to overcome. Another reason for decrease support from DOF staff is that they often do not have funds to travel to the locations of the groups. The other five groups exist, but that is all that can be said of them. Here again, perhaps a few more years of support would have given them the capacity to sustain themselves.

All said and done, it can be said with some degree of confidence that

given the time,

the right type of managerial culture in the DOF, and

— funds, at levels well within the reach of present budgetary allocations,

the effort can be replicated, to the benefit of the fisherfolk. The DOF is very interested in establishing a similar kind of an effort all along the coastal zone, and is taking active steps to attract donor support to enable it. Given the fact that the training inputs which made the activity possible and successful are locally available, and that the training design and materials are readily available, there is reason to believe that the DOF would replicate the project, provided it receives the needed donor support to tide over the budgetary problems. But a larger effort, which trains all, or at least a major part, of the extension staff, may also be necessary. For, to a certain extent, such an effort might overcome the disruptions caused by moving staff around, as the replacements would also be familiar and trained.



*WajedAli, a BOBP Co-ordinator, participates in a weekly group meeting with the members of a 'janata' carp-Macrobrachium polyculture group in Grampradan village.*



*M.A. Razak, a BOBP co-ordinator, advises a member of the 'Bashharia' social forestry group.*



*'NewMarket Matsojib Samiti' - the fish trading group - holds its weekly meeting.*





*Casting a net in one of the group-owned ponds.*



*Using deep tube*



*The fish market in Patuakhali town.*



*Due to the health and nutrition training and rapidly expanded amongst the wit was used for household*



*The women learnt how to vaccinate their poultry against the most common diseases.*



*Drying the*





*water for drinking.*



*Champa, one of the village-based group supervisors, discusses health and nutrition issues with women in Nazirpur village.*



*received, vegetable gardening was taken up by his group members. Some of the harvest is for consumption and some for trading.*



*A women's group meeting in a school in Mirzaganj village.*



*before husking.*

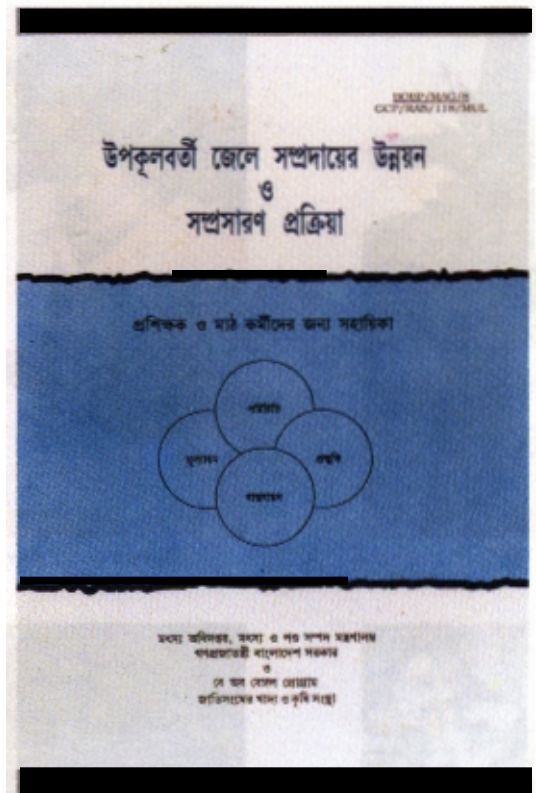


*A family in a small village - relationships between husbands and wives are said to have improved with the women's increasing confidence and independence.*





*Shibabrata Nandi, an aquaculture training and extension expert, guides the DOF and NGO staff in a two-day project review workshop.*



*the training-cum-process documentation manual - Extension Approaches for Coastal Fisherfolk Development in Bangladesh: Guidelines for Trainers and Fictid Level Fishery Extension Workers-written by Md, Sahahid Hossain Talukder.*



*The DOF and NGO staff participating in a three-day technical orientation workshop on small-scale post-harvest handling, processing and marketing offish.*

## 6. *LEARNINGS*

1. The needs of the fisherfolk of coastal and estuarine Bangladesh are primarily of a nonfishery nature. The most important need is for increased earnings to alleviate poverty. Institutional credit is not available. Informal credit sources exist, are well organized and provide credit for economic and consumption needs, albeit at very high cost. Access to viable institutional credit, at reasonable cost, without collateral support, is necessary. Communities lack proper access to social services such as education, healthcare, water supply, sanitation and quality housing which adds considerably to lowering the quality of life and these need to be addressed. Almost all these concerns are outside the mandate and capacity of the DOF.
2. The prospects of increasing production from capture fisheries in the estuarine and near inshore regions is bleak, given the increasing populations, intensity of fishing, and practice of some extremely destructive fishing methods. The fisherfolk realize the limitation and, where possible, are trying to get out of capture fisheries, though the options seem very limited. The potential for aquaculture in the numerous freshwater ponds is large, but is limited by access to use-rights, lack of inputs such as seed and feed, and extension support. Marketing, transportation, handling (including use of ice) and processing (mostly drying) is well organized and primarily in the hands of traders. The only development options may be trying to break the trader-credit link, which gives low prices to the fisherfolk, and enable increased control over marketing chains to fisherfolk, both of which may be very difficult unless viable alternatives are offered.
3. Given the mandate of the DOF and the technical capability of the staff, the focus of fisheries extension will have to be, on the one hand, promoting and enabling participatory management of capture fisheries and, on the other, extending and facilitating freshwater culture. The DOF can only play a catalytic role regarding the nonfishery needs, by facilitating fisherfolk access to the government departments concerned.
4. DOF staff can, and should, promote and facilitate enterprise development to increase earnings of fisherfolk, but central to this is the provision of credit, which the DOF administratively, and in terms of capacity, is not designed to handle. The success of enterprise development depends not only on the technical knowledge and abilities of the fisherfolk, but, more so, on their ability to manage their enterprises efficiently.
5. Institutional credit is a critical need. Revolving funds-based credit programmes do work well and fisherfolk groups with training and support can manage them with very good repayment rates. However, the DOF staff may not be able to manage and supervise such programmes in their present circumstances.
6. DOF and NGO staff associated with the subproject have shown that, with proper training, some financial inputs and a supportive managerial culture, they are capable of evolving, designing and implementing participatory extension programmes which benefit fisherfolk and address their needs.
7. DOF staff lack sufficient technical and extension knowledge and skills. There is a need to develop induction training programmes and regular, need-based, on-line training to refresh and update skills and knowledge of the staff. There is need to look at training not merely as information and skill transfer, but as a human resource development activity which builds up the organizational capacity of the Department to manage its tasks at all levels.
8. Regular and periodic project review workshops, which encourage reporting and sharing of information and feedback, are very useful ways of motivating staff, rewarding performance and providing necessary training. It also builds constructive competition.

9. Fisheries extension efforts are affected by the lack of technical backstopping mechanisms and these need to be developed and institutionalized.
- IO. The managerial culture prevalent in the DOF does not facilitate problem-oriented, participatory efforts at the field level, which require devolution of responsibility to thana levels. The culture is not performance-oriented, and there is no visible incentive for quality work. Budgets are low and are more oriented towards maintaining the organization and special schemes rather than operational activities. They also do not allow much discretion at district and thana levels. This is particularly problematic, as fisherfolk in these circumstances can expect little from extension staff to facilitate their efforts other than advice.
- I 1. Regular (and seemingly random) transfers of staff wastes training inputs and is positively disruptive in development and extension work which require sustained efforts over long periods of time and which are dependent on the relationships which staff are able to evolve with fisherfolk.
12. Thana and district level staff often lack transportation (especially boats) and do not have access to budgets that allow them to fuel and maintain their vehicles, when they do have them, or utilize alternate private transport.
13. Group formation is a useful way of mobilizing the collective efforts of fisherfolk and its success depends on good training, regular and sustained follow-up over long periods of time, involvement in viable economic enterprises, good leadership in the group, managerial capacity and a healthy amount of luck.
14. Savings mobilization in groups is very useful. It builds confidence, security, capital and provides groups with a safety net for difficult times. Adequate managerial capacity and transparency in all dealings are necessary for their success. In spite of good savings, the amounts saved are rarely enough to support economic activities without additional credit access.
15. Women in fishing communities are desperately in need of assistance, primarily in terms of income-generation, healthcare and knowledge-building in matters relating to women's issues and rights. The issues and concerns relating to developmental activities for, and with, women are similar to those already referred to. Given the social and cultural circumstances prevalent in Islamic communities in Bangladesh, it is impossible to provide women with extension services unless women extension staff are involved. However, male staff can do the work alongside their female colleagues. It is important for DOF to consider recruiting properly qualified women staff at district and thana levels to address the needs of women in the fishing communities.

## *7. CONCLUSION*

The subproject has shown that with nationally available training resources, some financial inputs (which are within the existing budgetary allocations) and a supportive managerial culture the DOF can provide extension and/development support to fisherfolk communities.

The subproject has also generated learnings about the real needs of the fisherfolk, the ways to address them and the manpower, organizational and technical factors that either promote or come in the way of the DOF being able to address the needs of the fisherfolk.

Given the situation and trends at present, it is unlikely that the DOF will be able to replicate the effort or expand it, without fairly dramatic changes in its organizational and managerial culture.

## APPENDIX 1

### Project chronology

1986

- NOV. Discussions with DOF, Bangladesh, regarding Second Phase of BOBP. DOF requests BOBP to develop an extension system to cater to the needs of the marine and estuarine fisherfolk of Bangladesh.

1987

- MAR Advisory Committee of BOBP recommends that in identifying and preparing Second Phase extension activities in Bangladesh, priority should be given to training of trainers, including NGOs, and to the organization of extension systems.
- DEC. In consultation with DOF, a strategy is outlined for extension services development to cater to coastal and estuarine fisherfolk of Bangladesh.

1988

- APR. Strategy developed and elaborated into a proposal for extension subproject. DOF suggests restricting subproject activities to the districts of Patuakhali and Barguna. Activity to focus on in-service training of district- and thana-level staff and NGO staff to evolve thana-level pilot extension activities. Working Document submitted for GOB approval.
- NOV. While awaiting GOB clearance, visit undertaken to Patuakhali and Barguna to conduct RRA and collect information to guide and facilitate implementation.

1989

- MAR. Another field visit to target area to collect information. National trainers identified to undertake training of DOF and NGO staff. Work to design training and curricula begins.
- APR. Final approval for extension subproject received from GOB.
- JUL. 23 DOF staff from district- and thana-levels and three NGO staff given 5-day training on RRA approaches to better understand fisherfolk communities, their status, needs and dynamics.
- AUG.-
- OCT. DOF and NGO staff, on the basis of training, undertake three months of fieldwork in their respective *thanas*. Fieldwork, data collection and analysis supported through monthly 2-day workshops undertaken by trainers.
- NOV. Findings of fieldwork presented at 4-day workshop. DOF and NGO staff given three days' training on participatory problem identification, problem analysis and planning.
- DEC.-
- FEB. DOF and NGO staff undertake three months of fieldwork doing participatory needs analysis, problem analysis and discussing with fisherfolk how their problems could be addressed.
- DEC. Three-day Technical Orientation Workshop on small-scale post-harvest handling, processing and marketing of fish held for DOF and NGO staff with BOBP's Post-Harvest unit.

## 1990

- JAN. Technical Orientation Workshop of three days held for DOF and NGO staff on freshwater culture.
- MAR. Findings of fieldwork presented and discussed at 4-day review workshop. DOF and NGO staff receive four days of training in participatory project formulation, planning and implementation, then proceed to their respective thanas to undertake project formulations with fisherfolk to address the needs identified.

MAY Trainers visit all field locations for discussions and to assess progress and provide training inputs as necessary. Preliminary project proposals presented by DOF and NGO staff at 3-day workshop. Based on inputs of trainers and discussions, DOF and NGO staff return to the field for two months to refine the proposals.

Detailed documentation of training and fieldwork to date consolidated and presented to DOF.

Preparations begin to formulate an activity to facilitate the development of women in fishing communities and to build awareness on health and family planning, as part of a regional project to be funded by the UNFPA. Officer from FAO visits to assist in project formulation. National Consultant is assigned to undertake RRA and project formulation.

- JUL. DOF and NGO staff participate in 4-day workshop with Director of Fisheries, BGD, presiding. Thirtysix project proposals for thana-level pilot activities are presented for consideration of DOF and BOBP.

OCT. In consultation with DOF, 18 of the 36 proposals agreed on for support and implementation. DOF and NGO staff attend 5-day training in fisherfolk group formation and management. DOF and NGO staff proceed to mobilize groups and start savings programmes in anticipation of the implementation of the pilot activities.

Detailed documentation of training and fieldwork to date completed and submitted to DOF.

A field extension coordinator is identified for posting in Patuakhali to provide on-line support and monitor the pilot activities.

BOBP in cooperation with DANIDA holds a one-day national workshop on fisheries extension. The meeting is attended by 50 representatives from' DOF and multilateral, bilateral and NGO agencies involved in the fisheries sector.

## 1991

- JAN. The field extension coordinator joins the project. Three-day training provided to the DOF and NGO staff on savings and credit management. As part of the workshop, the staff refine the 18 agreed on project proposals and develop workplans for the first six months of the activities.

A project proposal for the development of women in fishing communities is incorporated into a regional proposal and submitted to UNFPA. The activity proposes mobilizing groups in ten villages, savings, credit support for income-generation activities, improved access to healthcare and family planning education and providing information on women's issues.

All 18 pilot activities go on-line. Savings have begun and all the groups have established bank accounts for the savings and for the revolving funds which will support the income-generation activities.

APR. Three-day workshop reviews the progress of the 18 pilot activities and finds the progress good, with savings on schedule. A detailed planning-cum-monitoring system is designed, which would not only help in monitoring the activities but also act as a management tool for the fisherfolk groups and assist DOF and NGO staff.

The clearance of the main phase of the UNFPA supported activity is delayed. In anticipation, preparatory activities are undertaken and a National Consultant identified who will organize and implement the activity, starting in July.

MAY In late April and early May a major cyclone causes considerable damage. The target area is in the periphery and is affected. However, the groups and their pilot activities are found to be functioning well.

The trainers consolidate the documentation of the training and the fieldwork into a training manual-cum-process documentation and the document is discussed at a one-day workshop in Dhaka which brings together several DOF staff and NGO trainers.

Credit in the form of revolving funds, and based on detailed feasibility studies and cash flow calculations, is released to the 12 groups involved in income-generation activities.

JUL. UNFPA informs FAO that they are unable to fund the main phase of the women's development activity as funds for regional activities have been over-allocated above existing fund ceilings. Consequent to this decision, BOBP decides to go ahead with the women's activities in Bangladesh, but at lowered levels, with funding from the SIDA-DANIDA main project. A National Consultant is appointed and she begins group formation work in ten villages with the help of a male project assistant. Fifteen groups are initiated in ten villages.

AUG. A review workshop brings together the DOF and NGO staff for a check on progress and further planning. Eleven pilot activities are doing well, two projects are delayed due to seasonality and organizational reasons and four projects are doing poorly. Mid-course corrections are applied to improve performance. Savings are on schedule, but repayments are below expectations due to the after-effects of the cyclone.

In the women's activities, the group activities have taken off. Ten women, one from each target village, have been identified, trained and appointed as group supervisors. The group supervisors are trained at weekly 1-day meetings. Local resource persons are being utilized to provide information and training inputs in healthcare, family planning, the technical aspects of income-generation and women's issues.

NOV. DOF and NGO staff review progress at a review workshop. Twelve groups are doing well and plans are made to help the other six groups to improve their performance. There is concern about low repayment levels and plans are made to motivate the fisherfolk to improve repayments.

1992

MAR. DOF and NGO staff meet at a review meeting to assess the progress and to plan. Five activities have been completed successfully. It is agreed that the groups would be motivated to continue group activities, particularly their savings and weekly meetings even after completing their pilot activities. Of the remaining groups, eight are performing well and five lagging behind. The savings are on schedule and the loan repayments improving, though still below expectations.

A one-day review meeting brings the ten village-based group supervisors together. Group savings are on schedule, and the 364 women in the 15 groups quite enthusiastic about their work. The groups have decided to expand their paddy parboiling and

husking activities with credit support from the project. Group supervisors have received training in group formation and management, savings mobilization, nutrition, health, family planning, savings and credit management and on women's rights. They have also had training sessions with their groups in these areas. Women group members are found to be taking up kitchen gardening, drinking water from deep tube wells and building sanitary latrines with government help as a result of the mobilization and training received.

APR. The DOF organizes a 3-day national workshop on fisheries extension at Mymensingh, bringing together staff from all levels of all agencies concerned with fisheries development in Bangladesh. The workshop is sponsored by BOBP and DANIDA.

JUN. A 2-day workshop of DOF and NGO staff reviews the pilot activities and plans for the next quarter. As the activities are working on schedule and BOBP's second phase is nearing its end, it is decided to terminate the activity when the pilot activities are completed, which is estimated to be in September '92.

The women's activities are reviewed at a one-day workshop, which finds the activities on schedule. Credit disbursements are initiated to enable the women to start up the enterprises they had planned. Given the late start of the women's activities, it is decided to continue the activity for another year.

JUL. The training-cum-process documentation manual is ready and, upon approval by DOF, is printed in Bangla. The DOF decides to distribute the manual to all district- and thana-level staff. The manual is advertised and reviewed; and the demand from the NGO sector for the manual is encouraging.

SEP. The remaining 13 pilot activities have been completed, and the BOBP input to all 18 pilot activities is terminated end-September. The DOF intends to continue supporting the groups and to motivate them to continue their savings and enterprises.

OCT. A video film on the subproject, made by a national NGO, is completed.

NOV. A final 2-day review is held of the 18 pilot activities, which brings the concerned DOF and NGO staff together. The savings of the 342 fisherfolk involved in the 18 groups stands at Taka 99,224, which is about 40 per cent of the total credit disbursed. The repayment of loans taken from the revolving fund is 100 per cent (see Appendix II for details).

A one-day review of the women's activities finds the effort on schedule, with savings and repayments at planned levels. A special programme to mobilize the women to accept immunization and ante-natal care is undertaken with quite some success.

DEC. Field visits are undertaken to all the 18 groups. The DOF and NGO staff and the fisherfolk groups undertake independent evaluation of the groups' performances. Seven groups are ranked excellent, two ranked good, six ranked average and three ranked poor. Based on this evaluation, set multiples of the group's savings are given to the groups as performance grants to enable them to continue their enterprise activities.

## 1993

FEB. A 2-day review brings the ten group supervisors together. The focus of the activity till termination in September is going to be training and advisory inputs to the groups, to strengthen group management and management of savings and credit to ensure their sustainability beyond the project period. Savings and credit repayments are on schedule. Some of the groups had, on their own accord, increased their weekly savings because their earnings had increased. Upon repayment, credit is reissued to group members.

MAY After a 2-day review of the women's activities, the ten group supervisors and the BOBP field staff proceed on a 10-day study tour to Dhaka and surrounding areas to study the activities of some leading NGOs.

The five NGO trainers who had been associated with the subproject meet for two days to discuss the learning of the subproject. The purpose is to document the learnings for reporting.

SEP. A final review workshop is held. Present are the ten group supervisors and the leaders (Presidents, Secretaries and Treasurers) of all 15 groups. The repayment of the Taka 190,000, which had been provided as credit, is almost 100 per cent over 2.45 rotations. The savings of the women stand at Taka 73,078. As an incentive to encourage the women to continue their activity, twice the amount of their savings is granted to them as a future credit fund (see Appendix III for details).

The activities and the performance of the 15 groups is reviewed by the head of a leading fisherfolk NGO, CODEC, who, in principle, have decided to take over the groups and incorporate them into their integrated development project early in 1994.

On the basis of the recommendations, CODEC is provided a grant to enable them to provide training and visit inputs to build up the groups' capacity in managing their affairs and funds.

The subproject is terminated at the end of September 1993.



## APPENDIX II

### Details of groups and their pilot projects

(All monetary values in Taka)

<i>S. No.</i>	<i>Name of Group</i>	<i>Enterprise Activity</i>	<i>Savings on Sept. '92</i>	<i>Credit received</i>	<i>Credit repayment created</i>	<i>Credit fund rating</i>	<i>Group performance</i>
<b>Formed January 1991</b>							
1.	Gudighata M M S (30W) Gudiphata/B. Bamna	Health education	11,213	N.C.	N.C.	11,213	2/5
2.	Piprakhali M S (4M) Piprakhali/P. Mirzaganj	Carp nursery	3010	11,325	100%	3010	2/5
3.	Piprakhali (25W) Adarsha M M S Piprakhali/P. Mirzaganj	Health education	6526	N.C.	N.C.	13,052	3/5
4.	Janata M S (10M) Gramprodan/P. Galachipa	Carp/Macrobrachium polyculture	4491	26,140	100%	22,455	5/5
5.	Pathaerghata M M S (29W) Pathaerghata B. Pathaerghata	Health education	8115	N.C.	N.C.	24,345	4/5
6.	Doctar Bari M S (5M) East Kera Barria/B. Sadar	Carp nursery	2658	16,997	100%	7974	4/5
<b>Formed February 1991</b>							
7.	Kaliya Adarsha MMS Kaliya/P. Bauphal	(10W) Poultry rearing; Mat-making	1063	12,350	100%	1063	2/5
8.	Tiakhali M S Tiakhali/P. Kalapara	(8M) Credit for boat and net repair	5386	20,000	100%	26,930	5/5
<b>Formed March 1991</b>							
9.	Betagi M M S Betagi/B. Betagi	(30W) Health education	5700	N.C.	N.C.	5700	2/5

S. No.	Name of Group	Enterprise Activity	Savings on Sept. '92	Credit received	Credit repayment created	Credit fund rating	Group performance
10.	a. Madhya Chapli Nijadergari M M S Chapli/P. Kalapara	(10W) Poultry-rearing	9837	37,300	100%	9837	2/5
	b. Naluabhagi Nijedergari M M S Naluabhagi/ P. Kalapara	(10w)					
1	1. a. Bashbaria M S I Bashbaria/ P.Dasmina	(40M) Social forestry	4926	N.C.	N.C.	14,778	4/5
1	1. b. Bashbaria M S II Bashbaria/ P.Dasmina	(40M) Social forestry	6984	N.A.	N.A.	20,952	4/5
12.	Chotobhagi M M S Chotobhagi/ B. Amtali	(9W) Poultry-rearing (1M)	2190	14,750	100%	10,950	5/5
13.	Chotobhagi M S Chotobhagi/B. Amtali	(15M) Social forestry	2961	N.C.	N.C.	5922	3/5
Formed August 1991							
14.	Charlotimara M S Charlotimara/ B. Patharghata	(10M) Credit for hilsa salting	2126	13,750	100%	6378	4/5
Formed October 1991							
15.	Daffodils M S Purakala/B. Sadar	(20M) Carp culture	15,934	40,850	100%	15,934	2/5
Formed January 1992							
16.	New Market M S Kalikapur/P. Sadar	(15M) Credit for fish trade	4950	13,500	100%	14,850	4/5

S. No.	Name of Group	Enterprise Activity	Savings on Sept. '92	Credit received created	Credit repayment rating	Credit fund	Group performance
Formed May 1992							
17.	Patharghata M S Patharghata/ B.Patharghata	(9M) Carp/Macrobrachium polyculture	2 104	15,000	100%	6312	4/5
Formed June 1992							
18.	Jarjainkat M S Jarjainkat/P. Sadar	(6M) Carp culture	2776	6000	100%	2776	2/5
(153W) (183M)			10,2950	221,962	100%	224,431	

NOTES:

M S: Matwji Samiti (fisherfolk association) M M S: Matwji Mahila Samiti (fisherfolk women's association'). respectively.

'P' and 'B' which precede the name of the thana indicates the district. Patuakhali and Barguna

Savings on September '92: The savings of the groups as on 30.9.92. which was used to calculate the incentive amounts to help the groups create their own revolving funds after termination of the subproject. The total savings amounted to Taka 102,950, which was 45.16% of the credit that BOBP provided to the groups to undertake their pilot projects.

Credit received: The credit received by the groups from BOBP to undertake their pilot project. N.C. indicates the groups that undertook activities of a nonenterprise nature and, therefore, had no credit inputs.

Credit fund created: At the end of the project period, a multiple of the savings accrued by each group were handed over to the groups to help them establish their own revolving funds and continue their activities. The multiplier was decided by the performance of the group. Groups rated 5/5 received five times their savings; group rated 4/5 received three times savings; groups rated 3/5 received twice their savings; and groups rated 2/5 received a sum equal to their savings.

Group performance rating: Performance of the groups, based on several criteria, as judged by the groups themselves and each independently by the DOF and NGO staff who guided the particular groups through the exercise. The final rating on a scale of five was an 'unweighted' average of the two ratings. 5/5 indicated excellent performance. 4/5 indicated good performance, 3/5 indicated average performance, and 2/5 indicated below-average performance.

## APPENDIX III

### Women's groups and their activities

(All monetary values in Taka)

S.No.	Name of Group	No. of members	Savings on Sep. '93	Savings on July '93	Total credit	Outstand- ing credit	Percent- age re- payment	Credit fund created	Group performance rating
Formed September 1991									
1.	Shapla M M S Idrakpur/P.Sadar	(30)	5206	4162	51,000	2614	94.87	9524	3/5
2.	Nabha Digante, M M S Lohalia/P.Mirzaganj	(15)	3436	3368	26,500	-	100.00	6136	3/5
Formed October 1991									
3.	Ekata M M S Katakali/ P.Mirzaganj	(22)	5266	4937	33,000		100.00	9874	3/5
Formed November 1991									
4.	Shimul M M S Idrakpur/P.Sadar	(28)	2431	2266	24,000	1103	95.40	4532	1/5
5.	Ujjiban M M S Nazirpur/P.Sadar	(28)	6457	5952	20,000	-	100.00	11,904	3/5
6.	Jagoroni M M S Nazirpur/P.Sadar	(26)	7094	6621	36,000	100	99.72	13,242	5/5
7.	Pairahunjo M M S (20) Manoharkhali P.Mirzaganj	(20)	4825	4268	42,000	420	99.00	8536	5/5
8.	Jhinuk M M S Kuripiaka P.Sadar	(22)	4638	4523	32,000	3159	90.12	9046	1/5
9.	Maitri M M S Kuripiaka P.Sadar	(19)	3603	3214	19,000	300	98.42	6428	1/5
10.	Karobi M M S Kalikapur/ P.Mirzaganj	(19)	6080	5605	32,000	495	98.45	11,210	3/5
11.	Polash M M S Piprakhali P.Mirzaganj	(25)	11,240	11,159	52,000	2165	95.83	22,318	5/5

S.No.	Name of Group	NO. of members	Savings on Sep. '93	Savings on July '93	Total credit	Outstand- ing credit	Percent- age re- payment	Credit fund created	Group performance rating
Formed December 1991									
12.	Dhansiri M M S Manoharkhali/ P.Mirzaganj	(13)	3440	3171	20,000	680	96.60	6342	3/5
13.	Shamolima M M S Vikakhali P.Mirzaganj	(18)	4833	4473	30,000	920	96.93	8946	5/5
14.	Golab MMS Kalikapur/ P. Mirzaganj	(15)	4713	4377	26,000	810	96.88	8754	5/5
15.	Rajanigandha MMS Mirzaganj/ P.Mirzaganj	(14)	4802	4382	22,000	815	96.29	8764	3/5
			314	78,064	73,438	465,500	13,581	97.08	146,156

#### NOTES

Savings as on Sep.'93: Total savings accumulated by the groups at the close of the subproject

Savings as on Jul.'93: Cutoff savings level of the groups used to calculate the amount of the credit fund the project created for each group at the end of the project to enable them to continue their activities. The credit created was twice the savings as on 31.7.93

Total credit: Total credit group member\ utilized from the revolving funds set up by the project. The revolving fund established was Taka 190,000. Total credit supplied to the group\ amounted to 245 time\ circulation of the fund.

(Group rating: Performance of the group\, based on several criteria. as judged by the groups themselves and by the extension coordinators who worked with them. The rating is an unweighted average of the two performance rating\ on a scale of five (5), with 5/5 Indicating 'excellent'. 3/5 'good' and 1/5 'below-average' performance.

Economic activities undertaken by groups: Production: parboiling and husking rice; net making: Culture. poultry: goats; Trade rice: wheat flour: nets: fish: vegetables; small shop\ for consumables; Services; net repair; boat repair. (Note: Group\ undertook a selection of these activities, with the most emphasis on parboiling and husking rice and small trade in rice, wheat flour and consumables).

Other activities of groups: Health education. nutrition education: child immunization and ante-natal care for women; family planning education: adopting sanitary latrines (with GoB support): utilization of deep tubewell water for drinking: management of diarrhoea: homestead poultry: immunization of poultry; homestead vegetable gardening: homestead tree planting. women's social and legal issues education/counselling (Note: All the groups participated in these activities).

## APPENDIX IV

### Training inputs

#### *Staff training*

All 23 DOF staff (including two District Fisheries Officers, two Fisheries Survey Officers and 19 Thana Fisheries Officers, Assistant Fisheries Officers and Fisheries Assistants) of Patuakhali and Barguna Districts and three staff of local nongovernmental organizations received several short training inputs between July 1989 and June 1991, amounting to approximately 45 days of training, on-line.

The training built capacity in the areas of:

- Participatory rapid rural appraisals.
  - Community diagnosis.
  - Participatory needs analysis.
  - Participatory problem analysis.
  - Participatory planning.
  - Participatory project implementation and management.
  - Group mobilization and group management.
- Savings and credit management.

All training programmes were followed by fieldwork, which put the training to test, and field workshops to assist staff with their work and to provide refresher training inputs, as required.

The training methodology, materials and a detailed process documentation of the training, and of putting the training to work, was compiled into a training manual and published.

The training package was designed and implemented by a group of Bangladeshi trainers from various NGOs, headed by Md. Shahid Hossain Talukder.

#### *Technical orientation*

Twentythree DOF staff and three NGO staff were provided technical orientation in:

- Post-harvest fisheries technologies and marketing in the small-scale fisheries sector by Duncan King of the BOBP's PHF Unit.
- Freshwater aquaculture by Shibabrata Nandi, an NGO trainer.

#### *Fisher-folk training*

The fisherfolk (153 women; 183 men), organized into 18 groups, received on-line training from their concerned *thana* level DOF staff and NGO staff in:

- Group management.

- Savings and credit management.
- Bookkeeping and simple accounts
- Planning and project management
- Leadership.
- Conflict resolution.
- Technical training in the areas of Carp culture, Carp-Macrobrachium polyculture, Carp nursery management, poultry-rearing, homestead and social forestry, health, nutrition and family planning.

The Departments of Livestock, Health and Family Welfare, and Forestry assisted in the training by providing staff and through follow-up extension inputs to the respective pilot projects.

### *Women supervisors*

Ten village-based women group supervisors received on-line training, one day each week, from July 1991 to September 1993.

The training covered:

- Group formation and management.
- Savings and credit management.
- Conflict resolution.
- Simple bookkeeping and accounting.
- Health practices, health education, management of diarrhoea, use of sanitary latrines, safe drinking water access, child immunization, ante-natal care for women, and family planning education and methods.
- Poultry-rearing and immunization
- Homestead vegetable gardening.
- Homestead tree-planting and care.
- Women's social and legal issues.

The training was provided by the extension coordinators of BOBP, Syeda Salma Begum and Md. Wajed Ali, with the help of resource persons drawn from government departments and NGOs at the district level.

### **Fisherfolk women's training**

The 314 women's group members from ten fishing communities of Patuakhali District, were provided on-line training in ten groups and received support from July 1991 to September 1993, in all the areas mentioned in the previous section, by the ten group supervisors and by the two extension coordinators.

## APPENDIX V

### Documentation related to subproject

#### Working document

BAY OF BENGAL PROGRAMME: Working document of Subproject 'Fisheries Extension Development, Bangladesh'. (EXT/FED/BGD). Unpublished internal document, BOBP, Madras, 1989.

#### Reports

DEPARTMENT OF FISHERIES: *Fisheries Extension in Bangladesh; Report and Recommendations of the Workshop on Fisheries Extension in Bangladesh*. Dhaka, October 11, 1990. Department of Fisheries. Ministry of Fisheries and Livestock, GOB, BOBP (FAO) and Mymensingh Aquaculture Extension Project (MAEP)-DANIDA, Dhaka, 1990.

DEPARTMENT OF FISHERIES: Report and Recommendations of the National Consultation on *Fisheries Extension in Bangladesh*. Mymensingh, April 25-27, 1992, Department of Fisheries, Ministry of Fisheries and Livestock, GOB, BOBP (FAO) and Mymensingh Aquaculture Extension Project (MAEP)-DANIDA, Dhaka, 1992.

#### Published material

BENGTON, SIGNAR: Impressions of Patuakhali. *Bay of Bengal News* No.36. BOBP-FAO, Madras. December 1989.

HEINBUCH, UTE: Population and Development in the Bay of Bengal Region. *Bay of Bengal News* No. 36. BOBP-FAO, Madras. December 1989.

ROY, RATHIN: Fisheries Extension in Bangladesh: Moving Towards a New Beginning. *Bay of Bengal News*, No. 38. BOBP-FAO. Madras. June 1990.

ROY, RATHIN and AMALORE, E.: Learning by Doing: Extension in Bangladesh. *Bay of Bengal News*, No. 40. BOBP-FAO. Madras. December 1990.

ROY, RATHIN: The Hope that Extension Offers the Fisheries of Bangladesh. *Bay of Bengal News*, No. 46. BOBP-FAO, Madras. June 1992.

TALUKDER, Md. SHAHID HOSSAIN: *Extension Approaches to Coastal Fisherfolk Development in Bangladesh: Guidelines for Trainers and Field Level Fishery Extension Workers*. BOBP/MAG/8. Department of Fisheries, Ministry of Fisheries and Livestock, GOB and BOBP-FAO. Dhaka. July 1992 (In Bengla).

BEGUM, SYEDA SALMA and ALI, Md. WAZED: The Case of the Battered Wife, *Bay of Bengal News* No. 47. BOBP-FAO, Madras. September 1992.

DURANTE, LISA: A path to extension has been laid, *Bay of Bengal News*. No. 50, BOBP-FAO, Madras. June 1993.

#### Video film

KAWSER, AMINUL: *Fisheries Extension Development in Bangladesh*. Sound and Vision Extension. 17 mins, VHS Format. Dhaka, 1993.



## APPENDIX VI

### Equipment supplied

The following equipment was supplied to the Department of Fisheries, GOB, for the implementation of the subproject:

	Nos
1. FRP workboats: GPW-18, 18 ft .....	2
2. Outboard motors: Yamaha (Kerosene) 40 hp. ....	2
3. Motorcycles: Suzuki 100 cc .....	10
4. Overhead projector: 3M -2160 .....	1
5. Photocopier: Nashua 7140 with table .....	1

## PUBLICATIONS OF THE BAY OF BENGAL PROGRAMME (BOBP)

*The BOBP brings out the following types of publications.*

**Reports** (BOBP/REP/...) which describe and analyze completed activities such as seminars, annual meetings of BOBP's Advisory Committee, and subprojects in member-countries for which BOBP inputs have ended.

Working Papers (BOBP/WP/...) which are progress reports that discuss the findings of ongoing work.

**Manuals and Guides** (BOBP/MAG/...) which are instructional documents for specific audiences.

**Information Documents** (BOBP/INF/...) which are bibliographies and descriptive documents on the fisheries of member-countries in the region.

**Newsletters** (*Bar of Bengal News*) which are issued quarterly and which contain illustrated articles and features in nontechnical style on BOBP work and related subjects.

Other publications which include hooks and other miscellaneous reports.

Those marked with an asterisk (\*) are Out of stock but photocopies can be supplied.

### **Reports (BOBP/REP/...)**

- 32.\* *Bank Credit for Artisanal Marine Fisherfolk of Orissa, India.* U. Tietze. (Madras, 1987.)
33. *Nonformal Primary Education for Children of Marine Fisherfolk in Orissa, India.* U. Tietze, N. Ray. (Madras, 1987.)
34. *The Coastal Set Bagnet Fishery of Bangladesh — Fishing Trials and Investigations.* S. E. Akerman. (Madras, 1986.)
35. *Brackishwater Shrimp Culture Demonstration in Bangladesh.* M. Karim. (Madras, 1986.)
36. *Hilsa Investigations in Bangladesh.* (Colombo, 1987.)
37. *High-Opening Bottom Trawling in Tamil Nadu, Gujarat and Orissa, India : A Summary of Effort and Impact.* (Madras, 1987.)
38. *Report of the Eleventh Meeting of the Advisory Committee,* Bangkok, Thailand, 26-28 March, 1987. (Madras, 1987.)
39. *Investigations on the Mackerel and Scad Resources of the Malacca Straits.* (Colombo, 1987.)
40. *Tuna in the Andaman Sea.* (Colombo, 1987.)
41. *Studies of the Tuna Resource in the EEZs of Sri Lanka and Maldives.* (Colombo, 1988.)
42. *Report of the Twelfth Meeting of the Advisory Committee.* Bhubaneswar, India. 12-15 January 1988. (Madras, 1988.)
43. *Report of the Thirteenth Meeting of the Advisory Committee.* Penang, Malaysia, 26-28 January 1988. (Madras, 1989.)
44. *Report of the Fourteenth Meeting of the Advisory Committee.* Medan, Indonesia, 22-25 January. 1990. (Madras, 1990.)
45. *Gracilaria Production and Utilization in the Bay of Bengal Region: Report of a seminar held in Songkhla, Thailand.* 23-27 October 1989. (Madras, 1990.)
46. *Exploratory Fishing for Large Pelagic Species in the Maldives.* R.C.Anderson. A.Waheed, (Madras, 1990.)
47. *Exploratory Fishing for Large Pelagic Species in Sri Lanka.* R Maldeniya. S. L. Suraweera. (Madras, 1991.)
48. *Report of the Fifteenth Meeting of the Advisory Committee.* Colombo, Sri Lanka, 28-30 January 1991. (Madras, 1991.)
49. *Introduction of New Small Fishing Craft in Kerala, India.* O. Gulbrandsen and M. R. Anderson. (Madras, 1992.)
50. *Report of the Sixteenth Meeting of the Advisory Committee.* Phuket, Thailand, 20-23 January 1992. (Madras, 1992.)
51. *Report of the Seminar on the Mud Crab Culture and Trade in the Bay of Bengal Region, November 5-8, Surat Thani, Thailand.* Ed by C.A. Angell. (Madras, 1992.)
52. *Feeds for Artisanal Shrimp Culture in India — Their development and evaluation.* J F Wood et al. (Madras, 1992.)
53. *A Radio Programme for Fisherfolk in Sri Lanka.* R N Roy. (Madras, 1992.)
54. *Developing and introducing a Beachlanding Craft on the East Coast of India.* V L C Pietersz. (Madras, 1993.)
55. *A Sri Lanka Credit Project to Provide Banking Services to Fisherfolk.* C. Fernando. D. Attanayake. (Madras, 1992.)
56. *A Study on Dolphin Catches in Sri Lanka.* L Joseph. (Madras, 1993.)
57. *Introduction of New Outrigger Canoes in Indonesia.* G Pajot, O. Gulbrandsen. (Madras, 1993.)
58. *Report of the Seventeenth Meeting of the Advisory Committee.* Dhaka, Bangladesh. 6-8 April 1993. (Madras, 1993.)
59. *Report on Development of Canoes in Sri Lanka.* G. Pajot. O. Gulbrandsen. (Madras, 1993.)
60. *Improving Fisherfolk incomes through Group Formation and Enterprise Development in Indonesia.* R N Roy. (Madras, 1993.)
61. *Small Offshore Fishing Boats in Sri Lanka.* G Pajot. (Madras, 1993.)
63. *Small-scale Oyster Culture on the West Coast of Peninsular Malaysia.* D Nair, R Hall. C Angell. (Madras, 1993.)

### **Working Papers (BOBP/WP/...)**

49. *Pen Culture of Shrimp by Fisherfolk : The BOBP Experience in Killai, Tamil Nadu, India.* E. Drewes, G. Rajappan. (Madras, 1987.)
50. *Experiences with a Manually Operated Net-Braiding Machine in Bangladesh.* B.C. Gillgren. A. Kashem. (Madras, 1986.)

51. Hauling Devices for Beachlanding Craft. A. Overa. P.A. Hemminghyth. (Madras, 1986.)
52. Experimental Culture Of Seaweeds (Gracilaria Sp.) in Penang. Malaysia. (Based on a report by M. Doty and J. Fisher). (Madras, 1987.)
53. Atlas of Deep Water Demersal Fishery Resources in the Bay of Bengal T. Nishida, K. Sivasubramaniam. (Colombo. 1986.)
54. Experiences with Fish Aggregating Devices in Sri Lanka. K.T. Weerasooriya. (Madras, 1987.)
55. Study of Income. Indebtedness and Savings among Fisherfolk of Orissa. India. T. Mammo. (Madras, 1987.)
56. Fishing Trials with Beachlanding Craft at Uppada. Andhra Pradesh, India. L. Nyberg. (Madras, 1987.)
57. Identifying Extension Activities for Fisherwomen in Vishakhapatnam District. Andhra Pradesh. India. D. Tempelman. (Madras. 1987.)
58. Shrimp Fisheries in the Bay of Bengal M. Van der Knaap. (Madras, 1989.)
59. Fishery Statistics in the Bay of Bengal. T. Nishida, (Madras, 1988.)
60. Pen Culture of Shrimp in Chilaw, Sri Lanka. D. Reyntjens. (Madras, 1989.)
61. Development of Outrigger Carves in Sri Lanka. O. Gulbrandsen, (Madras, 1990.)
62. Silvi-Pisciculture Project in Sunderbans, West Bengal : A Summary Report of BOBP's assistance. C.L. Angell, J. Muir, (Madras, 1990.)
63. Shrimp Seed Collectors of Bangladesh. (Based on a study by UBINIG.) (Madras, 1990.)
64. Reef Fish Resources Survey in the Maldives. M. Van Der Knaap et al. (Madras, 1991.)
65. Seaweed (Gracilaria Edulis) Farming in Vedalai and Chinnapalam. India. I. Kalkman, I. Rajendran, C. L.Angell. (Madras. 1991.)
66. Improving Marketing Conditions for Women Fish Vendors in Besant Nagar, Madras. K. Menezes. (Madras, 1991.)
67. Design and Trial of Ice Boxes for Use on Fishing Boats in Kakinada, India. I.J. Clucas. (Madras, 1991.)
68. The By-catch from Indian Shrimp Trawlers in the Bay of Bengal: The potential for its improved utilization. A. Gordon. (Madras. 1991.)
69. Agar and Alginate Production from Seaweed in India. J. J. W. Coopen, P. Nambiar. (Madras, 1991.)
70. The Kattumaram of Kothapatnam-Pallipalem, Andhra Pradesh. India — A survey of the fisheries and fisherfolk. K. Sivasubramaniam. (Madras, 1991.)
71. Manual Boat Hauling Devices in the Maldives. (Madras. 1992.)
72. Giant Clams in the Maldives -A stock assessment and study of their potential for culture J. R. Barker. (Madras, 1991.)
73. Small-scale Culture of the Flat Oyster (Ostrea folium) in Pulau Langkawi, Kedah, Malaysia. D. Nair, B. Lindeblad. (Madras, 1991.)
74. A Study of the Performance of Selected Small Fishing Craft on the East Coast of India. G. El Gendy. (Madras, 1992.)
75. Fishing Trials With Beachlanding Craft at Thirumullaivasal, Tamil Nadu. India. 1989-1992. G. Pajot (Madras, 1992.)
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NOTE: Apart from these publications. the BOBP has brought out several folders, leaflets. posters etc.. as part of its extension activities. These include Post-Harvest Fisheries folders in English and in some South Indian languages on anchovy drying, insulated fish boxes, fish containers. ice boxes. the use of ice etc. Several unpublished reports connected with BOBP's activities over the years are also available in its Library.

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