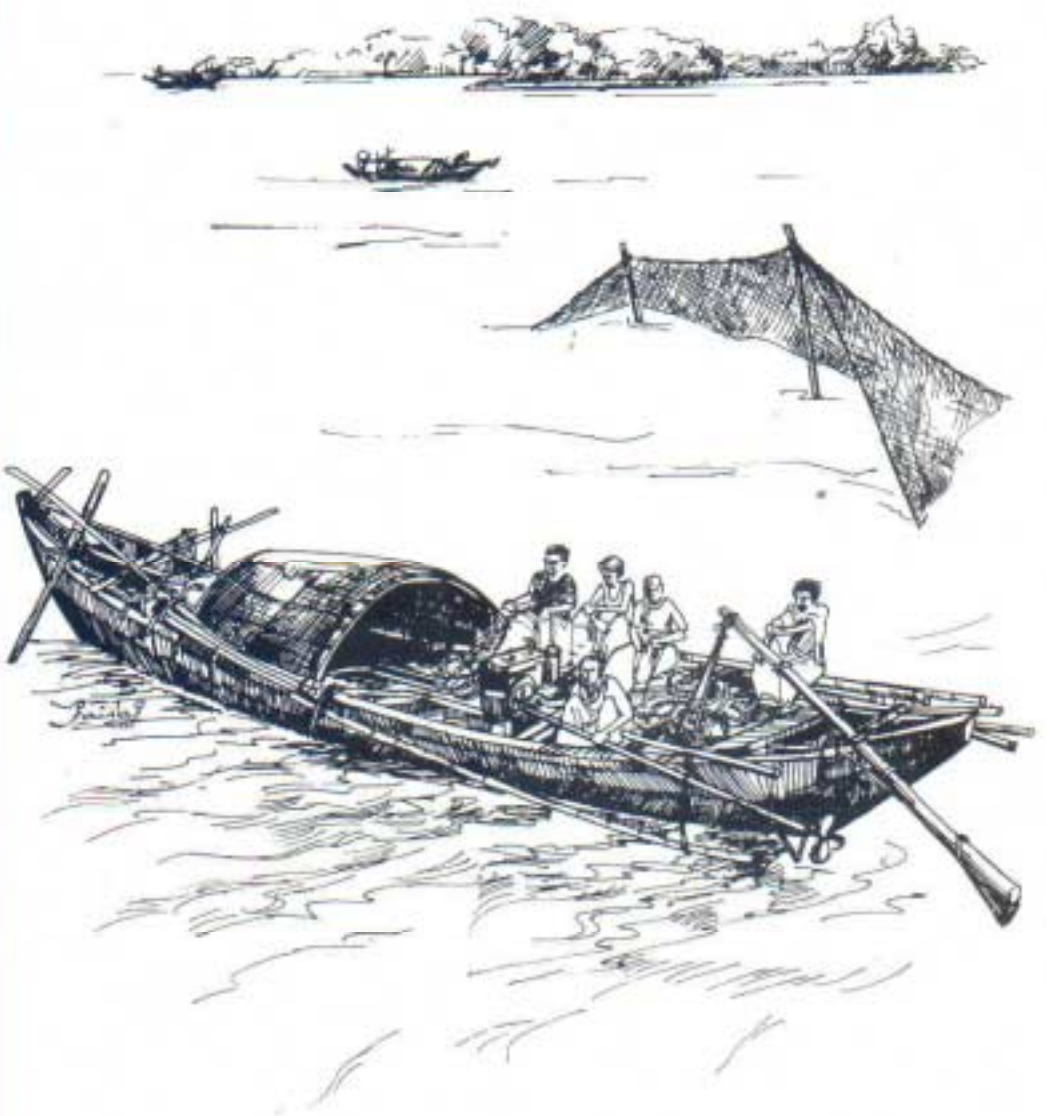
DFID

BOBP

DEPARTMENT FOR INTERNATIONAL DEVELOPMENT
POST-HARVEST FISHERIES PROJECT

SOCIO – ECONOMIC METHODOLOGIES FOR COASTAL FISHING COMMUNITIES: THE EXAMPLE OF SET BAGNET COMMUNITIES IN BANGLADESH



INFORMATION BULLETIN – 10

Information Bulletin 10

Socio – Economic Methodologies for Coastal Fishing Communities : The Example of Set Bagnet Communities in Bangladesh

BY
Nasimul Haque & M E Blowfield

Post-Harvest Fisheries Project
Department for International Development
Chennai, India

<<

In 1993-94, the DFID Bay of Bengal Post-Harvest Fisheries Project used a participatory approach to study coastal fishing communities in Bangladesh and identify possible interventions. This paper documents how that study was conducted and some of the issues that arose.

The findings are relevant to people who want to **work with coastal fishing communities and** to **those who are interested in rural research methodology in general, and particularly in participatory approaches.**

The paper discusses past **experiences with socio-economic methodologies.** It **also sets** out the goals and the **criteria, the** study guidelines and the research tools used for the 1993—94 study.

The paper says that many research tools developed for agrarian communities can be adapted for use with fishing **communities. But** the tools should **be** used with caution, specially while studying social and economic relationships.

Development organizations may not be able to spend enough time on project preparation to understand the communitjes they are working with. But this study seeks to show where **blind spots can** occur, and why **and** how **they exist.**

The DFI D—PHFP is based **in** Cheniiai, India, and Operates in three countries **of the** Bay of Bengal region — Bangladesh. india (east coast) and **Sri** Lanka, The project started **in** 1987 and is currently in its third phase. It is funded by the Government of the United Kingdom.

The **i)Fl D—PHFP** works with artisanal fishing communities *in* reducing post—harvest losses **of** fish; develops low—cost improvenlents **in** handling, processing and marketing fish; and provides technical support, advice and training to government and non—government organizations, **lisherfolk associations and** women's groups.

This information bulletin has not been cleared by the **Governments concerned or** by the DFID.

November 1997

<<

CONTENTS

Page

1. **INTRODUCTION** 1

2. **FIRST STEPS** 2

The set bagnet fishery 2

2.1 Learning from the past 2

2.2 Time 2

2.3 Multi-disciplinarity 3

2.4 Community participation, empowerment and knowledge 4

2.5 Limits to participation 5

Community expectations 5

The extent of participation 5

2.6 The influence of previous and ongoing interventions 6

Fishers are not farmers 6

Relief is not development.. 6

3. **METHODOLOGY..** 8

3.1 Goals 8

3.2 Selecting criteria and communities 8

3.3 Methodology 8

3.4 Study guidelines 9

A working framework for analysis.. 9

Topics and sub-topics 9

Household and extended family case studies 10

Notes on the guidelines 10

Revision of the guidelines 11

4. **IMPLEMENTATION** 12

4.1 Research tools 12

Activity profiles.. 12

Community reporting 12

Brainstorming.. 13

Case studies.. 13

Semi-structure interviews and group discussions 13

Ranking 14

Community mapping 14

Practical activities 15

4.2 Common factors 15

Building rapport 15

Privacy.. 16

Time 17

Results 21

Conclusions 21
Bibliography 24
Glossary 24

TABLES

1. Indicators of participation in development project 7
2. Characteristics of coastal fishing communities 7
3. Features of the study communities 11
4. Research tools 19
5. Effectiveness of different research tools at different stages of implementation.. 20

APPENDICES

1. Initial study guidelines 26
2. Case studies 29
3. a Example of community mapping
Rehania community, Hatia Island..... 32
3. b Example of community mapping:
Rakhainpara, Cox's Bazar 33
4 Published findings of the study 34
Table I : Outstanding loans to dadonar among Rehania fisherfolk 36
Figure 1: Theoretical model — flow of cash
and credit in Bangladesh coastal communities 36
Figure 2: The ladder of economic progress in coastal fishing communities 38

1. INTRODUCTION

In recent years there has been a surge of interest in research methodologies that place people rather than technology at the centre of development. These methodologies have been applied in development programmes throughout the world, but discussion so far has mostly been based on experiences in agriculture and forestry.

In 1993-1994. the DFID Bay of Bengal Post-Harvest Fisheries Project used a participatory approach to study coastal fishing communities in Bangladesh to identify possible interventions. This publication documents how that study was conducted and some of the issues that arose. The findings are relevant to anyone wanting to work in coastal fishing communities, and those interested in broader aspects of rural research methodology, particularly participatory approaches.

2. FIRST STEPS

THE SET BAGNET FISHERY

In early 1993 the authors were asked to investigate the feasibility of developing a post-harvest fisheries programme targeted at a certain type of Bangladesh coastal fishing community. The common link between the communities was that a major part of their income from fishing depended on the use of set bagnets - wide-mouthed, long-tailed nets that are set in estuarine waters to catch a variety of fish as they move with the tide.

The main reason for focusing on set bagnets was that the nets were being blamed for depletion of the fishing stock. As the fish harvest decreased, so the fisherfolk were using smaller and smaller sized mesh. As the use of small mesh increased. so the amount of fry trapped in the nets grew and the chances of fish reaching maturity were diminished. There were a number of question marks surrounding this theory. but this did not lessen the threat to set bagnet users. The level of fishing activity was unsustainable, and changes in the livelihoods of the communities seemed inevitable. The main question was: What were the viable options for these communities?

Prior to our involvement there had been several studies looking at productivity. marketing and alternative technologies. These studies had used a range of methodological approaches. from standardized, structured questionnaires to rapid appraisals involving researchers from one or more disciplines. They each shared two things in common: firstly. they had been quick (single communities were rarely visited for more than a few hours): secondly, they had been unable to recommend interventions.

The number of outsiders that had visited certain communities with the common aim of establishing interventions was brought home to us during our first visit to Delipara, a set bagnet community near Chittagong. We were warmly welcomed and began with an informal discussion to introduce ourselves and learn something about the community. Or so we thought. After fifteen minutes of what we felt was good semi-structure interview technique. a village elder stopped the conversation dead by telling us to get out our questionnaire! It was no surprise to learn later that the village was used by local university students to practise their fieldwork.

It would be mistaken to label previous studies as examples of poor research technique since many of the same researchers using the same approaches in different situations have provided useful and usable results that have been incorporated into successful interventions. Moreover. in relation to the set bagnet communities they had drawn one vital conclusion-there is no simple solution. The key reason for this was the communities themselves. Dependence on set bagnets is often an indicator of poverty. Wealthier communities have larger fishing vessels and a wider range of gears, or have alternative sources of income. Set bagnet communities have little or no land except for housing, have no viable employment opportunities outside fishing and do not have the capital to invest in vessels that would allow them to fish beyond the immediate waters. These communities were the poorest of the poor and the early studies showed that any intervention that did not understand the nature and complexity of this poverty posed a threat to the already precarious balancing act that allowed these communities to survive*.

2.1 Learning from the past

Nothing begins with nothing. Compiling secondary data is an accepted part of the research process, allowing the researcher to develop, refine and explore a hypothesis by referring to previous studies and existing data sources. However. past experiences can offer more than data: they can provide important lessons about how to make our research more effective.

2.2 Time

As mentioned above, various studies had been carried out in set bagnet communities which showed thecomplexity of the communities and the need for adequate time to develop appropriate activities. These previous studies fell into two categories: policy-oriented research to gather basic data on the set bagnet fishery community. and

* Some of the study findings are presented in this report. but for a more complete analysis of the set bagnet communities see Blowfield and Haque (1995). Blowfield and Haque (1994), and Blowtield and Kamila (1995).

project-oriented studies carried out as part of project preparation with the aim of identifying and appraising the feasibility of different interventions.

The policy-oriented research had tended to be quantitative, employing structured questionnaires to extract data for later analysis. The project-oriented studies tended to use techniques that have been popularized by the Rapid Rural Appraisal (RRA) approach. Although research has always been an accepted part of development projects, it has tended to be treated suspiciously. Pelkey (1994) criticizes World Bank projects for spending more on project appraisals than the cost of some interventions, and consultants are frequently criticized by planners for recommending further research in their reports.

RRA has to an extent provided an acceptable compromise to the calls for more information before project implementation and the need to obtain that information quickly and efficiently. But the widespread use of RRA in project preparation has been a mixed blessing. Despite its many strengths, planners have tended to latch on to the word 'rapid' and concluded that everything can be understood quickly provided the right methods are used. RRA's emergence has also coincided with two other trends: a decline in development funding and an increasing acceptance of social dimensions to development. Many planners and project managers, like astrologers linking earthly and heavenly events, have linked together RRA, reduced budgets and social development and concluded that RRA is a social development approach that can be carried out cheaply and quickly. Although RRA was developed as a multi-disciplinary approach to problem identification, not a few projects have limited it to the terms of reference of social scientists. In the worst cases, this has allowed planners and project managers to pay lip service to social development without ever fully integrating social with technological issues in the planning or implementation process.

Past experience with set bagnet communities showed that getting to know these communities was not a rapid process, and our first task was to convince the project employing us that there was good justification for spending more than 12 months on preparation that many project managers would like completed in a matter of weeks.

2.3 Multi-disciplinarity

It has become increasingly clear that technical interventions cannot be seen within a simple evolutionary perspective as they are only one of many possible factors affecting technical and social change. (Okali et al. (1994) p.29)

Drawing on the perspectives of different disciplines is basic to the principle of triangulation in RRA. However, despite this awareness, many projects in all sectors continue to face problems in developing multi-disciplinary approaches.

Mikkelsen (1995) says that projects are artificial units following dynamics other than the development process in the surrounding society partly because many elements remain beyond planners' control and partly because projects address problems from a sector perspective. There are a number of levels at which the sector perspective works against multi-disciplinary approaches:

- donor institutions are often organized along sectoral lines and continue to provide funding by sector;
- national governments are organized along sectoral lines and funding often has to be channelled through sectors: and
- project employees are recruited for their expertise in given sectors and the extent to which they are steered towards working with others depends on project management.

This sectoral focus was highly relevant to the set bagnet community work which was being funded as a post-harvest fisheries project. Within fisheries, a distinction is drawn between fisheries and post-harvest fisheries, and any project activities prior to landing would have to be implemented through a separately funded fisheries project. Furthermore, the established interpretation of post-harvest fisheries was quite narrow, favouring landing sites, processing and storage. Earlier studies as well as the project's work in India and Sri Lanka showed that the key issues for fishing communities require a far broader definition that encompasses credit, marketing, institution building, policy-making and alternative income generation or employment creation as well as technologies.

However, any attempt to expand the established definition meant convincing decision-makers that a broader definition was valid — something that required effort and, based on previous experiences, not a little determination.

Even if the importance of multi-disciplinary approaches is recognised. there are still practical problems to be faced. At a seminar on multi-disciplinary approaches to research *, the following constraints were most frequently mentioned.

- lack of time to consult with colleagues from other disciplines;
- insufficient funding to employ people from other disciplines; and
- awareness of what other disciplines have to offer.

The upshot of the last two points has been highlighted by Pelkey (1994) who cites typical terms of reference where the fisheries specialists are clearly defined (e.g. geneticist and botanist) while the social scientists are seen as interchangeable (e.g. anthropologist, sociologist or economist).

In the case of the set bagnet community study it was never intended nor feasible to adopt a true multi-disciplinary approach. The idea of including a full-time natural scientist in the research team was discussed early on, but it was felt that as only expatriates were available this would not only be too expensive, but also raise community expectations about interventions and funding. As both of the authors are social scientists, we knew from the outset that our work would therefore overlook some aspects that would have evolved from having. for instance, biologists or ecologists involved for long periods with the communities. As a compromise, the project had access to short-term inputs from experts in post-harvest fisheries who made visits to the communities twice during the study period. In addition, the researchers made use of previous studies on relevant aspects of post-harvest fisheries, made provisional findings available to researchers from other disciplines for comment, and ensured that the presentation of findings was attended by people from a range of professional disciplines.

2.4 Community participation, empowerment and knowledge

The set bagnet communities are extremely poor and within the communities are specific groups that could be marginalized and further impoverished by ill-conceived interventions. In such communities, what may appear a minor change or one that goes unnoticed by outside researchers, can in fact close off niches essential to some people's livelihood strategies. To avoid this. the idea that communities know most about their own livelihood systems (Pretty and Guijt, 1992) and that they must be involved in finding appropriate solutions lay at the core of developing a successful programme of interventions.

Some degree of community participation is widely accepted as essential to project planning and implementation, but as Okali et al. (1994) show, participation can be a subjective, misleading term. The debate is most developed in agricultural research, and as explained below it is a mistake to uncritically equate the situation of agrarian communities with those of coastal fishing communities. However, some lessons from agricultural research are relevant to fisheries.

Farming systems research was the first to shift attention away from returns to land and onto the farm family, its goals and its resources. Farming systems research has been promoted as a participatory approach in that research themes emerged from consultation with farms. But it has been criticized (for instance in Chambers. 1992) for validating the perspectives and priorities of researchers, and continuing a process that extracts knowledge and does nothing to empower farmers. This has resulted in a continued emphasis on technological solutions and a failure to address policy issues (Biggs and Farrington, 1991).

To an extent our starting point was the result of testing and rejecting a technocratic solution to the problems faced by set bagnet communities. Therefore, the more recent focus on empowerment and knowledge systems summarized respectively in Cromwell and Wiggins (1993) and Okali et al. (1994) seemed of particular relevance.

On farmer participatory research, there is at present a lengthy debate about what is meant by indigenous knowledge, its value and how it relates to other knowledge systems. Earlier studies on set bagnet communities

*** 'Owning the Objectives' – a seminar on multi-disciplinary research in forestry sponsored by the Forestry Research Programme in Oxford. September 1995.**

had tended to begin with what farmer participatory research calls 'outsider knowledge' (e.g. technologies developed by professional researchers to solve a particular technical problem) and see if this was of use to the fisherfolk. In general. the studies had concluded that this type of knowledge was inappropriate to set bagnet communities, at least at the present time. A key reason for this conclusion was the apparent absence of suitable institutional mechanisms to use such knowledge effectively and for the general good.

To an extent we felt that our work would be used to see whether the institutions that housed indigenous knowledge would be able to accommodate outsider knowledge. However, we wanted to take this a step further. As described earlier, our research would be unable to bring natural scientists in contact with local communities as much as we would have liked. We also did not feel that we had enough experience to try and represent indigenous knowledge systems to natural scientists. Therefore. in addition to understanding the institutional setting of indigenous knowledge we wanted to create an environment where indigenous and outsider knowledge could be brought together, at least once the initial study had been completed.

If asked, we would probably have described the creation of the above interface between outsider and indigenous knowledge systems as a form of empowerment — allowing local people to meet on an equal footing with natural scientists. If pushed further, we would have said that community participation is inherently empowering because it increases people's ability to identify and gain access to assistance.

But for many theorists empowerment has far broader implications than just the relationship between researchers and local communities: it relates to promoting an environment where people analyse. question and ultimately resist the underlying reasons for their poverty (Cromwell and Wiggins, 1993). To state the case so boldly in the context of a technical co-operation project would be considered inappropriate. Poverty alleviation may be a stated aim of most donors and development organizations, but that is not supposed to be achieved by encouraging grassroots level upheaval in friendly countries.

Furthermore. some of Bangladesh's largest NGOs (e.g. PROSHIKA and BRAC) which began by emphasizing empowerment, have emphasized the importance of economic development as a prerequisite for other activities such as consciousness raising. Not all NGOs agree with this. and one of the project's most successful NGO partners in India insists that economic and non-economic activities are two sides of the same empowerment coin (Blowfield and Kamila, 1995). However, we chose to focus our research on individual communities and thereby effectively to ignore the wider political aspects of empowerment — something that would become evident as our study progressed.

2.5 Limits to participation

Apart from theoretical considerations, there were practical issues affecting community participation in the research.

Community e.xpectations

Mikkelsen (1995) says that participatory study techniques are being made use of in all phases of the project cycle, but we were concerned that they would blur the line that planners draw between the phases. What planners and donors might see as project appraisal can easily merge into what communities see as implementation and the promise of external support. There was no doubt in our minds that fostering participation would create expectations amongst communities, but neither the communities nor we were in a position ultimately to decide whether there would be an implementation stage. All we could ensure was that through participation communities would have an opportunity to argue their case, but our experiences on other projects told us it is a long way from a fishing community to Dhaka to London or wherever the ultimate power to accept or refuse ideas resides.

The extent of participation

The nature of development funding and the accountability of donors to their own constituencies (e.g. tax payers) mean that it is unrealistic to expect communities to be the ultimate decision-makers. But even within these constraints there are different forms that participation can take. Much of the work on assessing degrees of participation has been done in a research context (see, for Instance, Biggs, 1989), but Paul (1986) gives four

levels of participation in projects: information sharing, consultation, decision-making and initiating action (see Table 1). Our aim was to encourage participation at the consultation level: however, what is meant by this level needs to be qualified.

Firstly, certain decisions had already been taken -the decision to allocate funds for coastal fishing communities in Bangladesh had already been taken by the project as a whole; the decision to work with set bagnet communities had been taken based on a macro-analysis of problems facing the set bagnet fishery; the decision to focus on post-harvest fisheries had been implicit in the overall project design. Therefore, the communities' participation in decision-making would take place several stages away from the start of the overall project cycle. Secondly, the final decision on how funds were to be allocated would be taken by the donor and the project management without any direct representation from the communities (see above).

2.6 The influence of previous and ongoing interventions

Previous development projects in the communities also influenced our thinking. The abundance of NGO projects plus the government's programme means that few Bangladesh villages are innocent of development work. People's feelings about these projects would inevitably influence their perception of our work. Indeed, as will be explained later, the extent of interaction with other projects eventually became a criterion for selecting communities. In general, NGO community development programmes seemed to have followed a blueprint and the same elements could be found in village after village — credit, basic literacy, primary health care and sanitation. Although NGOs talk about participation, what is meant is participation in implementing the blueprint rather than in planning. This situation is not unique to Bangladesh and the notion that NGOs are inherently more bottom-up than other organizations is one that needs to be questioned.

The blueprint approach is not necessarily inappropriate, although ironically it is something for which early NGO advocates criticized government programmes (see, for instance, Korten, 1980). Many of the NGOs working in coastal fishing communities are small without the resources to develop unique approaches. They prefer to take existing models, try them out and then modify them. But we saw two potential problems with the models that had been adopted.

Fishers are not farmers

The models that were most widely spread were ones that had been successfully developed by Bangladesh's largest NGOs working with farming communities. There are, however, clear differences between farming and fishing communities that have ramifications for interventions (Blowfield and Kamila, 1995). Some of the key differences are set out in Table 2, although as our research progressed we were to discover that this was far from being an exclusive list.

It needs to be remembered that there are a wide variety of farming systems as well as categories of coastal fishing community, and any attempt to compare fishing and farming will suffer from a degree of generalization. Our analysis in particular reflects a bias toward high-yielding, intensive farming systems common in much of Bangladesh.

Relief is not development

In 1991 much of coastal Bangladesh was devastated by a cyclone. Many coastal communities benefited from the enormous relief programme that was mobilized. However, the urgent need to provide shelter, sanitation and food meant that little attention was paid to sustainability and use. Inevitably some of what was provided was wasted, but more importantly, in some communities development and relief have become synonymous. Help has become more important than self-help, and NGO field workers felt that community attitudes had changed from what can be achieved to what can be expected.

In some communities relief work had led on to more sustained development work such as credit programmes and basic literacy and numeracy. But in others there had been little or no follow-up from a period of intensive relief work. Some people felt that promises had been made during the relief effort which had not been kept, and this had led to a suspicion of development organizations.

Table 1 Indicators of participation in development projects

Stage of project	Indicator of participation
Information sharing	Beneficiaries receive information about project aims and how it will affect them.
Consultation	People are not only informed, but are also consulted on key issues. Beneficiaries may provide feedback to project managers who may use the information to influence project design and implementation.
Decision-making	Beneficiaries involved in decision-making about project design and implementation.
Initiating action	Beneficiaries propose action to initiate themselves.

Source: Paul (1986) cited in Okali et al, 1994

Table 2 Characteristics of coastal fishing communities

Feature	Description
High capital outlay	Fishing often requires higher capital outlay than equivalent levels of agricultural activity because of the cost of purchasing and repairing craft and gears.
Unpredictability of incomes	Incomes are highly unpredictable compared to intensive, high potential farming systems because fisherfolk have less control than farmers over their resource and the size of harvest.
Dependency on an open resource	The sea is an open resource, and few fisherfolk have much say on how it is managed, or on policy-making.
Perishable nature of the product	The nature of the product affects incomes and marketing. In the tropics, fish perishes within six to eight hours and the quality of the catch is often beyond fisherfolk's control. Although deterioration can be delayed by using ice, access to ice itself requires capital, and the capacity for longer storage does not exist outside of the commercial sector.
Differences in markets an marketing	The marketing system at the landing site is characterized by traders requiring a high degree of liquidity or an agreement with the seller to defer payment in order to market the highly perishable product as quickly as possible.
Vulnerability to adverse weather and natural disaster	Coastal fishing communities are more susceptible to weather conditions than many farming communities. Not only is the size of the catch affected by the weather, rain and storms prevent artisanal fisherfolk from setting out to sea. Villages located on the coast are inevitably more exposed to natural disasters such as cyclones and tidal surges which can destroy shelter, fishing equipment and other assets.
Seasonality	The problems of seasonality in agrarian economies referred to by McGregor (1994) are especially relevant to coastal fishing communities. Incomes, labour demand and subsistence opportunities vary with the seasons. There is also a need for investment prior to the main seasons so that boats and gears can be repaired, and crews recruited.
Migration	Many fisherfolk migrate at different times of the year in order to benefit from richer fishing grounds. Consequently they find it difficult to gain access to services designed for sedentary communities, and are often treated with the same wariness that greets all types of nomads.
Access to credit	Formal lending bodies are reluctant to lend money to fisherfolk because fish (unlike grain) and boats (unlike land), are not accepted as collateral.

3. Methodology

3.1 GOALS

In the study plan submitted to project management we stated our goals as follows:

- to research, describe and analyse from the perspective of poor fisher-folk the social and economic system in three villages engaged in set bagnet fishing activity; and
- to make available the results of the above research in a form usable by organizations working with set bagnet fishing communities as input into their planning and monitoring activities.

Upon reflection, these goals were deliberately cautious and they do not show all of the factors described earlier that we had taken into consideration. On the contrary, they reveal our doubts about successfully developing a participatory approach so that the first goal limits participation to consultation: it does not demand that the fisherfolk present their own case, only that the researchers will attempt to extract information from the communities which will represent their perspective. The second goal does not demand that fisher-folk be involved in later stages of planning and implementation, nor indeed that there will be any further involvement by the project once the study is completed.

As an explanation of the goals we set the following outputs:

- primary qualitative micro-level data over 13 months on the structure and relationships directly and indirectly affecting the livelihood strategies of poor fisherfolk;
- supplementary quantitative data supporting the above;
- secondary data on the social and economic history of the three study villages, on market-related conditions and trends, and on other aspects relevant to a fuller understanding of the social and economic life of the set bagnet fishery in Bangladesh; and
- a written description of the above data.

3.2 SELECTING CRITERIA AND COMMUNITIES

Based on past experience and discussion with a number of primarily non-government organizations working with set bagnet communities, we developed the following criteria for selecting study communities:

- the set bagnet was a major contributor to the livelihood of the fisherfolk in the village;
- the communities represented different types of technical and marketing constraints and opportunities;
- each community represented a different religious and cultural mix;
- there was potential to coordinate study implementation and findings with other ongoing project activities;
- the extent and nature of contact with development programmes varied between the different communities;
- the findings could be analysed in the context of a previous bio-socio economic survey of Bangladesh set bagnet communities: and
- villagers were willing to participate in the study.

To allow us to work with the major religious and ethnic groups involved in the set bagnet fishery, a minimum of three communities was required. This also allowed us to choose communities based on their present or previous relationship with development programmes. The communities chosen and their key features in relation to the selection criteria are shown in Table 3.

3.3 METHODOLOGY

Our main focus was on obtaining primary data over a full fishing season. We decided on a 13-month study period so that we could cover an entire year's activity plus some overlap to check data obtained in the early

stages. Our emphasis was on qualitative data supplemented by limited quantitative data over the same period, and secondary data to provide a historical perspective as well as insights from other disciplines and at the macro-level.

Primary data were to be collected using selected community participatory techniques, such as mapping, wealth ranking and village histories. In addition to this, selective household case studies, and open ended interviews with villager and non-villager key respondents were also identified to be means through which the information needs of the study could be satisfactorily addressed. Underlying these techniques was the importance of personal relationships and rapport development.

3.4 Study guidelines

Following a review of past experience (see above), we set about developing study guidelines to identify key topics and sub-topics. Although we did not put it in these terms at the time, our guidelines focused mostly on institutions within the communities households, religious organizations, marketing channels, fishing teams, social organization and cultural activities.

A working framework for analysis

The following initial analytical framework was used:

Social and Economic Activity → Level of Analysis ↓	Fishing activity	Other economic activity (including debt/credit)	Marketing trade	Social and reproduction	Resource ownership/access
Household					
Gender					
Age					
Economic class					
Caste					
Residence					
Religion					
Season					

This framework, developed from what we already learned about the communities and coastal fishing communities in general, was intended to be used as a pocket checklist in a variety of situations. Overall, its purpose was to ensure a balance between type of respondent, topic of discussion and level of analysis of each topic. Thus, for instance, fishing activities were discussed from the perspectives of household, gender, age, class, etc.; marketing was not only discussed with traders, but with men and women, with rich and poor, at different times of the year.

Topics and sub-topics

The framework provided an analytical tool that could be used to explore different themes. After a single observation visit to one of the communities we brainstormed to come up with a set of topics and sub-topics that would be used to focus later fieldwork. These are set out below (for a complete list of topics and sub-topics see Appendix 1):

Village social structure

- History of the village.
- Village power structure.
- Economic activities of the village.
- Social activities of the village.
- Identification of formal and informal social and economic alliances within the village, for instance:
  - trader groups, religious groups, fishing groups, savings and loans groups, community groups, groups for co-operation and conflict resolution.

External relations

- Identification and description of non-residents' interaction with the social and economic life of the village.
- Description of conflict with external parties and its resolution.

Technologies of fish production and marketing

- Description of the fish catch.
- Description of the utilization of the fish catch, including:
  - amount of fish sold (by individual, by type and by season);
  - to whom fish is sold (by individual, by type and by season);
  - prices of fish (including the impact of debt/credit arrangements);
  - amount of fish for own consumption (by individual, by type and season).
- Description of the marketing of fish catch at different levels within and outside of the village.

Household and extended family case studies

In addition to the topics and sub-topics, the guidelines provided notes relating to the development of case studies. These were intended to cover a cross-section of households using classifications developed during the preliminary village mapping exercise (see above). Possible classifications identified at this stage included households of different religions, households of different wealth, households with different economic activities, male- and female-headed households. The topics for interviews would include (for a complete list of topics and sub-topics see Appendix 1).

- description of the household and extended family structure;
- description of the economic activities of the household members;
- description of the production and reproduction systems of the household; and
- description of trading relations.

Notes on the guidelines

The topics and sub-topics may seem overly comprehensive. In fact there are only three topics and 11 sub-topics, but we used the brainstorming sessions to expand on different aspects of these as far as we could, listing what we thought might be the most pertinent angles to each sub-topic. We have listed them in full here partly to show our thought processes and partly because of their relevance to others who might study coastal fishing communities.

Looking back on these guidelines today, we can see that they are an uncomfortable mix of the qualitative and quantitative. It is particularly noticeable that when describing economic and technical information, we talked

about amounts and used the language of extractive techniques rather than encouraging community analysis. It is probably no coincidence that neither of us is an economist or fisheries scientist, and perhaps unconsciously we felt the need to collect 'hard data'to legitimize our exploration of those fields. Perhaps too we were concerned that people would be unwilling to discuss openly what we thought were sensitive sub-topics such as incomes and debt, and therefore that these could not be analysed by the communities. Furthermore, some sub-topics involved people from different communities (e.g. the marketin g chain) and it would be difficult to bring these people together. Without quantitative data it would, therefore, be impossible to put together the links in the chain (e.g. to determine the added value at different stages in the marketing chain).

Revision of the guidelines

Despite the apparent detail of the guidelines and the inclusion of quantitative enquiries that would seem to require standardized questionnaires, it was always our intention to use the guidelines as a starting point in an open-ended process of information gathering and analysis. We did not develop questionnaires nor any closed data gathering tools: our main purpose at this stage was to give ourselves sufficient structure to explore without getting lost.

As the study progressed the guidelines were revised and refined. In some cases this was because we discovered aspects not covered in the original guidelines: in one community, for instance. it became clear that sickness affected economic activities, and therefore we decided to collect information on types of illness, seasonality of illness and the groups most affected. In other cases, regular contact with the communities enabled aspects to be explored in more depth; for instance, the impact of accrued debt on individual households.

Some new topics were relevant to just one of the communities; fish drying, for instance. was an important seasonal activity in Rakhainpara. Other topics were identified in one community but proved relevant to others: the economic and social significance of ceremonies and festivities was first identified in Delipara, and then explored in the other two communities. Therefore, checking the relevance of new ideas or topics to different communities was an important part of the routine for reviewing the research guidelines.

Table 3 Features of the study communities

Community	Key features
Delipara	A Hindu fishing hamlet on the shore of North Selimpur village in Sitakunda thana, Chittagong. The community had been the recipient of Danish development assistance channelled through CODEC. a relatively large fishing-oriented NGO.
Rakhainpara	A Buddhist fishing hamlet in Khurushkul thana, near Cox's Bazar town. The community had been assisted by AZAD, a small NGO working primarily with Muslim fishing communities.
Rehania	A Muslim community adjacent to Rahmatbazar, Burirchar Union, Hatia Island. The community received relief aid during the 1991 cyclone and had savings groups under the supervision of a local NGO. but no fisheries-specific programmes.

4. Implementation

Fieldwork began in May 1993 and was carried out over 13 months. Most of the fieldwork was done by Nasim, supervised through occasional field visits and regular correspondence. In order to cover all three communities throughout the year, a series of short, regular visits were made rather than long periods being spent in a single location. These visits ranged from three to eight days in a single community, and a total of 180 days was spent in the field. There were also two visits by post-harvest fisheries scientists totalling approximately one month.

In addition to this, community members were invited to a two-day planning workshop in Dhaka in June 1995, and the results were taken back for further discussion with the communities.

The fieldwork and participatory planning both showed some of the problems of working with fishing communities. During the first two months of the field work one community was cut off because of the monsoons. Another community could not attend the Dhaka planning workshop because of bad weather. For part of the research period adult males in one community migrated away from the village and could not be contacted. Nasim saw the damage caused by a tidal surge at first hand but when houses are washed away and most of a village is under water, people are not much interested in participating in research.

4.1 RESEARCH TOOLS

A range of standard PRA/RRA tools were used (see Table 4) with different degrees of effectiveness (see Table 5). Using our own subjective criteria for appraisal (see table), only 24% of the different tools were effective during the early stage (the first three months), compared to 72% during the middle stage (months four to eight) and 80% during the final stage.

The tools depend on different types of respondent; some depending on researcher observation, some on information from individuals and some on information from groups. Not surprisingly, observation techniques and, to a lesser extent, tools that required information from individuals rather than groups, were effective during the early stage. Techniques requiring more participation from a wider range of individuals and groups became more effective as a rapport developed between community and researcher during the middle stage, and this in turn led to not only greater participation in the final stage but also to the formation of groups initiating and managing their own study-related activities.

A more detailed description of some the tools we found most effective or expected to be most useful is given below:

Activity profiles

Activity profiles require respondents to describe, in their own words and according to their own perceptions, economic and social activities. Men and women were asked about their daily activities. The activities were described by the respondent in their own language, and often diagrams were used as some respondents found it easier to visualize rather than just verbalize their perceptions. Respondents responded better if asked in private as they were reluctant to part with information in front of others.

This technique was not so successful at the early stage and was used at different stages in different communities. Economic activity profiles were obtained more easily in Rakhainpara and Rehania than in Delipara, but in all three communities it was difficult to obtain a profile of social and cultural activities until quite late in the study, when more detailed information was obtained for Rehania and Delipara.

Using notes taken during the discussions, individual activity profiles were compiled. then compared. using the analytical framework described earlier.

Community reporting

Community members were organized by Nasim in groups to monitor and record an activity that was important to them. Some of the groups were existing alliances based on economic activity. In Rakhainpara, for instance,

30 community fish driers cum - traders recorded the current market prices for the species caught and traded. The same was attempted in Rehania. but the set bagnet season was so bad that none of the fisherfolk had enough fish to dry. In Delipara. six boat-skippers noted all catch quantities per fishing operation and the prices they were traded for during the set bagnet season.

The alliances that underpinned the women's groups were less obvious. and although never analysed thoroughly appear to have been based on a combination of kinship, location of housing and common interest. These groups decided to focus on health care rather than on economic activities. In Rakhainpara women maintained a user's logbook and began distributing basic medicines. Seventeen Rehania female members conducted a household survey while carrying out basic counselling on family planning methods and practices.

This technique proved most useful once people were interested, willing and committed to the study process. Only a small section of each community was able to devote enough time to this type of activity, but for those who did it proved to be participation-friendly, and the willingness and motivation of the participants increased in line with the degree to which they could manage how to implement their assignments.

Brainstorming

Brainstorming was used to identify issues within the communities and was most useful during the early stages of fieldwork. Groups were asked to suggest a range of topics. For example, how they could increase their catch, what actions could be considered to resist intruders, what means were available and accessible to reduce dependency on trader-money lenders, what alternative means of livelihood would they consider to be accessible and acceptable to them. These were listed without any evaluation or judgement.

This technique focuses on number and variety of ideas rather than on detail, and the ideas helped in organizing the discussion which followed. There were occasions when unlikely ideas led on to a more practical idea which otherwise might never have surfaced. For instance, discussion of the embankment in Delipara arose out of brainstorming sessions as did the idea for Rakhainpara women's health groups.

Case studies

Following the early stages, a cross-section of people with whom a rapport had been established were invited to take part in case studies. The cases were built up over repeat visits to the individual, their family members and others whose response could be used to verify the accuracy of the information.

This technique provides in-depth information not only about the individual but the systems governing behaviour and the interrelationships between people and institutions. to establish and explain attitudes and beliefs, and to show why certain behaviour occurs.

Although listed as a tool. the case studies are themselves compiled using different techniques such as personal observation developing into direct participation; the use of informants for current and historical data; straightforward interviewing: collecting oral testimonies for life stories; and the tracing and study of relevant documents and records available with public authorities, NGOs, etc.

Examples of case studies are given in Appendix 2. The eclectic approach used to develop case studies requires flexibility on the part of the researcher. Ultimately it relies on ability, experience and ingenuity to observe, interview, record and continually review the information collected, as well as to maintain rapport with the respondents. often over a long period. There was a remarkable change in the quality of information as each case study was developed. Even those most suspicious of the study, such as the money-lenders cum traders who felt the study would turn the community against them, in time provided detailed and thorough information about their lives.

Semi-structured interviews and group discussions

Interviews were very successful with individuals, but the same technique was less effective with groups. Groups responded better to more structured, task-based exercises because these provide a more rigid framework for facilitation.

In group discussions, the groups themselves decided on topics and the researcher played only a background role, ensuring that everyone had the chance to speak. In semi-structured interviews. the researcher decided the key topics and steered the direction of the discussion.

Ranking

Ranking provided a useful entry point when used with key respondents, but was less successful as a group exercise where it was perceived as asking individuals to judge other community members. People were happy to list indicators of wealth, but were uneasy about ranking their fellow community members using these criteria. There was also a tendency to use ranking to describe ideals: for instance. in Delipara, land ownership was described as an indicator of wealth even though the community is landless.

The items listed during wealth ranking provided other insights into how the community perceived itself. Delipara, made up of Hindus from a fishing sub-caste, gave indicators that were primarily to do with fishing -ownership of gears, number of craft. In Rehania where most people were originally farmers that had recently moved into fishing because they had lost their land, the indicators were the number of poultry, cattle and goats. In Rakhainpara where men are engaged in fishing but the community is matrilocal (i.e. the husband moves to live in the wife's village), indicators were based on women's economic activities (e.g. number of handlooms).

However, indicators were not just material possessions: the number of male children, for instance, was also given as an indicator of wealth.

People offered different ranking criteria for the same topic at different stages in the study. Two possible reasons for this are:

- as people's interest in the study grows, they give more consideration to their responses and see that their responses have a value; and
- opinions are affected by the current situation. For instance, when catches are low and people have economic difficulties, they are reminded that households with more sons have greater security: when there are storms, good housing is more important than the number of nets.

It is not possible to draw conclusions from a single year's experience, but it is important to note that people's aspirations change and that hard-and-fast indicators, even when set with a community's participation, are not necessarily appropriate.

Community mapping

Community mapping was one of the most successful techniques when used in relation to community land-based activities. During the early stages of the study it was mostly an observation exercise with only casual participation from community members, but as the study progressed, the community took over, developing its own maps that, together with the community questionnaire. provided extensive data on households, livelihoods and community interaction*.

The finished maps not only provided an important analytical tool for the researchers, but seemed to enhance community self-esteem. Copies were made and were framed for community centres where various groups intend to use them as a record to explain their communities to other outsiders in the future.

However, adapting the technique to the open sea which is the centre of fisherfolk's economic life proved problematic. In farming research, mapping includes natural resources used by the farming community. The same type of information is equally important when working with coastal fishing communities, but more difficult to obtain. The researcher needs a boat to reach the fishing grounds: the boats of set bagnet communities are small and, to the outsider, encourage a sense of foreboding even in calm seas. Joining specific boats brings interesting insights into the lives of the captain and crew and detailed information on specific locations. This does not, however, help obtain an overall picture of where grounds are located and who fishes where, as the

* Examples are provided in Appendix 3a and Appendix 3b.

grounds cover a large area. Without formal mapping skills or use of Global Positioning System (GPS) technology, it is difficult to map relative locations and distance. especially as fishing is often done in darkness or where landmarks are not visible. It is also the case that fisherfolk are reluctant to reveal their favourite fishing sites.

Attempts were made to visit the fishing grounds in Rehania and Delipara, although only when the sea was calm*. Nasim joined already crowded craft on their fishing expeditions, but with mixed success, and although by the end of the study we had a fairly comprehensive picture of fishing practices and the lives of fisherfolk, we never obtained accurate information on the fishing grounds.

Practical activities

As the study progressed, community members became more interested in and insistent upon conducting their own study-related activities. This was used to involve members in Community Mapping, Community Reporting and Community Questionnaires. More than that, people were keen to start new initiatives. This was not merely the expectation of some benefit from outsiders, although some members obviously felt frustration or annoyance that nothing tangible was coming from these frequent visits to their villages. More constructively, the discussions with individuals and groups that were part of the research had led to an analysis of what could be achieved, and youth groups and women's groups especially were eager to build on their analysis of problems even though it was made clear that there would be no outside financial support.

In Rehania, existing women's savings and loans groups began to explore new weaving opportunities and new groups were also formed. In Rakhainpara, women formed savings and loans groups and discussed ways of buying new looms, their old ones having been washed away in 199 1. The youth group in Delipara was also active in developing the fieldwork although no new groups were formed.

4.2 Common factors

Building rapport

Although some techniques worked on their own, the most successful ones over the three stages were those that built rapport between communities and researchers. It was very noticeable that, irrespective of the technique used, personal attitude, perception and social position affected people's responses. and that responses changed as the study progressed.

Key factors in this were:

- the ability of the individual to respond: command of language. capacity for self-expression, individual knowledge, state of mind, general sense of well- being;
- the respondent's expectations;
- the person asking the question and the perception of why the question was being asked. For instance. an individual might not respond to a question raised in a group discussion by a neighbour, but would respond if the same question were asked by a researcher in private. Status and personal relations were very apparent in group discussions;
- the timeliness of inquiry. Responses were affected by mood as well as the degree of trust between respondent and researcher. For instance, the tidal surge in Delipara or the economic problems that loomed when it seemed that the set bagnet catch for that season was going to be poor made individual perceptions generally negative. Yet when people were optimistically preparing for the new set bagnet season, or once debts had been cleared, the same topics would be discussed in a far more positive light.

* **Fishing grounds were not relevant in Rakhainpara as the vast majority of fisherfolk were labourers on larger deep sea vessels operating out of Cox's Bazar.**

Trust proved central to obtaining accurate, consistent information and also in allowing each stage to build upon the last. The communities have their own ways and means of defining, collecting and analysing information and knowledge. At the early stage of the fieldwork there was inevitably misunderstanding of world views, and even during the final stages the meaning of what was implied rather than what was said was not always clear.

To an extent, this is a weakness with the tools that were used, which despite encouraging participation, are nonetheless rooted in a way of thinking and expression that is alien to many in the set bagnet communities. Although the researcher may be aware of the existence of multiple world views, there is always the temptation to listen more closely to those that express themselves in the way we find easiest to understand. This is one reason why it is dangerous to consider RRA/PRA techniques as social science tools as they can produce a social analysis that appears correct yet lacks the insight of a trained anthropologist. In this study, a rapport was established but we feel far from confident in saying that we understand the world views of the three different communities.

The response of the people of these communities, like other marginalized communities who continue planning for survival against diminishing livelihood support options as well as natural disasters, is generally influenced by material expectations, drawn from the analyses and syntheses of their own life experiences. The juggling for position was apparent throughout. It was crucial therefore, while planning and implementing the study, to review how the members of each community responded to the study process, their reactions and participation.

During the early stage of the study, community members were shy, and hardly made eye contact. Answers were carefully considered, constructed around what should be concealed as much as revealed. In Delipara, where academicians, researchers and donors had all made visits, villagers were indifferent or talked only of material assistance. The majority of the community were members of groups set up by a local NGO. Consequently responses were tailored according to perceptions of what NGO field workers would want to hear, and there was confusion about our position in relation to the NGO — were we sent by the NGO to investigate the community? Who would benefit from the information provided? What would be the profit for the community?

It was important to try and understand body language. In Delipara the gestures and signs used in everyday behaviour are linked to the gods and goddesses in the Hindu pantheon, and in certain contexts can be as important in communication as words. Few people in Rakhainpara spoke Bangla and so there was a dependence on gestures and sign language to communicate certain ideas. In such circumstances it can be as important to watch people speak as to listen to the interpreter translating what they say.

Suspicion and preconceptions were a common theme. Rehania is a squatter community built on a government-owned embankment and therefore has good cause to be suspicious of too many questions. The Rakhainpara community described itself as having been 'the victim' of previous studies. Just as we were testing out hypotheses about the villagers, it seemed that they were testing their own hypotheses about us.

Privacy

The villages were crowded places that offered little privacy. In so far as many of the research tools encouraged group discussion, this was fine as it was never difficult to bring people together. The problem was keeping people away. There were marked differences in responses on a number of topics between group discussions and those held in private with individuals or small, carefully defined groups. Group discussions did not even necessarily help identify the best individuals with whom to explore a topic in more detail, as people who seemed in group discussions to lack interest or knowledge, in private proved themselves to be important and reliable sources of information.

To an extent, as knowledge of stakeholders within the community becomes more refined, so discussion groups themselves become smaller and more homogenous. Arranging such discussions is nonetheless difficult. The villages are small and densely populated. Unlike farming communities where people can be contacted in fields, fisher-folk are alone only at sea, where taboos and the problems of interviewing in a small, rolling boat in the middle of the night test the ingenuity and stomach of researchers.

Individual interviews were very important, especially once initial reluctance had been overcome and before the communities felt a sense of ownership in the study. Some of the topics that people preferred to discuss in private

were unsurprising — individual indebtedness, relations with money-lenders or traders, relations between crew members, illegal firewood extraction, land rights. These were topics that when discussed in groups brought only the most general responses but there were also topics that were discussed quite openly in groups, yet when discussed in private provided very different, normally more accurate information. For instance, on fishing grounds, on catch composition, on social hierarchy, on indicators of wealth and status. This was an important lesson to learn -that willingness to discuss does not necessarily mean a willingness to reveal or share the true situation.

In Delipara. there were no real obstacles to meeting women, and in matriarchal Rakhainpara women were the most active people in the study. In Muslim Rehania, however, it was difficult to meet women because of purdah which meant they were not accustomed to meet and talk to strangers in their homes. The set bagnet researchers were all men, and initially any discussion with women had to be conducted with husbands or male relatives present; As rapport developed. however, men no longer attended the women's discussion groups and women's groups became the most active as the study progressed. Only individual interviews with Rehania women proved problematic, and these were possible only with women whose husbands or brothers were most involved in the study.

The importance of talking to individuals does not mean that group activities are unimportant. Properly conducted, they elicit a greater range of responses in a far shorter period of time, and both accuracy and significance of information can be cross-checked by responses from the rest of the group. They are very effective in generating information on general or neutral issues. Furthermore, discussions can develop around issues that the researcher might consider sensitive yet the community is eager to discuss. For instance, community members used group discussions to raise the general issue of the role of money-lenders-cum-traders, the construction of a coastal embankment that posed a threat to the community, and the impact of naval exercises on the fishing grounds.

What is and is not discussed in groups will vary according to the situation of each community, and it seems that it is not the sensitivity of the information that determines what is discussed, but the degree to which the topic encourages harmony or consensus. Therefore, a group will discuss something affecting them that the government is doing if government officials are not present because they can share mutual concerns and display solidarity. They will talk about the oppressive practices of the money-lenders and the physical violence that results because this is something that is shared. But they will not discuss specific cases of how the money-lender system works because that would mean singling out a member of the group.

Time

In any study, time and timing is crucial. People are happier to talk when they are relaxed, have no other engagements, and are undisturbed by more pressing concerns. Responses from women, for instance, varied according to the time of day: they replied in monosyllables when they were busy or their minds were elsewhere, but would talk at length if they were relaxed.

Fishermen have considerable time for relaxation, as once the catch is landed in the morning they sit in tea shops or on the beach mending gears. There are also many days when boats cannot put to sea because of bad weather, although the anxieties this raises may affect their responses (see below). However, as mentioned earlier, it is difficult to talk to them when they are at sea. Women can be contacted more readily because they are working in and around the village, but they have less time for relaxation and spend less time in groups.

It was noticeable that information changed over time. We have already mentioned that opinions and data were affected by external factors such as mood in the community, perception of the study and composition of the group. In each community there were examples of the same inquiry eliciting different responses from the same people at different times of the year. Measurements (distance, quantity. weight) were especially unreliable. For example, in discussing the amount of fish caught, numerical data became less accurate the older the season or event, and data for catches of over a month past needed to be used with great caution. This became especially clear when the actual catch of a season was compared to the reported catch of the previous year, or the income from a good season in the past was compared to the actual income from an equally good season during the study period.

However, this should not be taken to conclude that community recall is wrong and that fisherfolk cannot remember anything that happened more than a few weeks ago. Thirteen months of field work is inadequate to draw too many conclusions about historical accuracy. Even if our experience were repeated in future years, it might be that this simply reflects differences in the way we and community members remember events. As graduates of formal education, we place great emphasis on statistics. but fisherfolk, mostly illiterate and with a different world view, may remember events in other ways and then, at our request or prompting, add statistics to quantify or justify the information they have provided.

During the fieldwork it became very clear that opinions can change over a relatively short space of time. For instance, in Rehania set bagnets were stated as the preferred gear before the set bagnet season began, but a few months later after the set bagnet catch proved disappointing (not for the first time) the same respondents said they preferred *hilsa* nets. In Delipara. people originally said that they would like to have land away from the sea, but as rumours began to spread about the construction of a coastal embankment that would require them to move inland, the advantages of living on the shoreline were seen to outweigh the disadvantages. Perhaps we should not be surprised that people's opinions can change quickly and often, but in looking for what makes people different too often we are surprised when they behave in the same way as ourselves.

Table 4 Research tools

Technique	Type of activity	Description
Catch ranking	Group	Matrix to analyse fish catch.
Community reporting (assignments)	Group	Community members keep a diary of agreed- upon aspects of their lives.
Brainstorming	Group	Discussions on specific issues and situations.
Wealth ranking	Group	
Critical incidents	Group	Discussions of key problems in community life.
Seasonal calendars	Group	
Trend analysis	Group	Mapping of historical trends on chart with community members
Community mapping	Group	
Venn diagrams	Group	
Group formation	Group	Starting of group formation/initiatives.
Problem-solving tables	Group	Analysis of problems, solutions, constraints and necessary resources.
Games	Group	To stimulate involvement (e.g. a memory game was used to encourage children's participation). Chinese whispers was also used to discuss how information is exchanged.
Group discussions	Group	Open-ended discussions.
Practical activities	Group	Introduction and discussion of new ideas.
Preference ranking	Group	Ranking of options and opportunities.
Oral histories	Individual	Individual life histories.
Community histories	Individual	Community history as recalled by key respondents.
Community questionnaire	Individual	Structured questionnaire used by community data collectors.
Semi-structured interviews	Individual	
Selective sample survey	Individual	Structured household survey.
Key respondent interviews	Individual	Exploratory and cross-checking interviews with selected respondents.
Case studies	Individual	In-depth studies of selected individuals and households.
Activity profiles	Individual	Open-ended description of respondents' activities.
Observation	Observation	
Transects	Observation	Transect of villages.

Table 5: Effectiveness of different research tools at different stages of implementation

	Effectiveness at different stages		
Technique	**Early**	**Middle**	**Final**
Activity profiles	0	3	4
Brainstorming	2	3	1
Case studies	0	3	4
Catch ranking	0	1	1
Community histories	2	3	4
Community reporting (assignments)	0	2	3
Community mapping	1	4	3
Community questionnaire	0	2	3
Critical incidents	3	4	2
Games	1	4	3
Group formation	0	3	5
Group discussions	0	3	4
Key respondent interviews	3	5	4
Observation	4	4	4
Oral histories	4	5	5
Practical activities	0	2	3
Preference ranking	1	2	3
Problem solving tables	3	4	5
Seasonal calendars	2	3	4
Selective sample survey	1	3	4
Semi-structured interviews	2	4	3
Transects	4	2	1
Trend analysis	0	3	5
Venn diagrams	2	4	1
Wealth ranking	0	2	3

Key:

0 Not effective or not used

1 Marginal effect

2 Some effect

3 Moderate effect

4 Effective

5 Very effective

Results

Some of the written outputs of the study are given in Appendix 4, **but** as stated earlier the study was commissioned as input into a planning process. The shift from study to the next stage in the planning cycle began with a workshop held in Dhaka which used the study's findings. This was the easiest way to ensure participation of government officials and other development organizations, all of whom we wanted to involve in the discussions. It also added to the multi-disciplinary dimension by bringing together experts from a range of relevant disciplines.

The goal of the workshop was to present the results of the fieldwork, and to identify and promote discussion of key findings. Prior to the workshop, the researchers' analysis was discussed with the communities and the results of these discussions formed the basis of the presentations from the two researchers at the workshop. The communities chose which members (male and female) they wanted to attend the workshop, and after the researchers' presentation these community members were asked to comment on and add to what had been described. Unfortunately, due to a landslide, the Rakhainpara group could not attend.

The presentations (in Bangla and English) were followed by open discussion, and it was during these that the community representatives became most vociferous. False assumptions by other participants were calmly corrected, and the more unacceptable assertions were firmly contested. Moreover, it was not simply that the community representatives corrected other participants: they revealed information that was also new to the researchers. This might have been because questions were posed in slightly different ways than hitherto (e.g. using the perspective of a fisheries biologist rather than a socio-economist) or because new issues arose. It was also because the workshop gave a new importance to the study so that community members were willing to reveal more about their lives. The workshop's conclusions are presented in Appendix 4.

The workshop sharpened the profile of the problems faced by set bagnet communities, and also resulted in a provisional plan for DFID support for work with set bagnet communities. This was discussed with each of the communities and now a three year programme is under way.

Conclusions

Development planners are increasingly under pressure to reduce costs, which in turn means less money for project preparation. Yet, more information is demanded with a growing emphasis on multi-disciplinary approaches that show human as well as technical dimensions to proposed initiatives. For an anthropologist there is nothing remarkable about spending 13 months studying a community, but the opportunity provided by the DFID Bay of Bengal Post-harvest Fisheries Project to gain a fuller understanding of how coastal fishing communities function is a rare example of prolonged contact between communities and development organizations prior to making decisions about the form a project should take.

Rapid Rural Appraisal has offered tools that promise to overcome these two problems by bringing a multi-disciplinary perspective in a short space of time. RRA's sibling, Participatory Rural Appraisal, adds another increasingly popular element — the participation of communities in the planning, implementation and evaluation process. But by linking disparate demands, wishes and conditions, are we improving our knowledge or simply starting to trust an illusion of knowing?

The experience of 13 months in three Bangladesh coastal fishing communities suggests that indiscriminate use of certain RRA/PRA tools can produce convincing information that is in fact misleading or false. In some cases this is because the tools developed to date have their roots in studies of agrarian rather than coastal fishing communities. Community mapping, for instance, works as effectively on dry land with fisher-folk as it does for farmers, but becomes much more problematic when it is tried at sea.

In some instances poor - quality information can be due to an incorrect perception by the researcher which is initially upheld by community respondents either out of politeness (not wanting to offend a guest) or an ulterior motive (e.g. the expectation of gaining some benefit by trying to please the guest). Thus. while researchers working on a fisheries project understandably see fishing communities as made up of fisher-folk, the communities themselves may have different perceptions of themselves. During the study this became evident in wealth - ranking exercises where initially the indicators of wealth were fisheries oriented, but later on when the exercise

was repeated, one community listed indicators typical of a farming community and another listed indicators based on women's rather than men's wealth.

It is important to understand what information is likely to be inaccurate and where the quality of information is likely to improve over a period of time. Individual indebtedness, location of each boat's fishing grounds, catch composition, cultural taboos, social hierarchy and certain aspects of trader-fisher relations are examples of awkward subjects. The researcher needs to be particularly aware of subjects that seem to be discussed openly or of subjects that people are unwilling to discuss in groups but may be willing to discuss in private. As a rule, groups try to achieve harmony and a consensus and group discussions are most effective where people have a common interest. This applies even if the topic may seem to the researcher to be sensitive. However, if the topic seems likely to cause conflict between the group members, it is difficult to obtain information or, more dangerously, the information provided is inaccurate.

The change in openness of respondents and the quality of information is most evident in case studies where a rapport between respondent and researcher develops with time. Even people who are suspicious of a study to the point of not wanting to respond at all, can eventually become good sources of information and assistance in analysing issues if there is time to develop this rapport. Indeed, ultimately the establishment of rapport is more important than any single technique.

This requires time a rare commodity in development projects. However: this need not be a continuous period with a single community. Where time is limited. our experience suggests that regular contact over a longer period is more important than prolonged contact over a shorter period. This also offers the advantage of covering a larger number of communities. Shorter but frequent trips to communities may even be advantageous in the project context as they allow communities to digest and work out responses to the research, and in the case of this study saw the communities move from the least participatory level according to Paul's indicators of participation (see Table 1) to the most participatory, where communities begin to initiate their own actions.

Most researchers are aware of the impact of time constraints, but the accuracy of information is also affected by other factors that we may be less conscious of, at least in the rush of doing field work. Some people may feel uncomfortable in a group (e.g. because of their command of language, because of who else is present, because of their character) yet prove to be good sources of information if interviewed privately. Respondents have expectations just as researchers have to make assumptions, and this leads to a process of guessing and positioning – most apparent at the outset, yet, equally importantly, still evident throughout the field work.

Responses to the same questions asked of the same people but at different times show the importance of when a question is asked. Greater trust and therefore more openness is established with frequency of contact. Answers are greatly affected by people's moods and what is currently on their minds, so that what is expressed as a burning issue one day may be a much lower priority at another time. This applies not only to individual opinion, but also to group analysis, and this study showed the shifting, situation-driven nature of group ideas. Snapshot planning, even when it appears participatory, is unaware of these changes and therefore must accommodate the likelihood of change in setting goals and, with the current move towards participatory evaluation, deciding upon indicators of achievement.

One problem with incorporating people's ideas in the planning process is the existence of different world views. The study shows how researchers respond more readily to ideas expressed in a way closest to their own conceptual language, and planning tools are inherently rooted in the conceptual framework of the planners. The same is **true** of RRA/PRA tools, the catechism of a particular orthodoxy offered to (sometimes imposed upon) people for whom it may, despite its commitment to participation, nonetheless be alien. The risk is that because these tools pay attention to social and cultural issues without guaranteeing adequate insight into the functioning of other cultures. shallow or false interpretations are made. A little knowledge can be more harmful than none.

The study shows that many research tools developed for agrarian communities can be used or adapted effectively in fishing communities, and in deepening our understanding of poor, marginalized people. We would only urge that the tools be used with caution, especially in studying social and economic relationships. Equally, we dare not pretend in the general climate of budget reduction that development organizations will be able to spend

Results

Some of the written outputs of the study are given in Appendix 4, but as stated earlier the study was commissioned as input into a planning process. The shift from **study to** the next stage in the planning cycle began with a workshop held in Dhaka which used the study's findings. This was the easiest way to ensure participation of government officials and other development organizatioqs, all of whom we wanted to involve in the discussions. It also added to the multi-disciplinary dimension by bringing together experts from a range of relevant disciplines.

The goal of the workshop was to present the results of the fieldwork, and to identify and promote discussion of key findings. Prior to the workshop, the researchers' analysis was discussed with the communities and the results of these discussions formed the basis of the presentations from the two researchers at the workshop. The communities chose which members (male and female) they wanted to attend the workshop, and after the researchers' presentation these community members were asked to comment on and add to what had been described. Unfortunately, due to a landslide, the Rakhainpara group could not attend.

The presentations (in Bangla and English) were followed by open discussion, and it was during these that the community representatives became most vociferous. False assumptions by other participants were calmly corrected, and the more unacceptable assertions were firmly contested. Moreover, it was not simply that the community representatives corrected other participants: they revealed information that was also new to the researchers. This might have been because questions were posed in slightly different ways than hitherto (e.g. using the perspective of a fisheries biologist rather **than** a socio-economist) or because new issues arose. It was also because the workshop gave a new importance to the study so that community members were willing to reveal more about their lives. The workshop's conclusions are presented in Appendix 4.

The workshop sharpened the profile of the problems faced by set bagnet communities, and also resulted in a provisional plan for DFID support for work with set bagnet communities. This was discussed with each of the communities and now a three year programme is under way.

Conclusions

Development planners are increasingly under pressure to reduce costs, which in turn means less money for project preparation. Yet, more information is demanded with a growing emphasis on multi-disciplinary approaches that show human as well as technical dimensions to proposed initiatives. For an anthropologist there is nothing remarkable about spending I3 months studying a community, but the opportunity provided by the DFID Bay of Bengal Post-harvest Fisheries Project to gain a fuller understanding of how coastal fishing communities function is a rare example of prolonged contact between communities and development organizations prior to making decisions about the form a project should take.

Rapid Rural Appraisal has offered tools that promise to overcome these two problems by bringing a multi-disciplinary perspective in a short space of time. RRA's sibling, Participatory Rural Appraisal, adds another increasingly popular element-the participation of communities in the planning, implementation and evaluation process. But by linking disparate demands, wishes and conditions, are we improving our knowledge or simply starting to trust an illusion of knowing?

The experience of 13 months in three Bangladesh coastal fishing communities suggests that indiscriminate **use** of certain RRA/PRA tools can produce convincing information that is in fact misleading or false. In some cases this is because the tools developed to date have their roots in studies of agrarian rather than coastal fishing communities. Community mapping, for instance, works as effectively on dry land with fisherfolk as it does for farmers, but becomes much more problematic when it is tried at sea.

In some instances poor - quality information can be due to an incorrect perception by the researcher which is initially upheld by community respondents either **out of** politeness (not wanting to offend a guest) or an ulterior motive (e.g. the expectation of gaining some benefit by trying to please the guest). Thus, while researchers working on a fisheries project understandably see fishing communities as made up of fisher-folk, the communities themselves may have different perceptions of themselves. During the study this became evident in wealth - ranking exercises where initially the indicators of wealth were fisheries oriented, but later on when the exercise

enough time on project preparation to achieve a sufficient understanding of the communities with which they seek to work, but we hope this study goes some way to showing where blind spots can occur, and why and how they exist. Communities such as those on Bangladesh's coastline are complex and cannot be understood at a glance. This study may not prevent development practitioners being snared in the net of that complexity, but it may reduce the shock when that moment occurs.

BIBLIOGRAPHY

BIGGS, S.D. and FARRINGTON J. (1991) Assessing the effects of farming systems research: time for reintroduction of a political and institutional perspective. *Journal of Asian Farming Systems Association*, 1: 113-131.

BIGGS. S.D. (1989) Resource-poor farmer participation in research: a synthesis of experiences from nine agricultural research systems. *OFCOR Comparative Study* Paper no. 3, New Delhi, ISNAR.

BLOWFIELD, M.E. and A. KAMILA, (1995) Credit services. women and empowerment in coastal fishing communities: case studies from Tamil Nadu and Bangladesh. *Paper presented at the Finance Against Poverty Conference, Reading 27-28 March 1995.*

BLOWFIELD, M.E. and N. HAQUE, (1995) Safety net or debt trap: ties between marketing and credit in coastal Bangladesh. NAGA, September 1995. Manila: ICLARM.

BLOWFIELD. M.E. and N. HAQIJE, (1994) Caught in their own nets: a social study of set bagnet fishing communities in Bangladesh. *Chatham: Natural Resources Institute.*

CHAMBERS. R. (1992) Methods for analysis by farmers; the professional challenge. *Paper presented at the 12th Annual Farming Systems Symposium, Michigan State University, US.*

CROMWELL, E. and S. WIGGINS (1993) Sowing beyond the state: NGOs and seed supply in developing countries. *London: Overseas Development Institute.*

KORTEN. D.C. (1980) Community organization and rural development: a learning process approach. *Public Administration Review (September/October 1980). 480-5* 1.

MCGREGOR. J.A. (1994) The growing gap between the banking system and the poor in rural Bangladesh: problems of financial liberalisation and the rise of NGOs. *Occasional Paper* 03/94. University of Bath, Bath: Centre for Development Studies.

MIKKELSEN, B. (1995) Methods for development work and research: a guide for practitioners. New *Delhi: SAGE.*

OKALI, C., SUMBERG J. and FARRINGTON J. (1994) Farmer participatory research: rhetoric and reality. *London: Intermediate Technology*

PAUL. S. (1986) Community participation in development projects: the World Bank experience. *Paper presented at the Economic Development Institute Workshop on Community Participation, Washington D.C.*

PELKEY, N. (1994) Please stop the PRA RRA Rah. *Out of the Shell, 5* (1).

PRETTY, J. and GUIJT, I. (1992) Primary environmental care: an alternative paradigm for development assistance. *Environment and Urbanization, 4 (1).*

ROY. R. (1994) Learning by doing in Bangladesh: extension system development for coastal and estuarine fisherfolk communities. *Madras: Bay of Bengal Programme.*

GLOSSARY

BOBP	Bay of Bengal Programme
Boyoshko Shikkha Kendro	Adult Education Centre
CODEC	Coastal Development Centre
ODA	Overseas Development Administration of the British Government
DFID	Department for International Development (UK) (formerly ODA)
Shishu Kendro	Children's education centre
thana	Administrative district comprising several villages

Appendix 1

INITIAL STUDY GUIDELINES

Village social and economic relations

- Map of the village, including:
  - location and classification of buildings;
  - name, age, religion and sex of household heads;
  - number of household members;
  - occupation of household members;
  - wealth ranking of households;
  - family ties of different households; and
  - resources used by the community.
- History of the village.
- Village power structure, including:
  - control over the resources (who has the power to allocate?);
  - the role of religion;
  - the role of gender;
  - the role of family; and
  - the role of economically-determined relationships (e.g. trader-fisher, boat owner-boat user, small trader-large trader, employer-employee).
- Economic activities of the village, covering:
  - types of economic activity;
  - who carries out the activities;
  - how much time is spent on each activity;
  - when is the activity carried out (time of day, time of month, time of year, time of life-cycle, etc); and
  - the economic value of the activity (for production, for reproduction).
- Social activities of the village, covering:
  - types of social activity;
  - who is involved in the activities;
  - how much time is spent on each activity;
  - when the activity is carried out (time of day, time of month, time of year, time of life-cycle, etc).
- Identification of formal and informal social and economic alliances within the village, for instance:
  - trader groups;
  - religious groups;
  - fishing groups;
  - loan groups;
  - community groups;
  - co-operation, conflict and conflict resolution.

<<

External relations

Identification and description of non-residents' interaction with the social and economic life of the village, for instance:

- traders buying from the village (including villagers' selling outside of the village);
- traders selling to the village (including villagers' interaction with local markets);
- consumers;
- local farming communities;
- religious affiliations; and
- government.

- Description of conflict with external parties and its resolution.
  - Technologies of fish production and marketing
  - Description of the fish catch, including:
  - types and size of gear used;
  - amounts of gear used and ownership/access;
  - types of boat used;
  - number of boats used and ownership/access;
  - types of fish caught during different seasons using different gears; and
  - quantities of different fish types caught during different seasons using different gears.

- Description of the utilization of the fish catch, including:
  - amount of fish sold (by individual, by type and by season);
  - to whom fish is sold (by individual, by type and by season);
  - prices of fish (including the impact of debt/credit arrangements); and
  - amount of fish for own consumption (by individual, by type and by season).

- Description of the marketing of the fish catch at different levels within and outside of the village, including:
  - amount of fish bought (by type of fish and by season);
  - who buys fish (by type and by season);
  - whom fish is then sold to (by trader, by type and by season);
  - prices of fish at different levels of trade chain; and
  - amount of fish for own consumption (by trader, by type and by season).

Household and extended family case studies

In addition to the topics and sub-topics, the guidelines provided notes relating to the development of case studies.

- Description of the household and extended family structure, including the following aspects:
  - family history (2-3 generations);
  - current household membership;
  - relationship of current household members;

- outward migration;
- economic activities of household members (past and present); and
- social activities of household members (past and present).

◆ Description of the economic activities of the household members, including:

- types of activity;
- labour arrangements;
- time spent (amount and when);
- capital investment (amount and type);
- operational costs (amount and type); and
- relationships evolving from the different activities.

¨ Description of the production and reproduction systems of the household, including:

- diet;
- clothing and shelter;
- health;
- sources of cash income and other basic needs' inputs, and their respective values; expenditures; and saving and investment (long-term and short-term).

◆ Description of trading relations, including:

- credit systems (amounts, seasons, use, etc);
- trading groups and individual traders; and
- impact of training relations on livelihood strategies.

Appendix 2

CASE STUDIES

Minoti Rani Das

Minoti Rani Das is 36 years old and a widow. She is a teacher and community service volunteer. Here's her story in her own words. The story was pieced together after several meetings.

I was born in the house of Kalabashi Das, of Patharghata under Kotwali *thana.* My father was a fish trader by profession. We had our own house and some agricultural land too. I was the third of four children and I have three brothers. I was regarded as the darling of the family during childhood. I remember that relatives as well as members of my immediate family used to bring me sweets and other presents. In 1973, when I was in class nine, I was given in marriage to Radhanath Das of Delipara and moved to live with him in his hut there. I was 14 years old at that time. I never got back to school after my marriage.

My father gave me six gold bala (bangles), one gold *har* (necklace) and a pair of *kaan pasha* (gold earrings) for my wedding. He gave Radhanath a wrist watch, a bicycle, a gold ring, a gold neck chain, two shirts, a pair of trousers, a pair of shoes and an umbrella. He also provided brass plates and utensils including a *paan baata* (betel leaf container) to start the new home.

Radhanath had a BA degree in commerce. He worked in the Bangladesh Tobacco Company factory. After marriage, he left this job as he felt he was looked down upon by his fellow workers because of his ancestral background. Some of them even accused him of taking a job unsuitable and above the rank of Jolodases. Radhanath soon got the job of headmaster in the local Abdul Jalil High School.

Radhanath's family had among their assets, six *behundi jal* (nets) and four *tong jals,* and a *nao* (traditional boat). His father used to maintain them and rent them out. My father-in-law passed away six months after my marriage. The loss was substantial. The family was left with nets and a boat that no one had experience in using or renting out. Radhanath sold the *nao* and rented out the nets. After adjusting for repair and maintenance, the net rentals provided the family an income of Tk 1 500 per month. Beside these, he had also inherited a *chapra* (hut) and a *doba* (water hole).

My first son was born three years after my marriage. I was treated with care and was given a lot of attention in my husband's family. With my mother-in-law and sister-in-law, we were one happy family. But, alas, this happiness was short lived. Radhanath died of cancer when my son was only five and a half years old. My life of happiness ended. A story of struggle began, which has made me who I am today.

I lived for raising our son properly, educating him and enabling him to succeed where his father failed: to develop the capacity to engage in a profession other than that of a Jolodas.

After Radhanath passed away, I sold two *behundi jal,* and with the money arranged for the marriage of my *nonod* (younger sister-in-law). I gave the groom clothes and cash worth Tk 2 000. As I had no money for the wedding feasts and other incidentals, I took a loan. I faced each crisis quickly and decisively. The nets were getting old and were fewer in number. The income was not enough to support my family. I was determined to use whatever skill I had to support my family. Since I knew how to read and write, I banked on this and took work teaching children as a private tutor in surrounding Muslim households. I also got to teach at the *Boyoshko Shikkha Kendro* (adult education centre). During this period, I attended a short course on family planning in Dhaka. I also attended a training programme on Mother & Child Health Care in Savar.

At the Friends in Village Development, Bangladesh (FIVDB) in Khadimnagar, Sylhet I took training in functional literacy and practical education. Since 1984, I have been a *shebika* at the Shishu Shikkhalaya (Children's Education Programme) in Delipara, in addition to my service at the *Boyoshko Shikkha Kendro.*

I earn bits and pieces each month from the various jobs I have. My income is Tk 350 for teaching at the *Shishu Kendro* and Tk *300* as *shebika* at *Boyoshko Kendro.* From private tutorship I earn Tk *700.* I have a *behundi jal* and the income from its rental is Tk 300. So the total comes to Tk 1 650 per month. Occasionally, I also manage to make handicrafts like *katha* sewing and basket weaving, but nowadays I hardly find time for it.

Each month when I get my income from these sources, I go to the pharmacy in Kumira Bazaar and buy essential drugs and medicines (Orsaline, Paracetamol, Flagyl, Imotil, Cotrim) I keep these in reserve should an emergency arise in my community. But I stopped keeping Paracetamol Syrup since the day I learnt that there were adulterated brands on the market. I sell the medicines to other people and this also earns a few taka.

I am happy with what I have been doing to earn a livelihood. At ***the Boyoshko Shikkha Kendro,*** I helped Tuntu Bala and Putul Bala of our community to learn how to read and write. They have also learned how to add, subtract, multiply and divide. They also went for training at FIVDB in Sylhet on practical education which they obtained through a stipend from CODEC. Both Tuntu and Putul Bala are teachers at ***Shishu Kendro*** and shebikas at ***Boyoshko Kendro.*** They maintain weekly savings accounts of the Mahila and Shishu Samity (groups), and prepare and send activity reports to the CODEC office.

My son Ranjit is now in class seven. He is 17 years old. He could not attend school for three years due to prolonged illness, This year he would have been taking SSC exams with his original classmates. I am worried about his future. Sometimes I wonder if he will equip himself to face life better than his father or any other Jalodas.

Since Radhanath passed away, I lost my house and belongings on three occasions, twice due to cyclones and once due to the erosion along the coast. I built my hut after filling the ***doba*** (waterhole) when erosion took away my ***bhita*** (homestead land). The 1991 cyclone robbed all this from my family again and all I had left was the cloth I was wearing. When the water reached my knee, I took Ronjit and went to the Muslim settlement towards the east. When I came back after the danger had passed, I found an empty space where my hut had stood. I got some relief, including a house with C.I. sheet roofing, a blanket, some food, etc. A few days after the cyclone, a neighbour recognized my ***paan bata*** among the debris and gave it back to me. This was a wedding present from my father, and I was happy to get it back. Bit by bit I am trying to rebuild my belongings. My mother-in-law lives with me and she sells fish. She buys small quantities at the landing and sells at the bazaar nearby.

I have prepared a list of the belongings in my house:

Paan Bata	1	Aluminium bowl	1
shitol Pati	2	Balti (pail)	2
Pillow	4	Moshari (mosquito net)	2
Blanket ***(katha*** and ***kombol)***	3	Kerosene lamp	1
Large polythene	1	Pata (grinding stone)	1
Aluminium Kolosh	2	Da (machete)	1
Aluminium cooking pot	7	Tin trunkcase	1
Aluminium jug	1	Umbrella	1
Aluminium drinking utensil	4		
Ranjit's clothes	2 pants, 3 shirts, 1 jacket, 1 lungi		
My clothes	***4 sarees,*** 1 ***chador*** (wrap), 3 blouses and 3 petticoats.		

The following descriptions of the lives of Putul Bala Das and Bhagyo Bala Das were obtained from single visits.

Putul Bala Das

My husband is Harimondo Jalodas; he is about 70 years old. We have three sons and three daughters. My father used to be a soldier in the army during the British period and we used to live in Patharghata. As far as I remember, I arrived in Delipara after marriage sometime around 1965. I was 14 years old then. I am third among live brothers and three sisters. One of my brothers lives in the United States. Of my daughters, two have

married and live elsewhere. Our eldest son is also married. He has chosen fishing as his livelihood, following his father's footsteps.

I did not know how to read or write, but I learnt how to from Minoti Rani. Now I am a teacher at the CODEC Shishu Shikkha Kendro. I have also obtained training on practical education from Friends in Village Development Bangladesh (FIVDB) at Khadimnagar, Sylhet. This enabled me to become a facilitator at the Boyoshko Shikkha Kendro. I also undertook training as a Mother and Child Health worker, and this included family planning. I also learnt to weave bamboo baskets, etc. and obtained training from Bangladesh Small and Cottage Industries Corporation (BSCIC). For some time, I made baskets and sold them. However, after the 1991 cyclone in which all my belongings and materials were destroyed, I stopped making handicrafts.

I was the group leader of CODEC Mahila Samity at Delipara until 1993. I was very busy keeping accounts of meetings, savings and loan accounts, sending monthly reports to the CODEC Centre, etc. Now, I am a member of seven Mahila Shabhanetri in the CODEC Federation.

Many children in the community were my students at the Shishu Shikkha Kendro. They now attend high school. I am particularly grateful to both Minoti Rani and Tunto Bala who have always encouraged and helped me to learn and use my learning to help others.

Bhagyo Bala Das

I am Bhagyo Bala Das and I sell fish to earn a living. I live with my father, Romendro Jalodas, who is nearly 80 years old. I am the third of four sisters and two brothers. I was married to Horidas of South Kattali in 1975 when I was 17. My husband was a full-time fish trader. Financially we were quite well off at that time and there were not many needs to worry about. My father gave my husband a dowry of Tk 3,000 at the time of my marriage. He also gave me a pair of gold earrings, a gold bangle, and brassware which included a ***kalash*** (water urn) and a ***paan bata*** (betel leaf holder) for household use.

During our 16 years of marriage we had two sons and two daughters. My husband died four years ago after suffering from prolonged diarrhoea. Horidas owned no land, neither did he leave us with any property. A few weeks after his death, my mother-in-law threw me and my four children out of the house we lived in. I came back to my father's home and built a small room where I have been living with my children. My youngest son is now five years old, and my eldest daughter Ramola is 15.

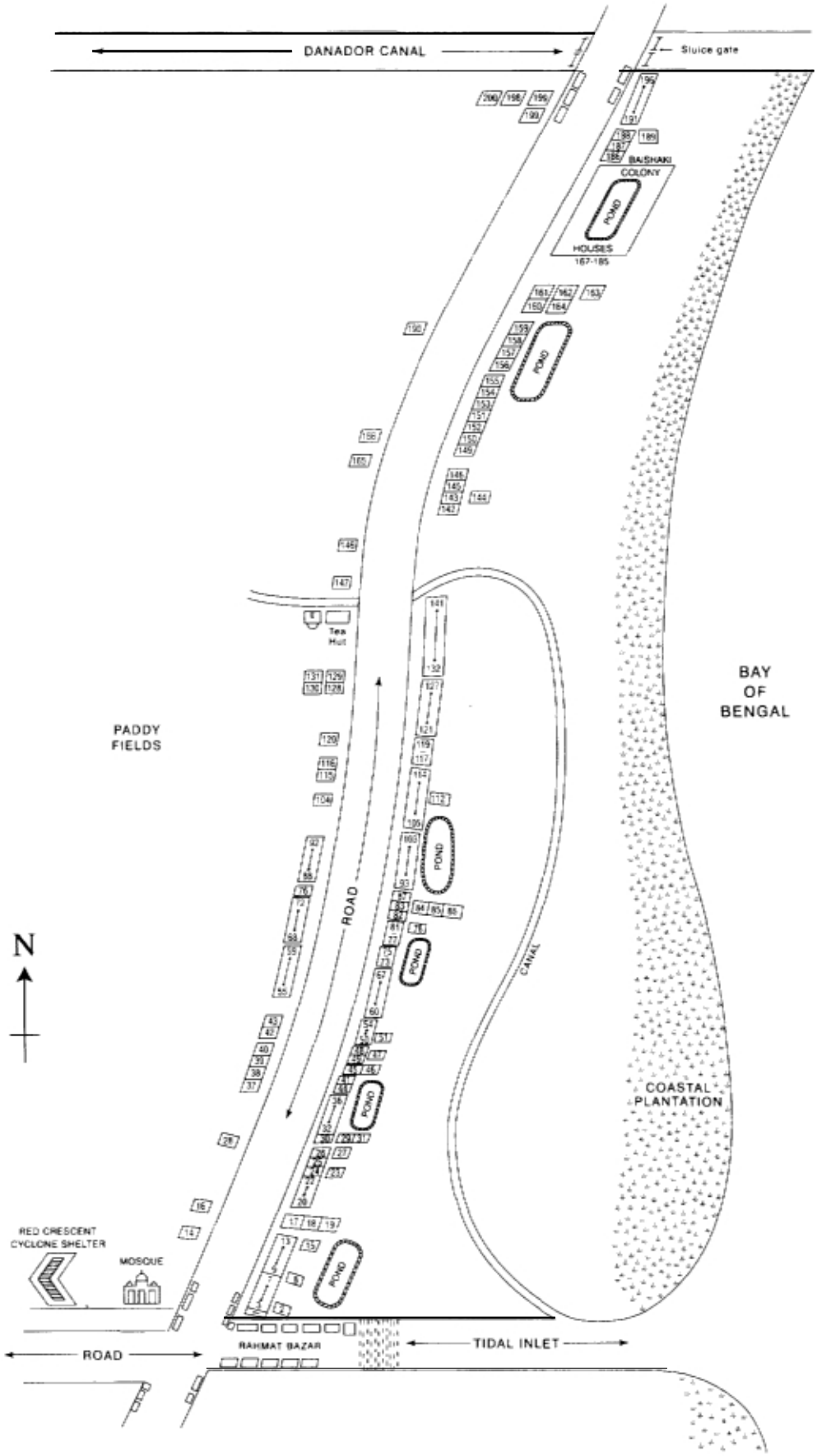
I started going to the Muslim households surrounding our community and offered to do odd jobs. If I was lucky, I found work and received rice in exchange for my labour. Over time, the Muslim households began to trust me. I borrowed some money from them and started to buy fish and sell them from door to door. This became my means of supporting my family of five. Often I had to please my loan providers by helping to maintain their house floors, or preparing firewood, etc. I also gave them discounts on the fish I sold to them.

I earn Tk 30-40 each day by trading fish worth Tk 200-250. When I am not able to purchase fish, I go to the Muslim households to do odd jobs.

During the cyclone of 1991, I took my children to the school next to the Dhaka-Chittagong highway for shelter. We lost all our belongings except the clothes we were wearing. After staying eight days at the school, I managed to get some polythene from the relief distributed and gathered some pieces of bamboo and started to build a shack again. I am now thinking of my elder daughter who may be able to help the family if she learns how to sew.

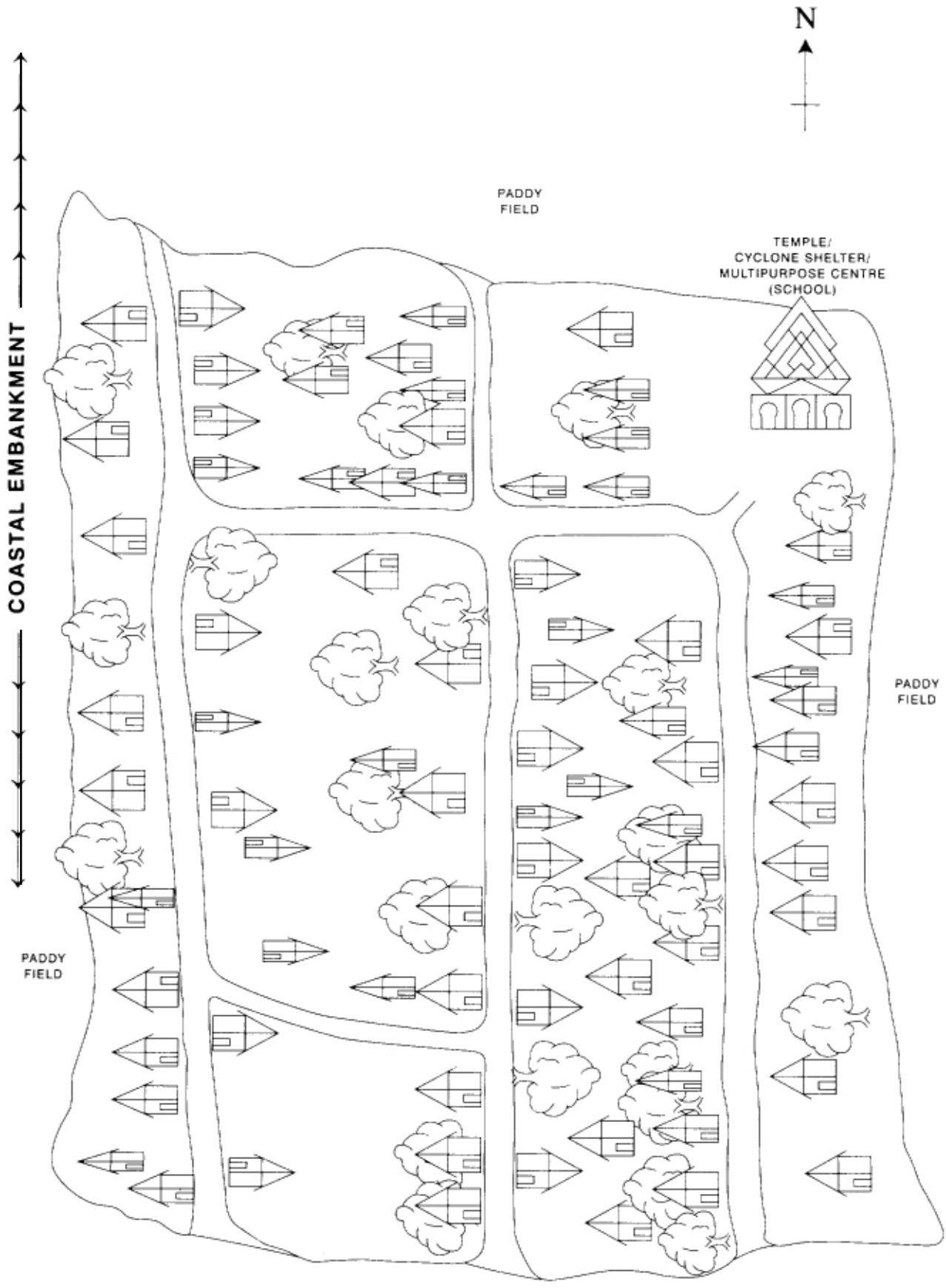
Appendix 3A

Example of community mapping – Rehania community, Hatia island



Appendix 3B

Example of community mapping – Rakhainpara, Cox's Bazar



Appendix 4

Published Findings of the Study

Safety or debt trap? Ties between marketing and credit in coastal Bangladesh

The net

Fishing is a risky business, and nowhere more so than in the seas off Bangladesh. Cyclones and tidal surges can cause years of investment in boats and gears to be washed away overnight. High winds or rain can mean days or weeks when those with small craft are unable to go to sea.

Even without the protection of bad weather, the Bay of Bengal is often reluctant to share her riches. For months the catch accessible to small craft is miserly, and by a cruel twist of fate the peak season for high-value hilsa coincides with the monsoon season, meaning that fisherfolk often have to stay ashore while the catch rots in their nets.

Uncertainty means that coastal fishing communities veer between boom and bust. During the hilsa season from June until September, the communities are crowded with buyers, boat repairers, salesmen and tinkers. When the season ends, the money stops and the strangers go away. Many of the communities turn to push nets or set bagnets, and household incomes are less than 5% of what they are during the hilsa season.

But although fish buyers do not visit the communities during the lean season, their presence is still felt. When a household needs credit at the local shop or money to repair equipment, somebody will contact the buyer or his representative. Because the buyers do not simply purchase fish: they are also money-lenders, the most available source of credit that many coastal fishing communities have.

The buyers-cum-lenders are known as *dadondar* and are often members of neighbouring farming communities. Their dual role distinguishes them from other fish traders *(paikar)* who do not offer loans, The dadondar are in turn linked to *arutdar,* large-scale traders who sell the *hilsa* to major urban and export markets and who also have access to the large amounts of capita1 that the *dadondar* system demands.

Of course, all this comes at a price and *dadondur* loans are charged at high levels of interest. However, for fisherfolk without access to banks and largely ignored by poverty-focused finance, initiatives such as those of the Grameen Bank or the *dadondar* at least fill a real need, and earlier studies such as that of Bennett (1991) viewed the system favourably.

The trap

A closer look at the *aratdar - dadondar* fisherfolk chain raises the question of whether the system is an engine of the local economy or in fact a brake. We studied three fishing communities at different parts of the coast, and each shared the same marketing-credit system. In Delipara, for instance, a Hindu fishing community near Chittagong, there are *five dudondar* each with four or five agents. The *dadondar* or his agents offer loans during the leanest fishing months, either in cash or by facilitating credit at local shops and kiosks. These loans are made to boat-owners *(bohoddar)* or captains *(majhi)* who are responsible for their repayment.

The dadondar system is not therefore as simple as that described in Figure 1. It traces the economic hierarchy within the communities, providing loans to the wealthier *bohoddar or majhi* who in turn provide loans to their crews. Anyone who is not a crew member does not have access to these loans. Boat-owners tend to prefer crews that own their own nets, in itself an indicator of wealth (see Figure 2). And women, who are excluded from fishing, can only obtain loans through their husbands or other male relatives, limiting their access to capital for fish vending and also their control over the amount of money available for domestic purposes.

The *dadondar* set the rate of interest for these loans - 60- 150% per annum depending on the community and on the credit record of the *bohoddar.* As most *bohoddar* are illiterate, the *dadondar* also serves as book-keeper in the transaction. A condition of the loan is that the *bohoddar* must sell the hilsa catch to the *dadondar,* and the *dadondar* sets the buying price at several taka less than the price offered by other traders. Furthermore, payment is only made at the end of the *hilsa* season.

But there is a special twist to the *dadondar* system. No matter what the size of the loan, the *bohoddar* must promise to sell all his catch through the *dadondar* for that season. Thus, a fisherman who requires a loan of Tk 1 000, and one requiring a loan of Tk 10 000, must both hand over exclusive rights to their entire season's catch to the *dadondar.* If a loan is not repaid in one season, it is carried over to the next season and the *bohoddar* must again surrender the right to sell his fish on the open market.

Table I gives an example of how loans are carried on from year to year, taken from the Muslim community in Rehania on Hatia Island where *12 dadondar* control over 90% of the hilsa trade. In the Buddhist community of Rakhainapara. near Cox's Bazar, failure to pay loans has led to one of the community's largest boat-owners going out of business, which in turn has forced his former crew members to leave the village in search of work. But the most severe case is Delipara, where years of trying to reduce dependence on *dadondar* loans, including the establishment of community savings and loans groups, ended with the 1991 cyclone which destroyed boats and gears and drove the community back to the *dadondar* in order to obtain new capital.

Escape

There is constant tension between fisherfolk and the dadondar, which has sometimes resulted in violence, destruction of property and, in one case, death. Freedom from the dadondar system is a commonly voiced desire in fishing communities, even amongst wealthier people. But finding a solution is not simple.

The large poverty-focused credit programmes which have proved so successful in agricultural communities have mostly passed fishing communities by. Fisherfolk have a poor reputation for repaying loans, although the Bay of Bengal Post-harvest Fisheries Project is working with fisheries-oriented savings and loans schemes in southern India that have repayment rates in excess of 90% — far higher than clients of commercial banks.

The Coastal Development Centre (CODEC). a Chittagong-based NGO, was one of the first to develop savings and loans groups in fishing communities. These suffered a setback with the 199 1 cyclone, but are still operating in 13 coastal communities. However, they have not succeeded in replacing the *dadondar* system. In part this is because the savings and loans model, based on that of the Grameen Bank, encourages regular saving and borrowing, and is unable as yet to respond to the seasonal nature of fishing community borrowing. Most loans are required before the hilsa season, but the current model is unable as yet to respond to this sudden peak in demand.

CODEC's approach, which is now being copied by another NGO working in Rakhainpara, has made loans available to a wider section of the fishing community. It has set up women's groups which, like schemes in agricultural communities, have proved more dynamic and effective than men's groups. But while the *dadondar* system remains strong, the major economic opportunity for women (i.e. training) remains closed as they can obtain neither enough fish to market nor the necessary capital to expand their present activities.

The experience of Santhidan, an NGO in Tamil Nadu that has been supporting women's savings and loans schemes in fishing communities for over 13 years, is highly relevant to the future of existing and future schemes in Bangladesh. Santhidan accept that they will never rid communities of money-lenders: the savings and loans groups simply offer a wider choice.

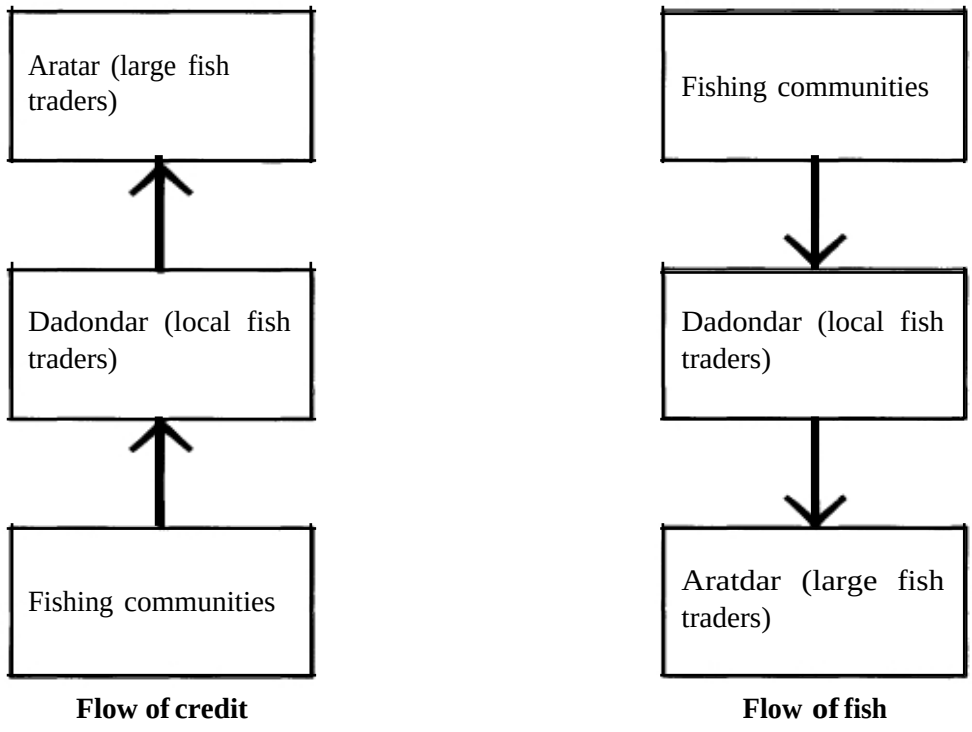
But above all. the groups are not just there to meet economic needs. For Santhidan, a savings and loans group is a focal point for community organization. raising awareness of fisherfolk's social and economic position and helping provide them with a higher profile so that they can lobby for policy change. Without such awareness, groups cannot survive the inevitable periods of pressure. And as the examples from Bangladesh show, it is during these periods that the *dadondar* tighten their hold.

Table 1 Outstanding loans to *dadondar* amongst Rehania fisherfolk

	Number	%
Number of boat captains	14	
Number of crew members	98	
Number of captains with outstanding loans at end of season	13	93
Value of outstanding loans (taka)	226 500	

Note : Data from Rehania fishing community, 1994

Figure 1 Theoretical model - Flow offish and credit in Bangladesh coastal fishing.



Conclusions of the Dhaka Set-Bagnet Fishery Planning Workshop, June 1994

Effect of the environment

The thinking, aspirations and perceptions of set bagnet communities are very much determined by the reality of their environment. They are highly susceptible to natural disasters such as cyclones, flooding and tidal surges. Loss of property and natural resources (for example through erosion) and the development momentum that occurs because of natural disasters seriously influence their perceptions of the future. There is a high degree of fatalism and a limited sense of control. In some ways this has been reinforced by set bagnet communities' relationships with outside development organizations with which the people have often had contact only as a response to natural disasters. The perception of outside agencies as providers of relief rather than as facilitators of social and economic development initiatives is very apparent.

The communities live at the margins of society. They have little or no land other than that for housing, and their access to the natural resources upon which their livelihoods depend is insecure. They have limited access to non-fisheries resources, yet can exert almost no influence over the management of the marine resource. The government's fisheries extension programmes are almost exclusively focused on inland fisheries, and its coastal fisheries policy only considers large-scale fishing activities.

Fisheries

The fishing year can broadly be divided into two seasons: the hilsa season and the set bagnet season. The former accounts for much of the value of the total catch, although the benefit to the set bagnet communities is reduced by their limited control over the factors of production. The set bagnet season is less important in terms of total value. but essential to the subsistence of the communities.

The set bagnet communities claim that the fish stock during both seasons is in decline; an opinion shared by the government. During the set bagnet season, this has driven the communities to use increasingly smaller mesh nets, and government and fisheries experts presume that this is depleting the stock of fingerlings and small fry. Whether decline in individual fisherfolk's catches is due to an actual decrease in the stock or to an increase in the number of fisherfolk has never been calculated. The effect any reduction in the use of the set bagnet would have on the stock is also unknown.

Despite the lack of answers to these fundamental questions, there are moves afoot that could outlaw the use of the set bagnet. FAO-BOBP is advising the government about the feasibility of bringing in legislation which would then have to be discussed before becoming law. Although any legislation is a long way off (King personal communication), there are in any case doubts as to whether it could be enforced, and fisherfolk from the set bagnet communities have no option but to use set bagnets at present. But such legislation would technically make the fisherfolk from these communities illegal operators, further weakening their rights in relation to natural resources.

However. there is potential for increasing the value of the present catch to the set bagnet communities. In Rehania, for instance, a considerable portion of the cheuwa catch goes to waste because there is only a limited capacity within the community to process and market the fish. Rakhainpara is close to the large urban market of Cox's Bazar. but the community does not have the skills to dry and market the set bagnet catch which is landed on their nearby beach. In Delipara, although most of the hilsa catch is taken by traders, more than 25% of the catch goes to waste either because it cannot be collected from the nets or because of market gluts. In the short term, increasing the capability of the set bagnet communities to process this rejected fish would increase incomes. In the medium term the introduction of more boats able to go to the hilsa nets during bad weather would increase the amount of fish for sale. In the longer term, if dependency on current credit-marketing arrangements was reduced, the value of the catch to the fisherfolk could be increased through processing and storage.

Economic organization

The major economic activity of the set bagnet communities is fishing. Those members unable to engage in fishing or without a relationship to fisherfolk are the most disadvantaged.

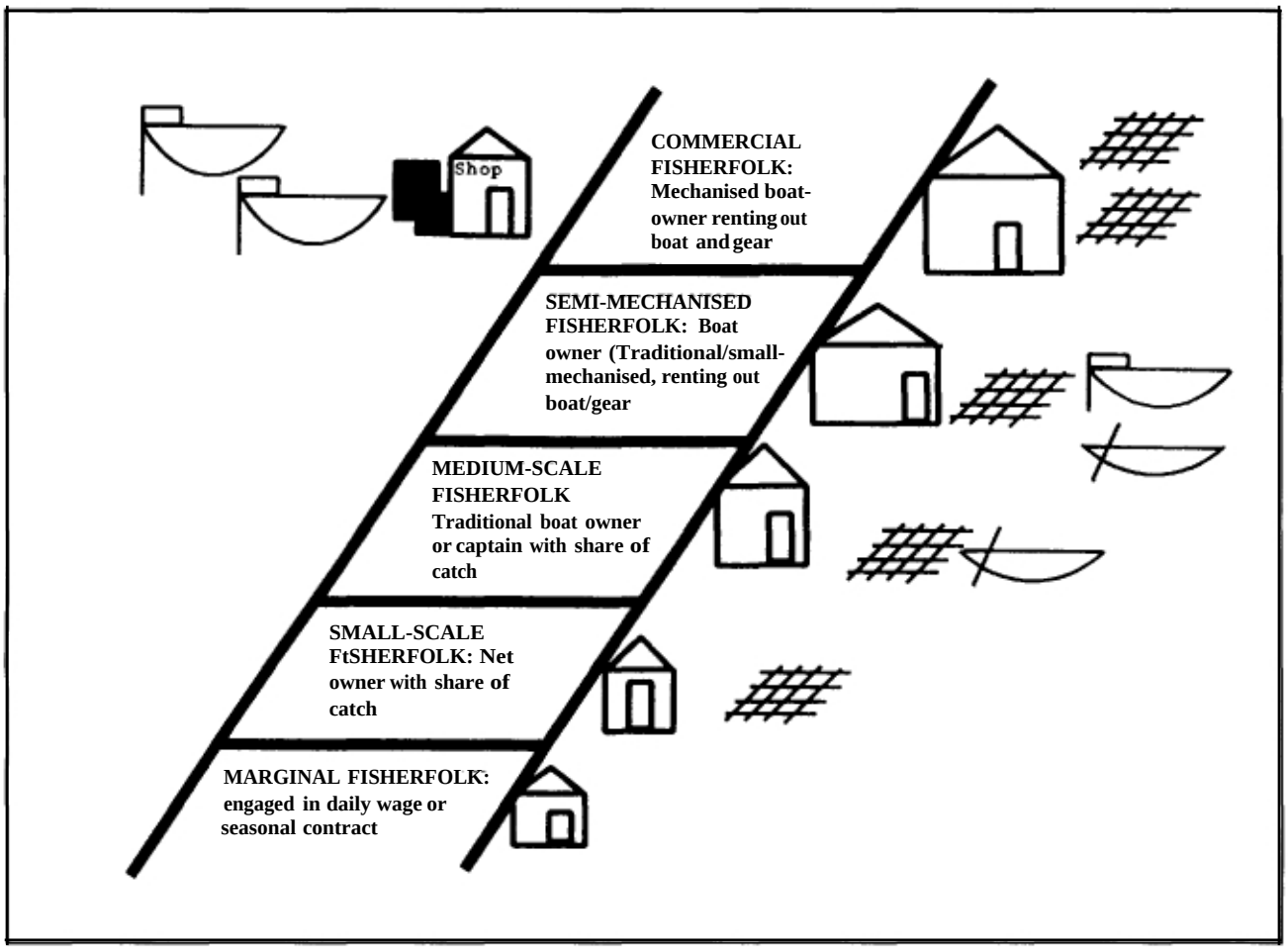
This hierarchy is male-dominated. Present ambitions of the fisherfolk are to move up the ladder. Thus, for instance, the marginal fisherman hopes to be able to afford a net: the small-scale fisherman hopes to buy a boat: the medium-scale fisherman hopes to have a mechanized vessel (see Figure 2). In reality, the number of people able to move up the ladder is decreasing in many communities, and natural disasters together with competition from capitalized landowners has let to a proportional increase in the number of marginal and small-scale fishermen.

Social Organization

Two of the three communities are from minority religious groups (Hindus and Buddhists), which in some cases can influence their relationship with the surrounding Muslim communities. Religion also influences the internal social mechanisms of the communities. For instance. in the Hindu Delipara community, the religious and social leadership are closely bound and include decision-making relating to fisheries.

In all communities the family is the main unit of economic co-operation, but the degree to which the extended family is important and the significance of family compared to community varies. For instance. in the Buddhist community of Rakhainpara men normally live in their wives' houses, whereas in Hindu communities women move to the houses and villages of their husbands. Consequently, widowed women in the Delipara Hindu community are in a weak position to call on support from the extended family and are dependent on the community

Figure 2: The ladder of economic progress in coastal fishing communities.



as a whole for support. In Buddhist Rakhainpara, a widow still has contact with her extended family, while widowers leave the community if they do not remarry.

All communities have indigenous social institutions, although the degree of power they still hold varies. There are links with other communities. especially those of the same religion or ethnic group, although these serve a social rather than an economic function.

The relationship between community members and the sea is also partly determined by social norms. The Rakhain people, although traditionally fisherfolk, do net feel that they have cultural ties to the sea. The Rehania community is partly made up of settled cultivators who have only entered into fishing because they have lost their land in their original villages. However, the people of Delipara are from a fishing sub-caste, and their culture and social status is wholly inter-twined with fishing and the sea.

However, many of the problems facing the set bagnet communities cannot he addressed at the level of individual villages. The different set bagnet communities face many problems in common (for example, rights of access, poor political representation, declining resources) and these can only be effectively addressed by the communities coming together as a group similar to those that represent the interests of traders and cultivators. CODEC, a Chittagong-based NGO, is currently trying to establish a coastal fishing community federation, while AZAD, a local NGO working with the Rakhainpara community and others, has operated for several years by mobilizing the resources of people in the Cox's Bazar area.

Gender

Because women do not take part in fishing, they are denied access to the largest single source of income for the communities. In male-headed households they could expect to benefit from any improvement in the position of fishermen, but female-headed households are much more likely to be poor.

Moreover, the nature of poverty in female-headed households is different from that in male-headed households. Women are involved in marketing fish but on a much smaller scale than male traders. Because capital is largely channelled through the fishing crews, they have much less access to credit, both for subsistence and investment. It is noticeable that where there are specific income-generating activities for women (such as weaving), these are adopted because they allow women to balance their basket of productive and reproductive responsibilities. Where women become the main bread-winner, these female-specific opportunities are.

In many communities, women are responsible for the children in the event of being windowed, divorced or separated from their husbands. In the Buddhist Rakhain set bagnet communities they are also responsible for elderly parents. In Muslim communities there are fewer female-headed households than in Buddhist or Hindu ones. But this reflects the Muslim communities' way of treating non-married women (for example, through remarriage or being taken in by siblings and other relatives), rather than any lower level of divorce, separation etc. It does not appear to be the case that un-married women in Muslim set bagnet communities are less advantaged than other communities, and because of their invisibility it is consequently more difficult to address their needs.

Women are not represented in indigenous social institutions, although they have shown themselves to be effective organizers in externally initiated activities such as education and savings and loans. But the opportunities for using such activities as catalysts for a broader range of development activities have not yet been fully exploited.

Marketing and credit

Women often engage in fish marketing on a small scale, and some male community members are fish traders. The bulk of the fish trade, however, is controlled by people from outside the set bagnet communities. There are two basic types of external traders. One is the exclusive trader who buys fish at the landing site. The other is the dadondar who markets fish as part of a credit arrangement with the fisherfolk.

The fisherfolk are very dependent on credit. When the catch is poor. especially during the set bagnet season, credit is required for subsistence. But it is also required to repair craft and prepare for the next fishing season. In return for credit, the dadondar has exclusive right to the fish caught by a boat-owner. In some communities this monopoly applies to hilsa, in other communities it can apply to the set bagnet catch. The dadondar assesses the value of the catch and deducts this amount from the boat-owner's loan for that season. Payment is not made until the end of the season when the value of the fish is offset against the amount of credit plus accumulated interest. If the loan is not repaid, the balance is carried over to the next year.

Despite the high rates of interest charged on the loans and the tendency to value the fish at a significantly lower price than other traders **might** be prepared to pay, the dadondar provides a readily accessible form of credit which is essential to many communities' survival. Unlike formal sources of credit, the dadondar acknowledge the catch as a capital asset and are willing to lend money prior to the actual fish harvest.

However, the dadondati system is pernicious because it creates a monopolized marketing system which gives the fisherfolk no choice or incentive. Any efforts to add value to the fish (for example, through processing) would not benefit the fisherfolk, because the dadondar pays them for catching, not processing. By giving the fisherfolk a lower price than would be the case if the fish were marketed through normal traders, the dadondar effectively encourages over-exploitation of the marine resource. Similarly, because of the low prices paid, the fisherfolk are deprived of the opportunity to accumulate capital for investment which could be invested in fishing, in non-fishing income-generating activities and **in** improving the general conditions of the community (for example, through improved education and health).

Some attempts have been made to end dependence **on the** dadondar through the setting up of savings and loans schemes by NGOs. While these have been successful as schemes with high rates of savings and repayment, they have not removed the dadondar. Partly this is because the total removal of the dadondar is unrealistic at the present time given the communities' need for credit at a time when the set bagnet catch is declining. It is also because of the rules of the dadondari system itself. The basic rule is that the cost of a loan is the entire catch. This applies regardless of the size of loan. Therefore a boat-owner who borrows Tk 1000 and one who borrows Tk 100 000 are equally bound to hand over all their fish for an entire season and after it as well. until the loan is repaid. Thus, savings and loans schemes that are slightly late in giving loans or that are unable to provide sufficient loans for a boat-owner's overall needs, cannot release the communities from the dadondar's hold and could possibly increase the chance that the loans will not be repaid.

The impact of savings and loans schemes on the dadondari system is also connected to the relationship between creditor and debtor. As Figure 1 shows, the dadondar do not interact directly with the set bagnet communities. The loans are provided by agents who are usually from farming families in neighbouring communities. The loans are not provided to individual fisherfolk, but to the boat-owners who then use this money for boat repair, preparation and advance payments to the crews. It is not therefore the case that the entire community is indebted to the dadondar. However, it is the boat-owner who controls the sale of fish and is the source of loans or advances for net-owners and waged crew members. Therefore if the boat-owner owes money to a dadondar, then his entire crew and their families are all affected.

The strength of the dadondari hold differs from community to community. It is also affected by the impact of natural disasters, and where a community has been severally affected with the loss of most capital assets (e.g. Delipar after the 199 1cyclone), the grip is very strong indeed. The dadondar are also part of a strong economic and political mechanism that extends way beyond the fishing villages.

Although unable to replace the dadondari system, savings and loans groups have been shown to work in set bagnet communities. Alone they provide an alternative source of credit alongside dadondar, local trader and informal money-lenders. Larger credit schemes such as those of the Grameen Bank, do not appear to reach coastal fishing communities. Moreover, savings and loans schemes can provide an important catalyst for community organization which is turn acts as a motor for other development activities.

Organization and representation

The government's fisheries programme pays almost no attention to the condition of set bagnet communities. A few NGOs have programmes with coastal fishing communities, and these have been working with FAO-BOBP for the past year or more. Certain individual set bagnet communities are covered by these programmes, but they tend to be general packages rather than addressed to the specific needs of the set bagnet fishery. Most communities do not receive regular assistance from development organizations, although many had contact with relief workers after the 1991 cyclone.

In developing programmes, one of the most commonly identified needs is the issue of credit because certain aspects of the existing money-lending system prove a major obstacle to sustainable development initiatives. Community savings and loans schemes have performed well where they have been established, and women's groups especially have benefited the most disadvantaged in the community. Moreover, such groups can serve as catalysts for a broader range of social and economic development activities. As DFID-PHFP case studies from India show, a broader role for such groups is both an efficient way of implementing activities and desirable for group susceptibility (Rogers and Blowfield, 1993).

As mentioned earlier, inter-community organization has not received much attention in the past, although it is increasingly recognized that without networking and co-operation the marginalized set bagnet communities will continue to be at a disadvantage compared to agriculturists and other interest groups.

Both government and NGOs are weak in their technical capacity to meet coastal fisheries related needs. The government's extension staff are not involved in coastal fisheries in the three studied communities, while NGO staff rarely have fisheries expertise. BOBP-FA0 pre-harvest fisheries conducted a training and outreach programme in the early 1990s to increase the technical and organizational skills of NGO and the government personnel and to encourage working with coastal fishing communities. There are many lessons to be learnt from this programme, but despite the problems of later sustainability encountered, the programme proved that the capacity of both government and NGOs can be enhanced effectively.

The BOBP-FA0 work provided the model upon which BOBP-DFID's sustainable income enhancement activity was built. The activity is still continuing and should be coordinated with the set bagnet community programme.

NGOs also have a limited capacity to identify and analyze policy issues relating to set bagnet communities. The skills required to conduct policy work will become increasingly important as awareness of the need for networking and co-operative action grows. The same skills would also benefit government officials in developing more appropriate coastal fisheries policies.