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Caught in their own nets: a social study of set bagnet fishing communities in Bangladesh (NRI report no. R2199(C))

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**CAUGHT IN THEIR OWN NETS:
A SOCIAL STUDY OF SET BAGNET
FISHING COMMUNITIES IN BANGLADESH**
by
M.E. Blowfield and Nasimul Haque
R2199(C)

March 1995

ACKNOWLEDGMENTS

The following are the findings of thirteen months of research in three coastal fishing communities in Bangladesh. The study was conducted as part of the ODA-funded Bay of Bengal Post-harvest Fisheries Project which is managed by NRI.

Thanks are due to Duncan King as field project officer, Abul Kashem (ODA-PHFP representative in Bangladesh) and Nick Willoughby (project manager).

The authors
February 1995

EXECUTIVE SUMMARY

The estuarine set bagnet communities are amongst the poorest rural communities in Bangladesh. An already difficult existence has been exacerbated by recent natural disasters and apparent declines in fish stock. In addition, they are socially and politically isolated from the mainstream of rural life, often coming from ethnic minorities and dependent on marketing channels that are dominated by the urban and rural elite.

This report presents the findings of a year-long study of three set bagnet communities that arose from planners' fears that intervention in such marginalised communities would exacerbate rather than assist the fisherfolk's situation. The communities are from three different religious and ethnic groups in different parts of eastern Bangladesh.

The findings show the intricate web of social and economic factors that hinder economic development. Lack of access to capital is a major issue. Most of the available credit is linked to the marketing of high-value fish during certain seasons. Consequently, external financing is channelled through boat captains and owners, excluding women and poorer men from directly accessing loans. Furthermore, for much of the year, when the value of the catch is insufficient for large traders, credit is unavailable.

In recent years NGOs have tried to address this situation, but the results to date are mixed. The study has identified many of the features of the fisherfolk's lives that serve as opportunities and constraints to such outside assistance. It shows that there are no magic solutions, but only slow, persistent and socially sensitive responses which might release some of the present pressures and open up possibilities for the future.

The report is primarily intended for use by the ODA Bay of Bengal Post-harvest Fisheries Project, and articles on specific aspects of the study are being published elsewhere. However, the report, and especially its final section (Conclusions), will also be of use to fisheries policy makers and development practitioners who need to increase their understanding of the complexity of coastal fishing communities and the implications for development work.

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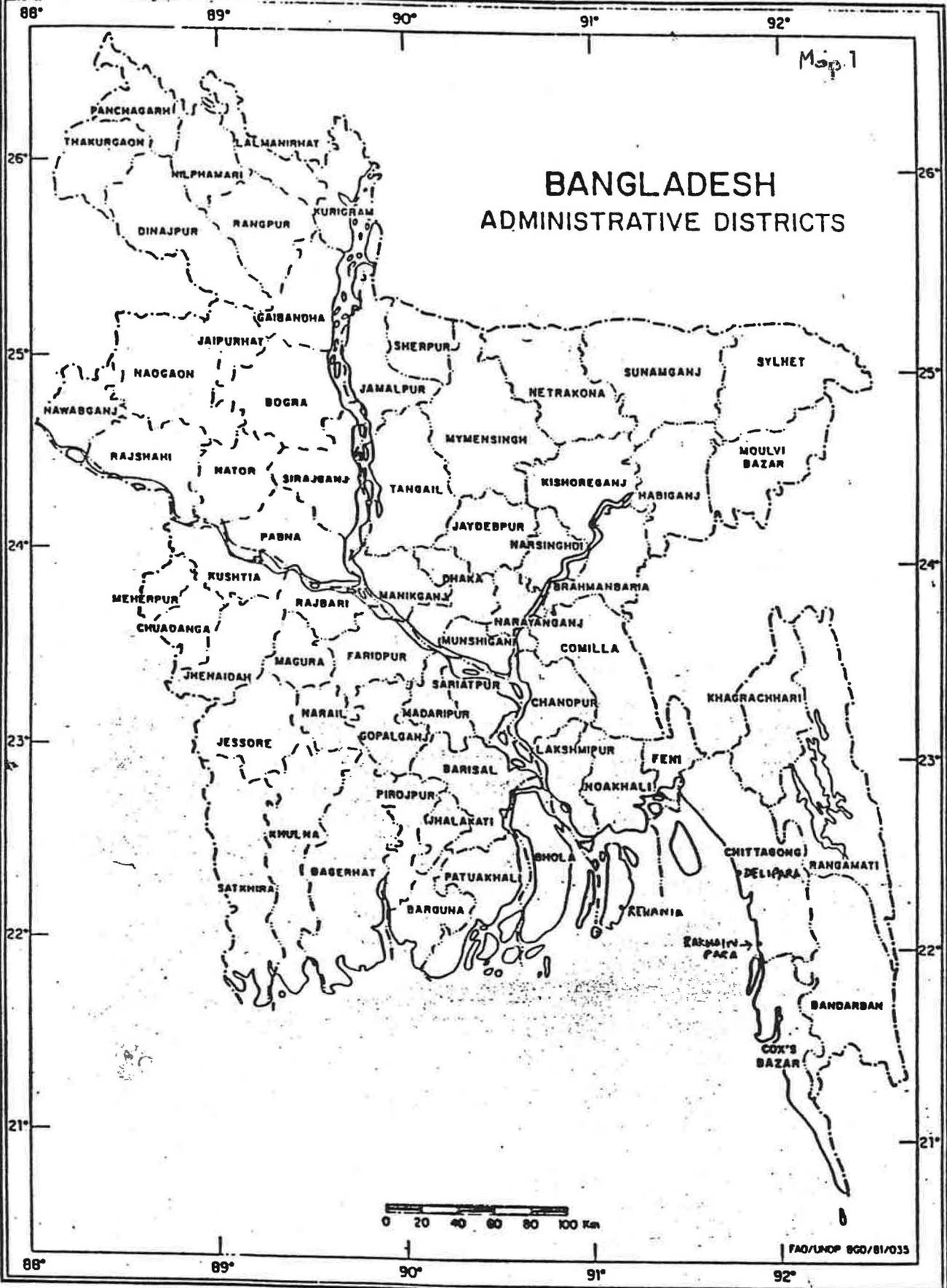
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BANGLADESH ADMINISTRATIVE DISTRICTS



FAO/UNEP 860/81/035

SECTION 1: BACKGROUND

The Bay of Bengal Project has had an interest in the set bagnet communities of Bangladesh since the early 1990s. In 1992-1993 the FAO-funded Bay of Bengal Project (BOBP) conducted a biological and socio-economic macro study of the estuarine set bagnet fishery. In the same year the ODA Bay of Bengal Post-harvest Fisheries Project (ODA-PHFP) conducted a study of marketing as it affected these communities, and in 1993 commissioned a thirteen-month micro-level study of social and economic factors affecting these communities.

There was already baseline data on set bagnet communities from a previous FAO-funded study, the work of Bennett (1991) and data from NGOs. It was therefore decided to conduct an in-depth study of just three communities.

Such a long study period of a small group is rare on development projects, and was an acknowledgment of the complexity of the set bagnet communities' social and economic situation. For although it was clear that these communities were amongst the poorest in rural Bangladesh, the complexity of this poverty made it impossible to plan successful interventions without the risk of marginalising and adding to the immiseration of groups within these communities.

It was also apparent that some of the communities did not trust development workers, and saw them as the type of 'development tourist' characterised in some of Robert Chambers' writings of the 1970s, paying brief, one-off visits that usually led to nothing. Thus when we paid an initial visit to Delipara, after a brief exchange of niceties, we were asked where was our questionnaire. It was therefore essential to gain the trust of the communities through frequent and prolonged contact prior to developing any concrete plans.

It was equally clear that the communities themselves were best placed to decide what types of intervention were necessary and

feasible. Again this required sustained contact, not only to build trust but because the history of natural disasters in these communities had led to people seeing development organisations as indistinguishable from relief work. The idea of community involvement in the planning and implementation process was something new and would take time to develop.

METHODOLOGY

A set of guidelines was developed in order to focus the initial field work, and these were adapted and developed as the study progressed (Annex I). A range of techniques were tried - some extractive, some participatory in nature. Each community was involved in a mapping exercise that developed into an informal census documenting the social and economic composition of households, the inter-relationship of households and the economic resources of each community. The methodology developed is the subject of a forthcoming NRI publication.

In addition, community members were interviewed individually and in groups, and discussions were held with interest-groups and key respondents. Prior to the end of the field work, the communities were involved in discussions of the findings, and nominated representative to attend a workshop to present the findings to BOBP, the government, donor organisations and NGOs at a workshop in Dhaka in July 1994. The results of this two-day workshop were used to develop a plan for future interventions. This was discussed with ODA-PHFP and ODA to determine the boundaries of ODA-PHFP involvement, and was then discussed with each community. A logframe outlining this plan is presented at Annex II.

This report presents the major findings of the field work with additional information from the above workshop. It is being published in English and Bangla. Particular aspects of the work will also be published in relevant journals and presented at seminars or other fora.

The findings for each community are given using a standardised analytical framework. Conclusions are given for each community and in the final section general conclusions in relation to future interventions are provided.

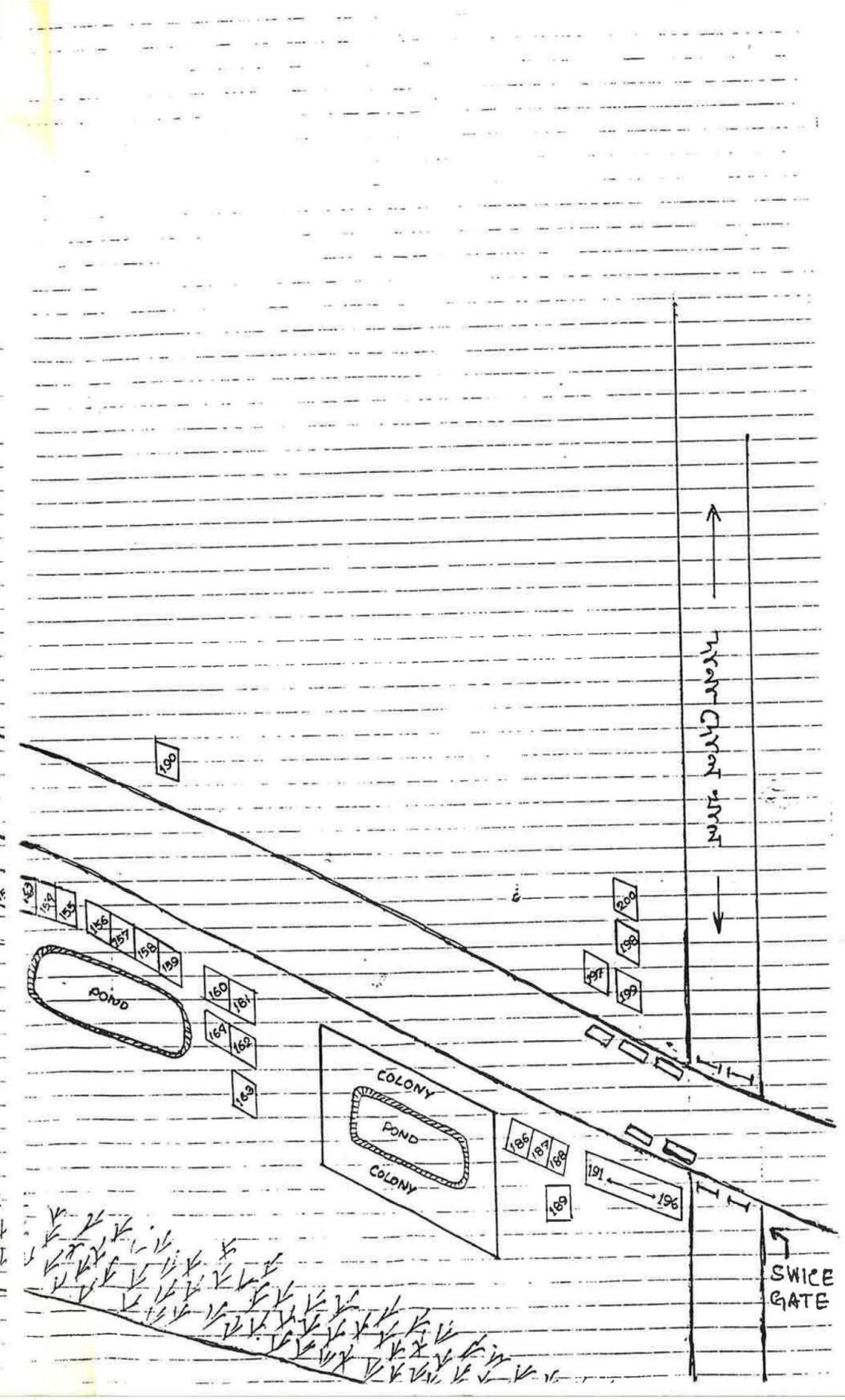
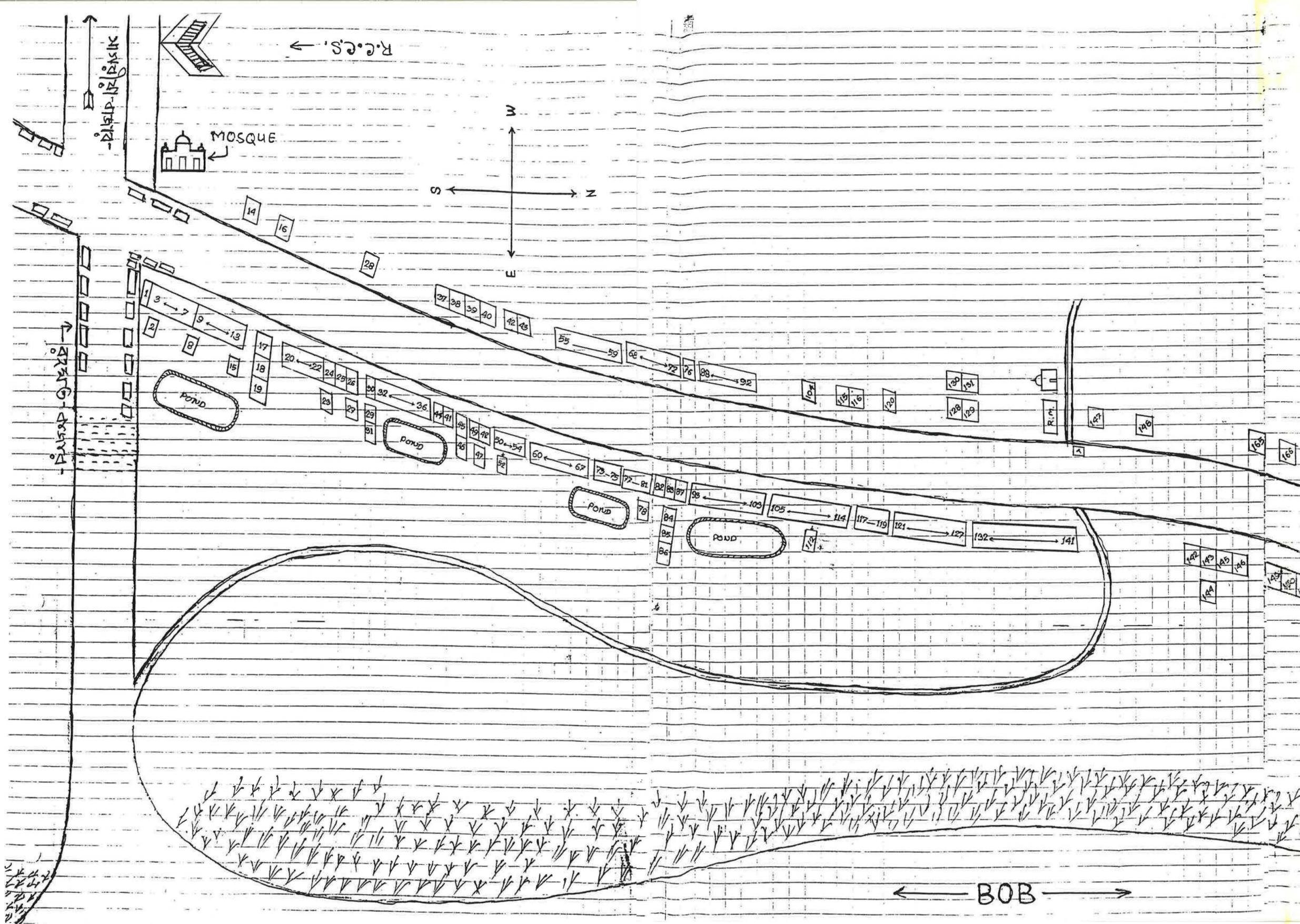
LOCATIONS

Weather played a major part in how the research was conducted. The monsoon season and storms meant that several planned visits to Rakhainpara and especially Rehania had to be postponed, and this partly accounts for there being more detailed information on Delipara than elsewhere.

SEASONS

The Bangla year is different from that of the Western or Arabic calendars. 1994 A.D. or 1415 (Muslim) is 1401 in Bangladesh. There are twelve months in the Bangla calendar: Boishak, Joishtho, Ashar, Sraban, Bhadra, Aswin, Kartik, Agrahan, Poush, Magh, Falgun and Choitro. Months are adjusted to the lunar cycle and most months last between 29-31 days, although in rare instances a month may be 32 days. Thus, for instance, 15 May 1993 corresponds to the Bangla date 1 Joishtho 1400.

Bangla months have been used throughout this report.



SECTION 2: DELIPARA

THE COMMUNITY

Location

Delipara is located on the south-eastern coast of Bangladesh, 17 kilometres north of Chittagong and a kilometre west of Fouzdarhat. It is part of North Salimpur village, in Kumira thana, Chittagong district (Map 1).

The settlement sits on a shallow bay facing directly onto the Bay of Bengal, on a narrow band between the sea and the neighbouring arable communities. Delipara itself has no arable land, although to one side there is an area of boggy, unused land that was once a ship-breakers' yard. The tightly packed houses of the settlement sit on the slightly raised land of a stone coastal barrier, but the fishing craft are beached on the wide shallow beach where the boats are repaired and fish sold.

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History

In early times, these communities lived further to the west, but over time they have shifted eastwards due to tidal damage and erosion along the coastline. The Delipara community alone has relocated its settlement three times since the Second World War, moving to its present site 25 years ago. Throughout this time, except during the war, the community's main source of livelihood was fishing.

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There is a general sense that life was better in bygone days. "My father and grandfather and his father lived a good life," says one elder, "They were all fisherfolk and with their traditional gear and methods used to catch enough fish during the [*hilsa*] season for the whole year. The catch of one net alone had to be sold by five to six of us. There was prosperity in our lives. A son, when born into the family meant another fisherman for the household." People feel that there was more fish in the past, enough to eat and to distribute amongst friends and neighbours in the Muslim non-fishing communities.

Daughters were married off as soon as they reached puberty, or earlier if possible. An old fisherman remembering the 1950s recalls that his wife was only eight when they were married. His wife lived with her parents after the marriage. According to the custom in those days, the groom had to give Tk 60 for the first glimpse of the bride, while the bride's parents gave a saree, a blouse, a few gold ornaments to the bride, a mattress (*pati*), pillows, *katha*, utensils and a brass water holder (*kalshi*). The Brahman who conducted the wedding rites was paid Tk 5, and there was Tk 20 for the band (30 *bairagi* singers) and Tk 1,000 for the wedding feast.

As it is remembered today, the community celebrated religious rites and ceremonies in grandeur, with all members of the community participating with donations and enthusiasm. The community *sardar* (leaders) administered and managed the affairs of the community and conflicts, both social and economic, were resolved through the joint consensus of the Sardar's.

The custom in the old days was to deliver the largest fish of the catch to some of the prominent farming households during the harvest period in Agrahan month. The landlord would also make a similar gift of rice to express his goodwill. Requests were made in advance for particular fish for feasts and occasions. The

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price of rice was only Tk 0.02 per seer (0.9 kg). Remembering the Sixties, older inhabitants recall that the daily average earnings of the fisherfolk was Tk 20 from which they could save Tk 5-6. On a rainy day or other days when they could not fish, a fisherman's savings were enough to live comfortably. Nowadays, even earnings of Tk 100 a day are not enough to make ends meet.

For reasons rooted in caste, it has always been exceptional when community members have sought work outside of fishing, and the few who sought non-fishing work lost much of their standing in the community. In the Eighties twelve fisherfolk went to the Middle East to work as fishing crews and other employment. But generally few people have migrated away from Delipara, and except through marriage few new people move in to the community, the exception being nine households which migrated from Sandwip almost three decades ago.

The only time large numbers left Delipara was during the Second World War when there was a great famine in 1941-1942 and only four families remained behind. Some found jobs as construction workers with a monthly salary of Tk 1, most living and working in Chittagong town. One community elder remembers how he purchased 0.21 acres of land for only Tk 60 just prior to the famine. But the land tax was Tk 5 and he remembers the difficulty he had paying this amount each year.

The sea claimed his land in the early Sixties, when the villagers first grew concerned about the whipping tidal waves which threatened to wash away their settlement. The destruction was gradual during the Sixties, and gained momentum with the cyclone in November 1970. By the Eighties, nearly five hundred meters of the community settlement had been lost to the sea. Some of those who lost their homesteads bought agricultural land for building houses from the surrounding farming communities during the late Sixties when the price of land was Tk 1,200 for 0.33 acres.

The fishing hamlet, with its bamboo thatch houses is vulnerable to the sea whenever storms and occasional cyclones hit the unprotected coastline. Inhabitants can cite three to four occasions over the past twenty years when their houses have either been seriously damaged or completely destroyed by cyclones and tidal waves. During the cyclone of 1970 (Nov 7), and 1991 (April 28), all houses in the settlement were either washed away or so seriously damaged that they had to be rebuilt.

ENVIRONMENT

Weather

Between the months of Joishtho/Ashar and Sraban/Bhadra there are rains. Heavy rain means that the small fishing craft cannot go to sea and this can disrupt fishing for a week at a time, especially during the hilsa season. Sickness is also very common at this time, although whether it is a result of the weather or a consequence of lack of money to buy medicines when fishing activity is forced to stop is unclear.

The months of Agrahan/Poush until Choitro/Boishak are usually the dry season when the sea is calmer and there are less chance of storms or tidal surges¹. But it is also this period that is poorest for fishing.

The Sea

As the section on Delipara's history shows the sea has always presented a threat to the community, and there is a general feeling that erosion has become worse since the 1960s. But the Bay of Bengal is also the main source of livelihood for the landless inhabitants, and its goddess is much feared by the community.

¹ However, the 1970 cyclone occurred during this period.

COMMUNITY SOCIAL STRUCTURE

The Settlement

Delipara settlement is a tight knot of huts set either side of narrow dirt alleyways, each hut facing to the east or west. Each hut occupies between 0.02-0.05 acres and the total land area is about 3.5 acres. The boundaries of the settlement are clearly demarcated by trees, channels, bamboo fences (*bera*), the sea and, at the eastern entrance, the rocks of the coastal barrier. None of the residents owns cultivable land although one person owns a pond used for bathing and fishing.

The main 'pukka' building is the cyclone shelter built by the government after the 1991 cyclone. But the *mandir* (temple) is the focal point for communal activities. There is only one pukka house in Delipara, owned by the same person who has the largest pond. Eight households have electricity, two houses have television and about a dozen have radio-cassette players.

Most of the housing is made of bamboo thatch with either corrugated metal roofing (mostly donated after the cyclone) or palm leaves. The alleyways act as drainage channels and water often floods into the houses during the monsoons. A common complaint is overcrowding and some say the population has grown four times since the community originally moved to the site.

Demography

The entire population is Hindu from the *jolodas* sub-caste of fisherfolk. All originate from the same community except for nine families which migrated to Delipara from Sandwip.

The total population is approximately 1400, consisting of 171 families living in 163 households. Nine households have more than one family living in them. These are normally married sons living with their parents or brothers sharing the same house.

There are no instances where two families lived in the same house without having blood ties.

The exact size of households is not known but from a sample of 30 families, 14 had more than six members, 14 had between four and five members and only two had three or less.

Most households are headed by men (see Table 1), and those considered heads of household are normally aged between 36-50 years. The majority of male-headed households are headed by married men, but those headed by females are normally headed by widows or divorcees. The number of such households, which are commonly recognised throughout the developing worlds as being amongst the most vulnerable economically, is relatively high (19%).

Occupation

The primary occupation of all male household heads is fishing which accounts for 54% of all household head employment (Table 1). This category includes all those involved in planning and carrying out fishing expeditions - boat-owners, boat operators, *po unna* who fish from others' craft and contracted fish crews. Women do not go fishing, but are often involved in fish trading (45%) which is also the primary occupation of 17% of male household heads. However, men engaged in trading are in a

Table 1: Delipara Population by Occupation of HH Head

	Total households		Male headed households		Female headed households	
		%		%		%
Total	171		138	81%	33	19%
Primary Occupation						
Fishing	92	54%	92	67%	0	0%
Fish Trading	38	22%	23	17%	15	45%
Other	1	1%	0	0%	1	3%
None*	40	23%	23	17%	17	52%

*(None includes Unemployed, Housewife, Retired, Mentally Deficient)

Table 2: Delipara Population Comparing Occupation and Marital Status of HH Head

	Total HHs		Male headed HHs		Female headed HHs	
		%		%		%
Total	171		138	81%	33	19%
Primary Occupation by Marital Status						
Fishing (married)	89	52%	89	64%	0	0%
Fishing (non-married)	3	2%	3	2%	0	0%
Fish Trading (married)	21	12%	21	15%	0	0%
Fish Trading (non-married)	17	10%	2	1%	15	45%
Other (married)	1	1%	0	0%	1	3%
Other (non-married)	0	0%	0	0%	0	0%
None (married)*	24	14%	21	15%	3	9%
None (non-married)*	16	9%	2	1%	14	42%

*(None includes Unemployed, Housewife, Retired, Mentally Deficient)

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different position from women. The former are commonly married (Table 2) and regard trading as a step up from fishing. But for women, trading is most common amongst widows and divorcees, and is on a smaller scale, buying small amounts of fish from the daily landings and selling these to nearby communities or roadside bazaars.

There is a relatively high number of household heads without a primary occupation, especially amongst women where 52% of female household heads have no regular source of income (Table 1). This confirms the impression that this section of the population is economically at risk, although the exact situation will depend on the overall employment situation within the family or household. For instance, one unemployed widow, although elderly, has four sons, all of whom are engaged in fishing and are able to care for her, whereas a younger divorcee has no children and has a poorer economic (and social) status even though she works as a fish trader.

Table 3: Delipara: Economic relations of retired household heads

Gender of HH head	Age of HH head	Past Live lihood	Number of sons	No. of sons engaged in fishing	No. of sons engaged in fish trading
Male	80	fishing	5	0	5
Male	60	fishing	4	1	0
Male	75	fishing	3	3	0
Male	over 90	fishing	3	3	0
Male	70	fishing	5	3	0
Male	65	fishing	2	2	0
Male	65	fishing	4	4	0
Male	65	fishing	1	1	0
Male	80	fishing	5	5	0

Table 4: Delipara: Examples of Household Incomes and Expenditures

Hilsa Season Income (Tk)	Expenditure	Set Bagnet Season Income (Tk)	Expenditure	Loans Taken (Tk)	Amount Due
16,000	16,000	40-50/day	40-50/day	10,000	1 10,000
49,000	20,000	50-60/day	50-60/day	45,000	1 25,000
	29,000	2			3 9,000
18,000	18,000	40-50/day	40-50/day	0	0
28,000	16,000	40-50/day	40-50/day	18,000	1 6,000
	12,000	2			
28,000	16,000	40-50/day	40-50/day	15,000	6,000
14,000	9,000	30-35/day	30-35/day	5,000	3 2,000
	3,000	4		2,000	1
	2,000	2			
21,000	12,000	40-45/day	40-45/day	10,000	1 0
	9,000				
60,000	20,000	30-40/day	40-45/day	20,000	1 0
	20,000	2			
55,000	10,000	40-50/day	40-50/day	0	0
	25,000	5			
16,000	16,000	35-40/day	35-40/day	0	0

Explanation:

- 1: Outstanding loan to dadon at start of year
- 2: Repayment of dadon loan during the season
- 3: Outstanding loan to CODEC
- 4: Repayment of CODEC loan during the season
- 4: Losses due to boat sinking with catch on board

All but two male household heads without a primary occupation are more than 60 years of age and are effectively retired, largely dependent on their children for their subsistence. Each of the twelve male household heads who are effectively retired have at least one son who is engaged in fishing. In addition nine male household heads said they were actually retired. All had previously been fishermen, and as Table 3 shows all have sons who are still engaged in fishing.

The employment situation within households is not fully understood, but where data are available the primary occupation is still fishing. In the majority of households (i.e. those with a male head aged more than 35 years) the wife is responsible for domestic tasks (cooking, cleaning, obtaining food), the raising of children, mending nets and maintaining the house. She will also market fish, either in the nearby village bazaar or hawking it from house to house in within the village. Daughters help with these tasks, while younger sons help carry fishing gear and off-load the catch, and on reaching adolescence join the father's fishing team.

There is only one person in Delipara who has a regular occupation outside of fishing - a female school teacher. Nine people have gone to the Gulf to work on fishing vessels there, and two men have gone to college but are now unemployed in the village because they cannot find suitable work.

Family Ties Between Different Households

At least two-fifths of the village are inter-related. Marriage partners are chosen from within the village or from one of the other Hindu coastal fishing communities. Bigamy is practised although not common. Where it occurs, the second wife is considerably younger than the first. There is cooperation between the wives in cooking and raising children.

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Generally women marry on reaching puberty and have often been promised before then. Marriages are arranged between parents, and dowries are paid by the female's family to the male's.

Brothers commonly live in neighbouring houses or within the same house. Except where there has been a family dispute, they will work together in the same fishing crew. The same is true but to a lesser extent of male cousins.

Village Infrastructure and Facilities

Delipara is connected to the outside world by a brick-built road that winds its way to the main Dhaka to Chittagong road. There is electricity in the settlement and prior to the 1991 cyclone most houses were connected to the supply. But now few families can afford to be reconnected. Traditionally eight ponds have been used for collecting water and there are 107 water-logged holes serving as latrines. Since the 1991 cyclone, 24 communal tube-wells and 16 new double-latrines have been built by outside agencies. Sixteen of the tube-wells are well-used and maintained, and people are happy to give a site on their land to have one constructed, although sometimes these then come to be seen as household property and conflicts can arise between community members over access. The latrines are less successful: they are seldom used and nobody wants to give land for their construction. Several were destroyed in the 1993 tidal surge and there is little interest in rebuilding them.

There is a *mandir* which serves as a temple and focal point for community activities. There is a hut which serves as a youth centre and CODEC, a local NGO, has a building for its community organising and education activities. CODEC organises functional and basic literacy programmes for adults and children. The nearest high school is 200 yards north of the settlement and for health care people use the government clinic at Kumira.

The beach acts as the land-base for fishing activities. Slightly inland, beside the former breakers' yard, five large fish traders from outside of Delipara have bamboo storage facilities with ice boxes inside. These are used during the *hilsa* season. There are no special facilities on the beach itself, although early in the *hilsa* season carpenters set up boat repair facilities here and the beach is always lined with old hulls and drying gears.

The sea itself is also divided into lots and families have specific fishing grounds where they can place their *far* - fishing grounds where nets and poles for catching *hilsa*. For these purposes the sea is divided into northern, middle and southern sections. Each *far* is allocated to a fishing boat or fishing household, and those *far* that are not too deep are the most valued because the fish catch decreases as the sea becomes deeper.

Villagers say that the right to fish these particular waters was given during the colonial period, and claim that there was a large copper plate in which these rights were embossed. Nobody admits to knowing where the plate is today, but it still forms the basis of present claims.

Although there are no tolls or levies for the right to a particular *far*, the villagers follow set norms and guidelines in allocating *far*, and the right to a particular *far* is tied to a family's standing in the community. Right to a *far* depends on use, and if neglected for a season it will be reallocated by the village elders.

However, these rights count for nothing when the Bangladesh military use the area for artillery exercises. For about one week a year, the sea off Delipara is shelled for target practice. Although this is not a long period, it takes place during the *hilsa* catching season, and in 1994 coincided with the full-moon period which is the peak time for catching *hilsa*.

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The community also depends on the mangrove forests that run along the coast. These belong to the government Forestry Office, and people do not readily admit to taking firewood for fear of being accused of trespassing.

Social Organisation

Social Groupings

Religion

The entire population is Hindu from the *jolodas* sub-caste of fisherfolk and not surprisingly many of the beliefs and ceremonies relate to the sea. Amongst the pantheon of Hindu gods, the people of Delipara give special status to Sri Krishna, but the sea goddess is also important.

The community holds many beliefs and conformity with the norms and precedents set by their ancestors is fundamental. Belief in destiny, fate and the will of the gods is strong, and the examples of the ancestors are cited as explanations for current events.

Puja are a common feature of community life and often result in a cessation of economic activity for two or three days.

The Role of Gender

Occupation is demarcated by gender which also prescribes many social roles. Community politics is almost exclusively a male preserve where decision-making is initiated and finalised by men. However, in recent years women have been active in organising non-formal education and savings and loans programmes.

Women play the predominant role in reproductive activities (child-rearing and domestic tasks). Men are expected to hand over their earnings to their wives, who many men feel are better money-managers. But men decide how much and when money is to be

handed over, and the resulting squabbles about financial responsibility are one reason for divorce.

Role of Age

Age is a significant factor in determining one's social role. From an early age young males assist with the fishing, helping to prepare the gears and off-load the catch at the end of an expedition. Daughters assist their mothers with domestic and reproductive tasks. When females reach puberty, the parents hope to have them married when they will take on the role of wife and normally mother. By the time the males are married they will be part of their family's fishing team, working alongside their father and male siblings.

Status within the community is partly determined by age, and the *sardar* chiefs are all senior community members. Within the household, too, status is connected with age.

Family

There is a complex hierarchy amongst families within Delipara based on their title, their size, their wealth and their rights to traditional resources such as *far*. As the example of the *sardari* system shows, economic status is not an indicator of social status or influence.

Social Activities

Most social occasions are connected to religion and are linked in some way to the *sardari* system which plays a role in marriages and *puja*. One important festival is the *Shitola Devi puja* which in 1993 was held in May. This festival is a celebration of community offerings to Shitola to protect the people from sickness and disease. Preparation begins several days before, after religious representatives have gone from house to house seeking donations. The festival itself takes place in a

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temporary shed built across from the temple, and consists of an evening of singing holy songs, chants and music which carries on until the following morning. About 300 villagers could be seen gathered listening to singers, watching dancers and hearing readings from time-honoured texts. In one corner, people were preparing food offerings to the goddess (*prasad*). The festival reaches a climax after mid-day when a communal lunch is served to all from dug out canoes.

Shitola Devi puja is not the only religious festival, and others follow the course of the Hindu festival season. Because of their dependence on the sea, the festival of *Sraboni Purnima* and other offerings to the sea goddess are practised. Inhabitants may also make pilgrimages and some have been to Hindu holy places in India, travelling by land or sea.

Apart from formal activities, the tea shops form the focus of the men's social life. Prior to the *hilsa* season there is a lot of talk and excitement about which people will be recruited for which boats. Young boys have *bohoddar* (boat-owners) and *majhi* (captains) as their heroes, and the way that these are spoken of plus the excitement generated by crew selection has been likened to discussions about football stars and player transfers elsewhere in the world.

Institutions

Social Groupings

Inter-mingled with religion is the *Sardari* system, a form of rural power structure encompassing leadership, justice and enforcement of social laws and practices. In Delipara there are five chief *sardar*, each with his own principal secretary (*mukkho*) chosen from among the community elders. The main *sardar* are hereditary positions, although it is possible for the *sardar* to dismiss one *sardar* and appoint another member of the same

lineage.

The *sardar* may fish themselves, and that some enter into contracts with boat-owners shows that this is not an economic elite. Equally, wealthier families in the community are not chief *sardar*. But this does not affect the respect shown to the *sardari* system for managing community affairs - its organisation of trials (*shallish*), *puja*, marriages and other religious and social festivals.

Economic Groups

Within the Delipara community, the family is the most important economic unit. In marketing, wives assist their husbands and daughters assist their fathers. In fishing, sons work in teams with their fathers or alongside their male siblings. Individuals without these intra-family economic relations are automatically disadvantaged both in terms of productive and reproductive activities.

There is an important distinction to be drawn between the crew, the operator and the owner of a fishing boat. Men fish in a team, each team working on one boat. The team consists of the boat-owner cum operator (*bohoddar*) plus others, although in some cases the operator may lease the boat from its owner for a share of the catch or fixed sum. Some team members own their own nets and use the boat to place their nets. These users are called *po unna* and use the *bohoddar*'s boat under the following conditions:

- The *bohoddar* places more nets than the *po unna* (e.g. four nets compared to two), and the physical work is divided equally between them;
- The *bohoddar* takes two-thirds of the catch, and the *po unna* divide the remainder of the catch between them;
- The *bohoddar* decides where the nets are to be placed,

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where the boat is to be directed and, indeed, whether to take the boat to sea at all;

- When the *bohoddar's* boat is repaired, *po unna* may be called upon to pay Tk 3,000-5,000 as a contribution to the cost of repair. The *po unna* will also be obliged to pay a share of the cost of repairing the *bohoddar's* sister vessel which goes to sea with the mother craft.

The *bohoddar* typically own 4-5 nets and had an average net income of Tk 40,000-50,000. Agreements with the crew may carry on for several years depending on the crew member's skills, his trustworthiness and his credit-worthiness. This latter is very important as the *bohoddar* often borrows money on behalf of crew members and uses this as means of control

A more recent economic alliance has been the loans groups (*samity*) set up as a CODEC initiative. There are both men's and women's groups. This year, fishermen said that they were glad to be group members, but were sorry that the loans were inadequate to make ends meet outside of the *hilsa* season and to allow them to prepare for the main fishing season.

Apart from the arrangement between boat and net-owners, there are economic arrangements between owners and labourers. Labourers, who do not have nets of their own, are paid Tk 1,000-1,400 per month and are contracted for up to two-thirds of the year. The main period for this contract labour begins in Ashar (approximately June) with the *hilsa* season, but often carries through to the set bagnet season in Poush (approximately December), and sometimes longer.

These labourers are mostly not Delipara inhabitants (something that Delipara people are proud of) and come from as far away as Hatia Island and Sandwip, as well as Sitakundo and Feni. While they are working the craft of Delipara inhabitants they are given

clothing, toiletries, two meals per day and Tk 10-20 per day pocket money in addition to their wages. However, 36 households in Delipara that list their main occupation as fishing do not have set bagnets and 30 similar households do not have tong nets. These people work as waged labourers on fishing boats, and the number of people engaging in what is regarded as a demeaning form of employment, has increased due to the loss of gears in the 1991 cyclone.

Role of Government and State

The government is currently constructing an embankment along the Kumira coast, although it has yet to reach Delipara. The community have not been consulted, and it is the cause of two major concerns. First is whether the embankment will reach Delipara and thus help the community resist the aggressive sea. Second is what will happen if it does reach Delipara, specifically what will happen to people who have to relocate because the embankment cuts through the settlement.

Apart from the emergency relief given after the 1991 cyclone and the subsequent construction of a cyclone shelter, Delipara has had little contact with the formal apparatus of government. When there are disputes with traders, there are no local police to call upon*, and there are no regular visits from health workers or fisheries' officers. The military camp on neighbouring ground once a year which is a cause of friction.

Role of NGOs

The Chittagong-based NGO, CODEC, has a sub-office in North Salimpur and has been working with the Delipara community for

* This is in contrast with fisherfolk in Kumira who were able to call in the police to protect them from aggressive traders, and have benefited as a consequence.

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almost ten years. It has helped establish a revolving fund, literacy classes and has provided loans to fishermen to purchase gears and boats. The loans programme is said to have worked well until the 1991 cyclone destroyed much of the equipment purchased and led many borrowers to default. No provision had been made to insure the loans. The revolving fund, which is intended to counter the more oppressive excesses of the traditional money-lending system, has run fairly well for 6-8 years, but in 1994 the late payment of loans by CODEC central office caused considerable frustration amongst CODEC's field-workers and the community. It is felt that the women's savings and loans groups have worked better than the men's - perhaps because women are not directly caught up in the *dadondari* loan system.

Following the 1991 cyclone, aid agencies gave support to rebuild houses and to construct tube-wells and latrines. Although this was largely channelled through CODEC and met a specific need at the time, the sudden appearance of such resources has created an aid-dependency amongst the community when viewing outside assistance. The difference between relief and development is, not surprisingly, not understood, and the idea that social and economic changes are a gift beyond their control compounds the community's generally fatalistic attitude.

VILLAGE ECONOMY

Household Income and Expenditure

Household income and expenditure is greatly affected by the fishing seasons. During the *hilsa* season the community expects a reasonable income, but during the set bagnet season incomes decline. It is during this latter period and in preparation for the *hilsa* season during Falgun and early Joishtho that loans are required. Repayment of these loans, either from *dadondar* or from CODEC, can consume more than half of a household's income from

hilsa sales. Many households find themselves unable to pay off their loans from a single season's *hilsa* catch, and loans are often carried over from one year to another (Table 4).

The examples of individual household income and expenditure given in Table 4 show that there is only surplus income during the *hilsa* season, whereas during the set bagnet season income is only sufficient to meet routine household expenditures. Credit is used to supplement the set bagnet income, either in arrangement with the *dadondar* or directly with the kiosk-owner. Food obtained on credit is charged at a higher price than would otherwise be the case, and the loan is usually paid off during the *hilsa* season. In addition to food, household expenditures include clothing, medicine and the repair and maintenance of housing. There are also unexpected outlays such as for medical care. For instance, during the last *hilsa* season these cost one woman Tk 13,000 when her son had to go twice to a Chittagong hospital to have an intestinal disorder treated.

There are also payments to be made in relation to social activities. A daughter's dowry is a major expense and must be planned almost from the child's birth. A dowry costs between Tk 10,000-20,000, and in addition to money the groom's family receives gold (typically four grams), furniture and household utensils.

Wealth Ranking

The family of Lalmohan Das is considered to be the wealthiest in Delipara, but estimating relative wealth is a complicated process. Inevitably wealth is related to fishing. A person with a net has the opportunity to become a *po unna* and earn more money than someone without nets who works as a waged crew member. With tong nets one has the chance of obtaining a stake in a *far*. This stake can only be maintained by continued fishing, and the loss of one's nets, such as occurred during the 1991 cyclone, leads to

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the loss of one's *far*. But with nets a fisherman can get the income to buy more nets and perhaps eventually a boat. By owning a boat, one can enter into *bohoddar* arrangements with net-owners and this entitles the fisherman to a share of the *po unna*'s catch as well as to distribute loans from the *dadondar*. It may also provide enough capital to enter into business as a *paikar* (trader).

However, this gradual rise in economic status depends also on the functioning of the family as an economic unit. Without sons or brothers to work with in a fishing team, the opportunities for expansion are limited. Likewise without a wife or other relatives to market the catch when required and to help prepare for fishing expeditions, there is less chance that the fishing enterprise will prosper.

Control over Economic Resources

The scarcest resource is land and as the population has grown the settlement has become highly congested. There have been various attempts to buy land from the neighbouring farming community, but the offers were refused, ignored or responded to with artificially inflated prices. The land-owners themselves say that the cultural, religious and economic practices of the Delipara community make it undesirable that the two communities should inter-mingle. This is ironic given that the farming community depends on the fisherfolk for fresh fish, and many have grown wealthy thanks to trade-relations. Also, given community accounts of past inter-relations with the farming communities, the ill-feeling seems to be a recent development. It may be exacerbated by the Muslim-Hindu conflict in India which is felt acutely by the Bangladesh Muslim majority. But it may also be exceptionally unfortunate in Delipara, and a similar community nearby does not seem to have quite such severe problems with its farming neighbours.

Because of difficulty in accessing land, the community are dependent on the sea. As mentioned earlier, the Kumira Hindu community says it has a claim to the marine resource dating back to colonial times, and based on this the Delipara *sardar* allocate sections of the sea to different fishermen.

Before somebody can obtain a *far* they must have nets to utilise the location. For *hilsa* and all types of fishing, ownership of nets is a key to one's status as a fisherman. Seventy eight per cent of households in Delipara have set bagnets and 81% have tong nets. But as Table 5 shows, only 66% have more than one set bagnet and 22% have more than five. Slightly more have tong nets, but again only the minority have a large number of such nets.

Distribution of net ownership is not equal. While on average each household has over four tong nets and three set bagnets, the range of nets owned by a household is 0-24 and 0-14 respectively (Table 5). Female households have a lower average number of nets (three tong nets, two set bagnets), and roughly one-third of such households do not have any nets.

Table 5: Delipara Fishing Gears Ownership

Total Households	171					
	=> 1 boat	%	=> 2 boats	%		
Households owning boats	84	49%	23	13%		
Households owning motorised boats	61	36%	5	3%		
	=> 1 net	%	=> 2 nets	%	> 5 nets	%
Households owning Tong nets	139	81%	124	73%	64	37%
Households owning Set Bagnets	133	78%	113	66%	37	22%
Total Tong nets	772	nets				
Average Tong nets per household	4.57	nets				
Maximum Tong nets per household	24	nets				
Total Set Bagnets	551	nets				
Average Set Bagnets per household	3.26	nets				
Maximum Set Bagnets per household	14	nets				

Net ownership is just one step on the ladder of economic prosperity. Ownership of a boat in addition to nets means that the fishing household raises a person to the status of *bohoddar*. Just under half of the households in the community own boats (Table 5), although only 13% have more than one craft. Motorised vessels allow the fishing teams to travel further and faster, allowing better access to fishing grounds. Thirty six per cent of households have motorised craft; three per cent have more than one such craft. It should be noted, however, that these craft are not the large Danish-style vessels that set their gill nets off Chittagong. The Delipara craft are given in the Technology section of this chapter.

The income that can be acquired from fishing and *bohoddar* arrangements allows some male-headed households to enter into the fish trade, and puts them high in the chain of economic inter-relations described in paragraph.

There are communal resources such as ponds used for bathing and sometimes drinking water. The largest and cleanest pond is privately owned but is nonetheless used by the community. Increasingly tubewells are used for water. These have been established by NGOs on the site of individual households. They are intended to be a communal resource, although in some cases they are regarded by the household as a private resource.

As noted previously, the community depends on government-owned land for its firewood and has no legal right to the mangrove resource which is being developed as a storm and erosion prevention measure.

Economic Activities

Economic activities are divided between productive (i.e. those that directly generate income) and reproductive (i.e. those that ensure the continuation of the family).

Productive Economic Activities

Fishing

The Hilsa Season

As is clear from the information presented so far, fishing is the main economic activity in Delipara, accounting for almost all income and employing or funding the subsistence of most of the population. The *hilsa* season is the most economically remunerative period, although for reasons of debt it is also the period when there is most expenditure. This season lasts for approximately four months - Ashar, Sraban, Bhadra and Aswin (roughly June until the end of September).

Each month during the season there are two *jo*, the peak fishing period lasting for three days during which the majority of fish are caught. These coincide with the period of the new and full moon, from the second day (*dittiya*) until the fifth (*panchami*). Although the catch is higher during these peak times, the selling price is lower. However, the volume more than offsets the decrease in wholesale price and the problem fisherfolk face in relation to increasing their income (and consequently to reduce their indebtedness) relates both to the need to add value to the catch and increase its volume.

Hilsa is sold by the basket (*kati*), each averaging 35-40 pieces of fish. The baskets are sorted by the size of fish and one *kati* fetches between Tk 150-200 depending on size and the wholesale price that day, approximately 30-50% of the retail market price.

During the *jo* period fishing craft with six nets can catch Tk 4,000-5,000 worth of fish per day. At other times the daily catch is more likely to be in the region of Tk 1,500-2,000. Not all teams start at the same time. At the start of the 1993 *hilsa* season in mid-August only five large and eleven medium motorised craft plus eight unmotorised boats were at sea.

Blowfield & Haque

Over a season, a boat with six nets sells between Tk 50,000-60,000 of *hilsa* or between Tk 8,300-10,000 per net. Individual team members earn between Tk 8,000-12,000. If all nets are used throughout the season (which is not the case), the maximum income to the community is between Tk 6.4-7.7 million.² It is more likely that the total is more in the region of Tk 4-5 million allowing for unutilised nets, boats under repair and ill health of crew members.

From the *hilsa* income must be deducted the cost of maintaining boats and nets. The former cost is shared between the team members, the latter by individual net-owners. For an unmotorised boat the cost of all maintenance is between Tk 8,000-12,000 per season.

Set Bagnet Season

The set bagnet season which follows the *hilsa* season begins in Kartik (approximately late September) and continues until the Falgun (mid-February). This is increasingly a lean period when there are few commercially valuable fish to be caught. The set bagnet catch is divided between that for subsistence and that for sale in local markets or by hawkers. The *dadondar* and other large buyers have no interest in the value or quantity of the catch at this time. Fish which are not for the fishing household's own consumption are bought by male traders (*paikar*) from Delipara or Feni for sale in local markets, or by women traders who buy smaller mixed quantities to hawk in nearby villages or sell by the basket at roadside markets.

During this time household earnings are rarely more than Tk 50 per day, and for some fisherfolk are as low as Tk 30.

² 772 nets x average worth of catch per net.

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PUSH NETS

Set bagnets are used less from Falgun until the start of Joishtho (mid-February until mid-April). This is the leanest period of the year when most fishing is done with push nets, and there is the greatest demand for loans. During Boishak and Joishtho the nets and boats are prepared for the *hilsa* season, but from Joishtho until Ashar push nets are also used to catch small *Latia* fish.

Non-fishing Economic Activities

There are almost no non-fishing economic activities in Delipara. Fish trading is the second primary occupation after fishing and has been described elsewhere. One Delipara inhabitant is a school teacher, nine men have gone to work in the Gulf states and two young men have received higher education. Although the community is adjacent to farming settlements, none of the inhabitants work as farm labourers, partly because of reasons of caste and partly because of the uneasy relations between the fishing and farming communities.

Reproductive Activities

Women are almost entirely responsible for reproductive activities within the household. Men are expected to hand over their earnings to their wives although this does not always happen. Apart from when women help with preparations for a fishing expedition, there is a clear gender differentiation between the spheres of women and men.

TECHNOLOGY

Fishing

The boats are owned by community members. Most traditional craft are small, 1.5 metres wide and 8 metres long. These cost Tk

45,000-50,000 and there are 25-30 of these boats in Delipara. There are also about 22 medium sized boats (1.75 x 9.5 metres) which cost Tk 60,000-65,000. And there are 6-7 large sized boats measuring 2 x 12 metres and costing Tk 80,000.

Prior to the 1991 cyclone there were a very few larger mechanised boats, but these were lost. Now there are six *tempo* powered by 6, 8 or 10 h.p. engines. These are the only craft that do not have to worry about tidal currents.

In addition during the peak *hilsa* season (Sabru-Aswin) 22-33 h.p. boats are rented from local landowners at Tk 1,000 per day (Tk 30,000 per month). These are not used for fishing but as collection vessels so that fish can be more quickly transported ashore when there is a large catch.

Tong nets are used for *hilsa*, although poorer fisherfolk use set bagnets at this time. The nets are attached to poles, and approximately six nets constitute one *far*. The set bagnets are similar to those described in the chapter on Rehanian. Push nets are also used off the beach to catch fry.

Post-harvest Fisheries

The fish is carried from the boats in the baskets in which it has been stored while at sea, and is then divided amongst the purchasers. Little is done to process the catch. In relation to *hilsa* this is largely due to the fact that the catch is promised to the *dadondar*. *Dadondar* employees collect the fish from the boats and keep it in ice boxes near the settlement until trucks come to take it to market or the *dadondar*'s store.

Hilsa spoilt by the use of set bagnets or caught when there is a glut are rejected by the *dadondar*, and are bought by *paikar*. Some of these traders have small temporary shelters along the beach where the fish are gutted and the fins removed before being slit and preserved with salt. The fish are then laid out in

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metal trays, covered in salt and shipped to the markets of Sylhet, Dhaka, Noakhali and Chittagong. There are no Delipara people who have taken up this activity, perhaps because it is only done during the *hilsa* season when the Delipara fisherfolk are busy fishing and perhaps feel there is less immediate financial need.

Women dry that part of the catch which cannot be sold and is not for immediate subsistence, especially in the set bagnet season. This is stored and used when no fresh fish is available, and can be kept for three or four months.

During the set bagnet season problems in reaching the nets due to bad weather means that up to 40% of the catch is spoilt. This cannot be sold and is not utilised. Thus, although at good times the set bagnet catch can be up to 300 kg, only 120 kg of this can be marketed or consumed, and during times when the catch is small the utilisable proportion can be as low as eight kilogrammes.

MARKETING AND CREDIT

Marketing

In terms of value and quantity of fish, Delipara fisherfolk are heavily dependent on outside marketing channels. Although fish trading is important to individual households and especially the female-headed household section of the community, overall the community takes little part in the processing or marketing of fish. The *hilsa* catch is almost totally monopolised by *dadondar* - large-scale traders cum money-lenders that link into the extensive *aratdar* trading network operating throughout Bangladesh.⁴ During that time external *paikar* (fish traders)

⁴ The *aratdar* system is described in Bennett, 1991. To obtain a perspective of the size of this fish-trading network, it
(continued...)

also come to Delipara to buy higher value fish and any *hilsa* that has not already been committed to the *dadondar* under a loan arrangement.

The largest *dadondar* operating in Delipara have sheds with ice boxes on the edge of the village to store *hilsa* until they have enough to load a truck. Here the fish are cleaned and the *dadondar's* agents wait until the next catch is brought ashore. At the edge of the beach the *paikar* also wait. Two *paikar* have found a market for damaged *hilsa* and salt and store this, but most of the catch is sent fresh to urban markets.

When a fishing boat arrives, there is a scurry of activity, but this has little to do with eagerness to bid for the fish. Most of the *hilsa* are already promised under *dadondar* loan agreements, and the *dadondar* agents are only concerned that *paikar* do not get to the boats first and try to buy the promised fish for a higher price. Only the minority of fishermen who have not taken out loans from *dadondar* are free to sell their *hilsa* as they want. For the rest, the activity around the boats is to do with counting the fish and setting the value off against outstanding loans. As the Delipara fisherfolk are almost entirely illiterate and in any case must ultimately accept whatever price the *dadondar* offers, this is a one-sided series of transactions. Furthermore, it is not the individual fisherman who decides where to sell the fish, but the *bohoddar* who then divides out the income as described previously.

Once the fish have been sold to traders, the fishing crews have nothing more to do with the catch. Many of the women buy fish rejected by the traders and take this for sale locally. This is paid for once the fish has been sold. Wives and other relatives

(...continued)

is worth noting that the largest donor of funds to the ruling political party is reputedly an *aratdar*.

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are also called upon to help market the catch if the traders' price is too low (see below).

There are also some Delipara *paikar* who make up most of the male fish traders in the settlement. These and other local *paikar* are present throughout the year, but are most prominent during the set bagnet season when the outside traders find no profit in coming to the settlement. As with the outside *paikar* they normally buy on credit, but if the fishing team leader is in need of cash they will pay at the landing site, although usually for a reduced price. In such cases the fishermen may refuse to sell, preferring to give the catch to their wives to market or to another family member who will take it to sell. The *paikar* sell to smaller traders in local markets such as Feni. In contrast with the *dadondar*, they lack the capital to enter into extended and restrictive credit relations.

Credit

The existing credit relations are the biggest obstacle to any community development in Delipara. Credit is required in order to meet subsistence needs during the set bagnet season and especially the period after that when there are few fish, a need for money to repair gears, and no other income generating opportunities.

The main source of credit is through the *dadondari* system. There are five *dadondar* who operate in Delipara, each with 4-5 agents. The *dadondar* or his agents make loans during the leanest fishing months, either in cash or by facilitating credit at local shops and kiosks. As many of these money-lenders come from the neighbouring farm communities, this is a relatively accessible form of credit, although it should be noted that local money-lenders are only the tail end of a chain, and are themselves linked through their own loans of working capital into a much broader network.

Not everyone in the community can access these loans. Loans are made to *bohoddar* who then distributes them amongst their crews who are then responsible for repayment to the *bohoddar*. This accounts for the high levels of indebtedness seen in Table 4 and the restrictive nature of the *bohoddar-po unna* arrangement. It also means that those not attached to a fishing crew are less able to access loans. Women and other household members not engaged in fishing must persuade the household head to borrow money for reproductive needs or, in pressing circumstances, go directly to the *bohoddar* themselves. Female household heads are clearly disadvantaged, especially if they do not have male children engaged in fishing.

As money-lenders, the *dadondar* set the rate of interest. This varies between 40-60% depending on the previous credit record of the borrower. As normally the only numerate person involved in the transaction, the *dadondar* also fulfils the role of book-keeper. As traders, they also set the landing price for *hilsa* which is commonly Tk 5 per kilogram less than the local wholesale market price; 50% less than the retail price. And as cashiers, the *dadondar* also decide when payment is to be made for the fish, and this takes place at the end of the *hilsa* season after a final reckoning of credit and debt has been done.

But the most restrictive part of the *dadondari* system is that it is brought into play no matter what the size of loan. 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*. This is one reason behind some boat-owners' frustration with the CODEC credit initiative where delays in releasing loans have resulted in fishermen being drawn once more into the *dadondari* system, even when the amount of money required was quite small.

Desire to escape from the *dadondari* system was a prime motivation

for the community to support the CODEC initiative. There have also been more spontaneous actions such as the refusal to repay loans or the sale of *hilsa* to better-paying *paikar*. But while the *dadondar* cannot stop every violation of the agreement, prolonged resistance leads to direct conflict, with the *dadondar*'s agents seizing the catch or physically assaulting the debtor, and in rare but famous incidents the burning down of two debtors' homes and the killing of a man who refused to repay a loan.

ANALYSIS AND CONCLUSIONS

Delipara is a fishing-dependent community whose economic and social prosperity is restricted by three main factors:

- The impact of the storms and erosion;
- The diminishing value and quantity of the set bagnet catch;
- Restrictive marketing and credit relations that prevent maximum benefit being gained from the *hilsa* catch.

Mangroves

There is little that can be done to overcome the first problem. The government has initiated a mangrove-planting programme which this seems to be developing successfully and will help reduce the impact of coastal storms, tidal surges and erosion. The community appreciate these potential benefits, but the mangroves are also the cheapest and most readily available source of firewood. Therefore the people are torn between longer-term benefits and day-to-day need.

The actual damage caused to the mangroves is unknown. But assuming that prolonged exploitation will cause damage the only solution is to increase access to other sources of firewood,

either by providing direct access or through increasing incomes.

Set Bagnets

The set bagnet catch is in decline, forcing people to resort to smaller and smaller meshed nets which in turn pose a potential risk to the sustainability of the marine resource due to the loss of fingerlings. Legislation to outlaw set bagnets will simply make the people unwilling criminals as there are no obvious alternative income generating activities at the present time.

There are some opportunities to increase the value of the catch which at present is subject to minimal processing and knowledge of salting and drying is low. However, the volume of fish with a market value is low. Such fish as pomfret can be easily sold and the women especially are active in marketing when they have the opportunity. More fundamental is the fact that catch-volume is low and contains a high proportion of fish that cannot be marketed. This is not to argue that all fish should be marketed as this would be disastrous for the community's subsistence. However, as during the set bagnet season the catch is not obligated to third parties, any increase in fish processing knowledge would not prevent the fishing households from continuing to decide how the catch is to be utilised.

There is also an opportunity to increase the volume of the catch if the problem of spoilt fish (as high as 40% of the catch) is addressed. Spoilage occurs in the nets at sea, especially when bad weather prevents fishing boats bringing in the catch. Larger craft would reduce this problem, but this is not presently an option for most fishing households. There are indications that credit arrangements enabling people to buy larger or motorised craft can be successful, although the 1991 cyclone put an end to the only initiative of this type to date.

Gender

The opportunities and constraints facing men and women in the Delipara community are quite different. Although being female is not an indicator of poverty, it is an indicator of economic vulnerability (e.g. female headed households) and low social influence. However, the CODEC credit and education interventions show that it is possible for women to organise themselves within the community, and interventions that take into account from the outset the gendered nature of women in society are not less likely to succeed than gender non-specific activities.

Credit and Marketing

Delipara people are capable of marketing fish locally and are linked in to a wider marketing network during the *hilsa* season. Promotion of marketing activities would especially benefit women who are already marketing fish, and in many female-headed households list fish trading as their primary occupation. However, women trade on a smaller scale than most men, some of whom have achieved *paikar* or medium-scale trader status. Therefore, any intervention to assist with marketing would need to distinguish between the differing scales of activity, and between the different opportunities and constraints that exist for men and women, with a special recognition of the specific condition of female-headed households.

Although traders from Delipara are present at the landings throughout the year, they account for a small percentage of the total annual catch value. This is because the *hilsa* catch, which is far and away the highest value catch (accounting for not less than 75% of the total income from fishing), is monopolised by external traders, both larger *paikar* and the traders cum money-lenders called *dadondar*.

It is the *dadondari* system which is both the motor and the burden

of the present economic system. It provides access to the most readily available source of credit and the widest marketing channels. Yet by locking fisherfolk into a monopolistic buying system, it makes irrelevant any attempts to improve the value or quantity of the *hilsa* catch. Moreover, it has ramifications for any other initiative. For instance, assistance in savings and loans activities must take into consideration the fact that it does not matter how much a person borrows from the *dadondar*, the fact of taking a loan ties that person into handing over all the *hilsa* catch for the entire season or thereon after until the loan is repaid.

This has been the greatest barrier to the CODEC *samity* where, despite the community having a good savings record, loans have not been made available at the required time, forcing inhabitants to resort once again to the *dadondar*.

It should also be noted that the *dadondari* system revolves around the internal economic grouping centred on boat owners or *bohoddar*. Interventions in the credit field therefore need to distinguish between the position of the *bohoddar*, the *po unna* (net-owners), other fishermen, and those dependent on fishermen as relatives and/or heads of household.

Without addressing the credit issue, other interventions all run the risk of failure as it is access to loans that is the single greatest determining factor affecting life in Delipara. By reducing dependence on *dadondar*, people will be freer to make choices and control their own lives. They would be in a better position to take advantage of marketing opportunities, to reduce pressure on the marine resource and to engage in new pre and post-harvest fisheries practices. It is our opinion that without

5 We do not suggest that the system will be replaced entirely.

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addressing this issue, other activities cannot meet the criteria of sustainability.

SECTION 3: REHANIA

THE COMMUNITY

Location

Rehania is a fishing settlement within Rahmat Bazar village, part of Burirchar Union in Hatia Island *thana* off the south coast of Bangladesh (Map 1). It is located on the south eastern coast of the island, several hours from the main town of Hatia Thana Sadar and a fifteen minute walk from the small harbour and market of Rahmat Bazar.

The settlement has been built on either side of a coastal embankment on government land. In some places the houses are almost entirely hidden from the road, perhaps reflecting the inhabitants' desire not to draw attention to themselves as they are deemed squatters. Inland are padi fields, and between the settlement and the sea is a large area of common land used for cattle grazing and unused ponds, the result of excavations to build the embankment.

History

Even by Hatia standards the people of Rehania are newcomers, the first settlers arriving 30 years ago. Most came to Rehania from the north of Hatia Island where erosion from the sea is a major problem. Some for instance came from Horni and were relatively prosperous farmers until erosion took their land. There are also migrants from Sandwip island to the east, working as farmers or traders. Some in the community traditionally engaged in fishing, and it is only the suitability of their present location that has led others to taking up what in the past they would have considered a low status occupation.

All the inhabitants are Muslim. The older inhabitants remember that even until five years ago there was a sizeable fish catch, but have noticed that since 1991 it has decreased annually, with

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1994 being the lowest to date.

Many fisherfolk lost their belongings and houses in the cyclone of April 1991. Over twenty families also lost their set bagnets and have since had to seek work as waged members of fishing teams or, during the fishing off-season from Push-Falgun, as harvest labourers for local farmers. There are some sharecroppers, although this is considered a poorer choice than fishing. Some also pull rickshaws and operate cycle carts during Magh, Falgon and Choitro.

ENVIRONMENT

Weather

The weather is as central to survival and prosperity as the sea whose erosion of the shoreline elsewhere has brought them to this place. Between the months of Joishtho/Ashar and Sraban/Bhadra there are rains. Heavy rain means that the small fishing craft cannot go to sea and this can disrupt fishing for a week at a time, especially during the hilsa season. Sickness is also very common at this time, although whether it is a result of the weather or a consequence of lack of money to buy medicines when fishing activity is forced to stop is unclear.

The months of Agrahan/Poush until Choitro/Boishak are usually the dry season when the sea is calmer and there is less chance of storms or tidal surges. But it is also this period that is poorest for fishing.

However, the 1970 cyclone occurred during this period.

COMMUNITY SOCIAL STRUCTURE

Demography

A surprisingly large number of household heads are young (56% aged 35 or under), reflecting the fact that those who have migrated to Rehanian are younger members of the family.

Occupation

The majority of men and a few women are engaged in fishing, as labourers, net-owners, *bohoddar* or *majhi* (86% of household heads - Table 6). As described in the chapters on Delipara and Rakhainpara, the *bohoddar* is the boat-owner who may in some cases operate his own boat. The *majhi* is the boat captain who, if he is not a boat owner himself, may rent the boat from the *bohoddar*, or enter an arrangement whereby the catch is shared. The *majhi* are directly involved in planning and managing the fishing activity.

In addition are those involved in post-harvest fisheries. There are 11 fish traders (*bepari*) and one other smaller trader.

There is, however, a greater variety of occupations than in the other two study communities. Amongst the household heads there are three carpenters, an agricultural labourer, a mason, two teachers, an imam, a mechanic, a tailor and a petty trader. Two household heads are retired. One female household head is the only head classified as unemployed, another is a small scale fish trader and the other three seek casual labour in the harbour and on boats.

Table 6: Rehanian Population by Gender and Age						
	Total		Male headed		Female headed	
	households	%	households	%	households	%
Total	199		194	97%	5	3%
Age of HH head						
<=35 years	112	56%	111	57%	1	20%
36-50 years	63	32%	60	31%	3	60%
>50 years	24	12%	23	12%	1	20%
Marital Status of HH head						
Married	194	97%	194	100%	0	0%
Non-married	5	3%	0	0%	5	100%
Single	0	0%	0	0%	0	0%

Table 7: Rehanian Population by Occupation of HH Head						
	Total		Male headed		Female headed	
	households	%	households	%	households	%
Total	199		194	97%	5	3%
Primary Occupation						
Fishing (incl majhi)	171	86%	168	87%	3	60%
Fish Trading	13	7%	12	6%	1	20%
Other	12	6%	12	6%	0	0%
Retired	2	1%	2	1%	0	0%
Unemployed	1	1%	0		1	20%

Family Ties between Households

As Table 8 shows, there is considerable cooperation between relatives in economic activities. In Team 1, for instance, two of the crew are brothers of the *majhi*, in Team 12 there is one of the brothers of the *majhi*, his son and a brother-in-law, and in Team 4 every member is related (father, paternal uncle, cousins, brother-in-law and maternal uncle).

This reflects the importance of the extended family as an economic unit. As the inhabitants have come to Rehania from various villages there are obviously new family ties being established all the time, but it is unclear to what degree family ties represent ties brought from previous communities or new ties established while living in Rehania.

Role of Government and NGOs

Following the 1991 cyclone, a cyclone shelter was built in Rahmat Bazar, and this is now the home to a Red Crescent-funded school. There is a health and family planning worker, but she does not have a budget for medicine or contraceptives. The Red Cross helped with house construction after the cyclone, and a Hatia NGO, DUS, together with World Vision International constructed a model village of 22 houses. Unfortunately this is now very run down and has some of the poorest housing in the village. There is some ill-feeling amongst the people to the NGOs involved, and generally there is the same non-discrimination between relief and development work found in Delipara.

However, it is likely that the main problem is lack of sustained presence by any organisation or agency. As the example of Rakhainpara shows, aid dependency is not an insurmountable problem if an organisation is prepared to invest time, build up trust and consult with the community.

VILLAGE ECONOMY

Household Income and Expenditure

There are fourteen *majhi* or boat captains who decide, out of their relatives, neighbours, and non residents, who is going to be a member of his fishing team for a particular season. The *majhi* takes the decision partly based on his asset portfolio, and significantly on the individual abilities and skills as well as asset ownership of the crew.

The crew arrangement in a fishing team may be as follows:

- The *majhi* owns or hires the boat, owns all (in the case of Rehania eight to ten) nets, and hires/contracts fisherfolk on a daily or seasonal basis to man the nets. The wage of a daily fishing crew is Tk 50-60; while those working for a season (four to five months) earn Tk 6,000 to Tk 8,000.
- The *majhi* owns or hires the boat, owns part of the net (one to seven) and hires wage labourers or contract fisherfolk to man his nets while taking in as many net-owner cum operator fisherfolk as necessary to utilise the boat's full fishing capacity (eight to ten nets per boat). The net-owner cum operator may earn an average of Tk 10,000 to 15,000 per season.

However, this year earnings from the set bagnet catch fell to less than Tk 5,000 per net in the majority of cases. Consecutive bad fish harvests two years in a row have led some of these marginal fisherfolk to reconsider their livelihood options. Some are considering selling their nets once and for all and seek employment elsewhere.

This year, the presence of wild shrimp larvae purchasing parties in Chor Chenga, 18 km from Rehania, introduced a new seasonal

earning opportunity among community members. Wild shrimp fry, particularly the *P. monodon* species which has a high commercial value, is available in the estuarine environment during Kartik up to Magh-Falgun, when the water salinity is high. Stocking demand from the shrimp farmers for fry is mostly dependent on such wild fry collection along the coast of Bangladesh. Prior to 1993-1994 no one was interested buying these wild fry. In 1993-1994, however, word spread quickly that these larvae could be sold to local fry gatherers for Tk 10 - 12 per 100. On a good day, a person working two four-hour shifts around the high and low tide cycle may catch 400-500 wild larvae. The fry gatherers in turn carry the larvae to Char Chenga where they are counted and loaded on mechanised carrying boats by fry collectors arriving from Khulna, Bagerhat, Barisal, Patuakhali and Cox's Bazar districts. The procurement price at this point is Tk 25 to Tk 30 per hundred live *P. Monodon* larvae.

There are four *majhi* households who own arable land and three of them crop the land engaging hired hands as they are too busy fishing. Three of them harvest enough rice to meet half of their annual subsistence rice needs, while the fourth meets his household rice consumption needs for the whole year.

There are also three households who have rented land from land-owners, and this is share-cropped by a tenant who gets 50% of the harvested crop net of all expenses.

There are some members who during the fishing season are crew members, but otherwise have no regular work. A few have found work on farms, earning Tk 40 per day plus lunch and working from dawn to dusk. Four members are engaged in a flood control and drainage construction project three kilometres north along the embankment. They earn Tk 75 per day without food money. There are three community members who rent rickshaws from their owners and make Tk 30 to Tk 50 per day.

Expenditure

A household needs cash to meet the following needs: subsistence; house maintenance and repair; clothing; medical care; weddings, religious festivals, entertaining relatives and guests, and children's education.

Subsistence expenses vary according to the household's income level as well as family size. Daily expenditure on subsistence can be as little as Tk 30 per day for a small family to Tk 100 for a large family. Thus expenditure is in the range of Tk 1,800 to Tk 3,000 per month.

The following describes an annual expense portfolio for a family of six:

<u>needs</u>	
1. subsistence	Tk 12,000
2. house maintenance and repair	Tk 2,500
3. clothing and footwear	Tk 1,500
4. health and medical care	Tk 1,500
5. weddings*	
6. religious festivals,	Tk 2,000
7. entertaining relatives, guests	Tk 1,500
8. children's education	Tk 800
9. miscellaneous	Tk 1,500
Annual Expenses	Tk 22,300

Tidal storms and cyclones disrupt this expenditure pattern as whole families can lose most if not all their assets including their homes when such disasters strike. Post disaster situations therefore call for emergency funds and other support.

Wealth Ranking

Given the importance of fisheries to Rehania, wealth can partly be assessed by control of fishing resources. The fishing community can be divided into four classes as set out below:

Classification	set bagnets owned	<i>khorch</i> owned	<i>khol</i> owned	motorised craft owned
large owner	=> 10	=> 10	=> 2	=> 2
medium owner	=> 5	=> 5	1	1
small owner	=> 2	=> 2		
marginal	1	1		

Twelve of the fourteen *majhi* rent boats, the remaining two being owner-operators. Between them, the non-boat owning *majhi* own nineteen set bagnets with a range of 1-4. The owner-operators have seven and eight set bagnets respectively.

This indicates the stages in economic progress which are similar to that found in Delipara. A fisherman who can buy a net is able to become a shareholder in a fishing team rather than a waged crew member. This enables the individual to increase his income and obtain capital to purchase more nets. With sufficient nets, the crew member has the opportunity to become a *majhi* and thus increase his earnings. Following on from this, the individual has the possibility of becoming a boat-owner, as an owner-operator initially and then as an operator renting out craft.

Control over Economic Resources

None of the community owns land and their houses are built on squatted government land. There is common land that can be accessed for grazing and some people tentatively use the ponds

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that have formed where excavations for the embankment were made. However, this is still government property and there have been no attempts to lease or acquire more permanent rights.

Most *majhi* rent boats from the owners and there are two owner-operators of the type commonly found in Delipara. For the set bagnet season rental of a traditional boat (*khol*) costs Tk 9,000 for the period 15 Kartik - 15 Boishak, and for a mechanised boat, commonly called *tempo*, Tk 20,000. The fisherfolk have to pay legal fees and levies for fishing. The fishing tax (*jol kar*) during the set bagnet season is Tk 85 per net; per boat Tk 680 per season (Tk 85 x 8 set bagnets). The tax for the boat has recently been increased from Tk 200 to Tk 600 per boat. The tax has to be paid separately from that for the set bagnets and the *chandi* nets used in catching hilsa.

Economic Activities

Economic activities are divided between productive (i.e. those that directly generate income) and reproductive (i.e. those that ensure the continuation of the family).

Productive Economic Activities

Fishing

Although the people of Rehanian are not traditionally fisherfolk, their main economic activity is now fishing due to the proximity of Rahmat Bazar, a small fishing port and market. Each boat has seven crew members and a *majhi* each with his own net. The catch is divided into eight shares, although larger craft can have ten members meaning there are ten nets and ten shares. In order to participate in this share arrangement, a fisherman must have his own net as is the case in Delipara but in contrast to the share arrangements in Rakhainpara. If the *majhi* or boat owner has more than one net, he will use hired labour to man this and these are paid on a retainer basis. The owner then takes his share based

on this hired labour, although in addition he will receive a rental fee from *majhi*.

The hired labour is paid Tk 1,000 per month plus meals, pocket money (Tk 5 per day), two lungi, two t-shirts, a towel and a cotton shawl.

There are 14 *majhi* in Rehania. They are responsible for managing the fishing activities of the boat as in Rakhainpara, but in Rehania they also negotiate the sale of the catch, and enter into *dadondar* relations as is the case in Delipara. The composition of the fourteen Rehania teams and the relationship between team members is found in Table 3.

TECHNOLOGY

Fishing

The most common set bagnet is 40-45 *haat* (60-70 feet) with an extended opening of 45-55 feet. The costs of a set bagnet are as follows:

• net	Tk 5,000
• drum x 2	Tk 1,500
• rope (2 x 50 ft)	Tk 1,000
• bamboo pole x 4	Tk 400
• drum fastener x 2	Tk 400
• poles x 4	Tk 250
Total	Tk 8,550

MARKETING AND CREDIT

Marketing

The *hilsa* season is from mid Srabon until Aswin (August-October). During this season up to eight outside *dadondar* come to Rahmat Bazar in addition to four local *dadondar*. The *dadondar* agents influence trading for the bulk of the catch (90-95%) as they have more financial resources than local traders (*bepari*). There are 14 *bepari*, each able to purchase 40-50 fish per day.

The sale of the catch is managed by the *majhi* who receives all payment from the *dadondar* and settlement of loans. Payment, based on the market value of the fish, is only made after the fish have been sold by the *dadondar*, and as the markets are often far away it is nearly impossible for the *majhi* to know the real wholesale price.

The *dadondar* pay Tk 700-800 per *poon* (80 pieces of fish) or Tk 9-10 per fish. This compares to the *bepari* price of Tk 1400 per *poon*. The *dadondar* agents ensure that contracted fishing boats hand over their catch which is then sent to carrying vessels that take the fish to markets outside of Hatia such as Barisal, Dhaka, Narayanganji and Madaripur. The *bepari* concentrate on local markets such as Chomuhuni, Sagaria, Oshkhali, Maijdee and Banga Bazar.

From mid-Aswin or Kartik until Agrahan (October-December) is the shrimp season. Shrimp is sold by the basket, one basket weighing approximately 30 kg. Roughly 200 baskets (5-6 tons) are traded per day at this time with some 50 boats in operation.

The shrimp are again bought by *dadondar* and *bepari*. The *bepari* pays Tk 700 per *maund* or Tk 18 per kilogram, and on average buys two *maund* per day (75 kg). After removing the heads, this weight is reduced by approximately 12 kg per *maund*. *Dadondar* pay Tk

400-450 per *maund* (Tk 11 per kg), but deal in higher volumes. The *bepari* sell the shrimp in a variety of markets such as Char Chenga, Choumohoni, Chittagong, Khulna and Dhaka, and have profit margins of about Tk 50 per *maund*. Selling the shrimp through *aratdar* in the larger markets costs roughly Tk 175 per kilogram, with coolies being paid Tk 2.5 per kg and *aratdar* being paid a commission of Tk 100 per *maund*.

The set bagnet season is from the end of Agrahan until early Boishak (December-April). Again about 50 boats operate from Rahmat Bazar and the principal catch is *cheuwa*, each boat having a capacity of 90-120 *maund*. The *dadondar* are not evident at this time because *cheuwa* is a low value fish with a wholesale price when fresh of Tk 90 per *maund* (Tk 2.4 per kg) and a retail price of Tk 3.5-4 per kilogram in local markets. Between Poush and Magh (January) shrimp are also caught in the set bagnets, with a total landing for shrimp and *cheuwa* of Tk 350-400 *maund* per day. The shrimp catch continues until Boishak but the total volume of the catch declines to 250-300 *maund* per day.

Local *bepari* purchase roughly one basket per landing, and approximately 100-125 *maund* (3-4 ton) of fresh fish are sold in a day for local consumption. Given the above mentioned figures for the daily catch, it can be seen that there is a surplus of fish during this season. Part of this is dried by the *majhi* and 80-90 outside *bepari* come to Rahmat Bazar to buy this dried *cheuwa*. One *maund* of wet fish is equivalent to 10 kg of dried fish. However, there is still an over-supply of *cheuwa* during the set bagnet season.

Credit

The credit system between boat-owners and *dadondar* is similar to that described for Delipara. The *dadondar* or their agents offer credit to mobilise fishing expeditions and also fishing gear.

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Interest rates are about 150% per annum.

The *majhi* may facilitate loans for the crew, and will normally provide advances prior to the start of the fishing season. The assistance provided by *majhi* and the amount of credit involved is given in Table 9.

ANALYSIS AND CONCLUSIONS

Rehania is an isolated spot on an already isolated island. Most of the product is exported because the community is poor⁷, and this in turn means that there is little economic investment which might improve this situation. However, some of the community have used the opportunities available, especially in fisheries, to develop trading and fishing enterprises. Although these are not large compared to the those of outsiders that come to the island during the height of the fishing seasons, they do show that there is potential for economic growth.

The marketing-credit constraints seen in Delipara are not as severe in Rehania, although quite why the *bohoddar* are less affected by the *dadondar* needs further analysis. There is though a shortage of capital and few channels for borrowing that would facilitate capital investment, despite evidence that such opportunities would be used if available.

Group organisation seems to be an important initiative that could be undertaken, and could involve savings and loans, cooperatives (e.g. a community general store) and even gear pools (providing a common resource of equipment for those without nets and other basic equipment). However, such interventions, which need not be unique to Rehania, should take into consideration the fact that the extended family is the major economic unit, much more so for

Larger land-owners tend to live off the island.

instance than Delipara where there are traditional community institutions that are still functioning.

In post-harvest fisheries there is potential for increasing knowledge and participation in fish drying and marketing, especially during the set bagnet season when there is a surplus of supply. Gear making and repairing is another possibility as is boat repair, as much of the expertise to date is migrant labour. Ice is another area that could be looked into because to date there is only small ice plant on the island, and most ice is shipped in.

If the land issue alongside the embankment could be resolved, there is also considerable potential for salt water aquaculture. The land issue will not resolve itself, and could form a part of a community social development programme. There may be opportunities for animal husbandry on the common grazing land, an extension of the smallstock activities the community already undertakes.

Table 8: Organisation of Rehania Fishing Teams

NB: Relatives marked in **bold**

TEAM 01

SL	NAME	POSITION/TEAM;RELATION W/MAJHI	HH CODE
01	Altaf Hossain	Majhi	01
02	Bahar	Wage Employed by Majhi	09
03	Nur Islam	Wage Employed by Majhi	
04	Moinuddin	Share Holder, Brother of Majhi	02
05	Sekander Hossain	Share Holder, Brother of Majhi	03
06	Abu Taher	Share Holder	
07	Forid	Share Holder	
08	Anowar Hossain	Share Holder	

TEAM 02

SL	NAME	POSITION/TEAM;RELATION W/MAJHI	HH CODE
01	Abdul Hai	Majhi	11
02	Afsar Hossain	Wage Employed; In-Law of Majhi	158
03	Khobir Uddin	Wage Employed	
04	Mintu	Wage Employed	
05	Nurul Hoq	Wage Employed	
06	Foyezuddin	Wage Employed	
07	Abul Bashar	Share Holder; Brother of Majhi	
08	Mahe Alam	Share Holder; Paternal Cousin of Majhi	

TEAM 03

SL	NAME	POSITION/TEAM;RELATION W/MAJHI	HH CODE
01	Md Robiul	Majhi	13
02	Sekander	Wage Employed;mat.cousin of Majhi	
03	Dulal	Wage Employed;mat.cousin of Majhi	
04	Mostan	Wage Employed;mat.cousin of Majhi	
05	Shahabuddin	Wage Employed;mat.cousin of Majhi	
06	Alauddin	Wage Employed;mat.cousin of Majhi	
07	Bashar	Wage Employed;relative of Majhi	
08	Abul Kalam	Share Holder;brother	19

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09 Mostofa Share Holder;brother 22

TEAM 04

SL	NAME	POSITION/TEAM RELATION W/MAJHI	HH CODE
01	Abul Kashem	Majhi	14
02	Nur Islam	Share Holder;paternal Uncle of Majhi	
03	Asadul Haq	Share Holder;father of Majhi	
04	Hashem	Share Holder;pat.cousin of Majhi	Do
05	Shohid	Share Holder;pat.cousin of Majhi	Do
06	Motalib	Share Holder;bro.in Law(sister)	Do
07	Siddiq	Share Holder;bro. In Law(wife)	
08	Md Ali	Share Holder;uncle of Majhi	

TEAM 05

SL	NAME	POSITION/TEAM RELATION W/MAJHI	HH CODE
01	Siraj	Majhi	20
02	Zahid	Wage Employed by Majhi	
03	Nasir	Wage Employed by Majhi	
04	Kamal	Wage Employed by Majhi	
05	Jamal	Wage Employed by Majhi	

TEAM 06

SL	NAME	POSITION/TEAM RELATION W/MAJHI	HH CODE
01	Bosu	Majhi	25
02	Khaleq	Wage Employed by Majhi	
03	Emran	Wage Employed by Majhi	
04	Nur Islam	Wage Employed by Majhi	
05	Helal	Wage Employed by Majhi	
06	Nur Uddin	Wage Employed by Majhi	
07	Hashem	Wage Employed;bro./Law (Wife)	
08	Md Imran	Wage Employed;bro./Law (Wife)	

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TEAM 07

SL	NAME	POSITION/TEAM RELATION W/MAJHI	HH CODE
01	Md Hossain	Majhi	31
02	Nasiruddin	Share Holder	
03	Oli Ahmed	Share Holder	
04	Shajil Ahmed	Share Holder	27
05	Osi Ullah	Share Holder	
06	Md Shahnaz	Share Holder	
07	Md Bulbul	Share Holder	
08	Shahabuddin	Share Holder	

TEAM 08

SL	NAME	POSITION/TEAM RELATION W/MAJHI	HH CODE
01	Amir Hossain	Majhi	128
02	Bahar Uddin	Share Holder	132
03	Shaha Raj	Share Holder;son of Baharuddin	132
04	Rashed	Share Holder	139
05	Eusup Haq	Share Holder	127
06	Robiul Hossain	Share Holder	129
07	Monir	Share Holder	136
08	Siddiq	Share Holder	
09	Abul Kashem	Share Holder	

TEAM 09

SL	NAME	POSITION/TEAM RELATION W/MAJHI	HH CODE
01	Abul Khair	Majhi	75
02	Abdul Hai	Share Holder;brother of Majhi	79
03	Abdur Rahim	Wage Employed by Majhi	
04	Abdul Baten	Wage Employed by Majhi	
05	Robiul Haq	Wage Employed by Majhi	
06	Abul Kalam	Wage Employed by Majhi	37
07	Abul Hashem	Wage Employed by Majhi	
08	Amir Hossain	Wage Employed by Majhi	63

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TEAM 10

SL	NAME	POSITION/TEAM RELATION W/MAJHI	HH CODE
01	Enayet Hossain	Majhi	84
02	Alauddin	Share Holder	
03	Shakhawat	Share Holder	
04	Abul Kalam	Share Holder	
05	Seraj	Share Holder	
06	Serajuddin	Share Holder	
07	Anowar Hossain	Share Holder	73
08	Ibrahim	Wage Employed by Majhi	143

TEAM 11

SL	NAME	POSITION/TEAM RELATION W/MAJHI	HH CODE
01	Jonu Majhi	Majhi	136
02	Shofiq	Son of Majhi;	136
03	Alauddin	Son of Majhi	136
04	Abul Kalam	Son of Majhi	136
05	Bashar	Wage Employed by Majhi	149
06	Alauddin	Share Holder	
07	Mostan	Wage Employed by Majhi	184
08	Monir Uddin	Share Holder	140
09	Anowar Hossain	Share Holder	

TEAM 12

SL	NAME	POSITION/TEAM RELATION W/MAJHI	HH CODE
01	Rezaul Haq	Majhi	95
02	Nurul Haq	Share Holder;brother of Majhi	95
03	Selim	Share Holder;son of Majhi	95
04	Abdul Kader	Share Holder;bro./Law of Majhi	
05	Quaiyum	Wage Employed by Majhi	
06	Belal	Wage Employed by Majhi	
07	Mastan	Wage Employed by Majhi	

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TEAM 12

SL	NAME	POSITION/TEAM RELATION W/MAJHI	HH CODE
01	Rezaul Haq	Majhi	95
02	Nurul Haq	Share Holder;brother of Majhi	95
03	Selim	Share Holder;son of Majhi	95
04	Abdul Kader	Share Holder;bro./Law of Majhi Sagaria	
05	Quaiyuum	Wage Employed by Majhi	
06	Belal	Wage Employed by Majhi	
07	Mastan	Wage Employed by Majhi	

TEAM 13

SL	NAME	POSITION/TEAM RELATION W/MAJHI	HH CODE
01	Kashem	Majhi	69
02	Md Babul	Share Holder; Son of Majhi	69
03	Robiul Hossain	Share Holder; Son of Majhi	
04	Dulal	Share Holder;brother	68
05	Jashim Uddin	Share Holder; Son of Majhi	71
06	Akhbar Hossain	Share Holder; Nephew	
07	Ruhul Amin	Share Holder; Brother in Law	
08	Abul Kashem	Wage Employed	
93b	Johra Khatun	Shareholder	

TEAM 14

SL	NAME	POSITION/TEAM RELATION W/MAJHI	HH CODE
01	Eusup	Majhi	164
02	Belal	Share Holder; Brother	162
03	Abul Bashar	Share Holder; Brother	161
04	Monir	Share Holder; Brother	163
05	Mostafa	Share Holder; Brother	160
06	Nur Islam	Share Holder; Cousin	170
07	Jalal	Share Holder;	179
08	Riton	Share Holder; Neighbour	
09	Korim	Share Holder; Neighbour	
10	Babul	Share Holder; Neighbour	

Table 9: Fishing Crew Credit Arrangements in Operation in Rehania

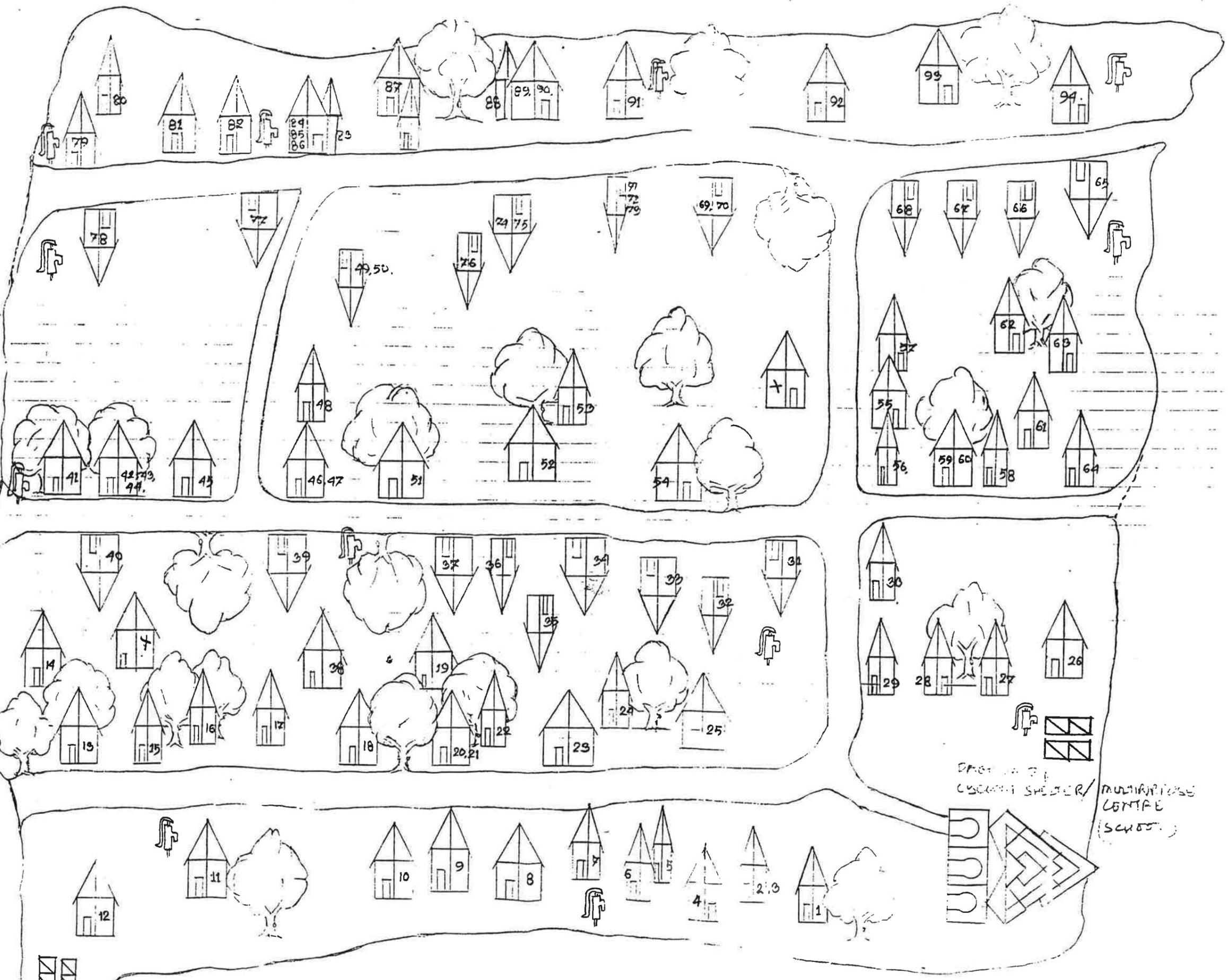
CODE	HH HEAD	HOW MAJHI ASSIST SHAE RFF+WAGED FF TO OBTAIN CREDIT	HOW MUCH CREDIT REMAINING/ OUTSTANDING/DUE AT END OF YEAR
11	MD ABDUL HAI	SHARE FF + WAGED FF HAVE NO CREDIT FACILITY, MAJHI PROVIDES TK 1,000 ADVANCE EACH TO WAGED FF BEFORE START OF FISHING SEASON	LAST YEAR POOR CATCH, SO TK 16,000 OUTSTANDING FROM LAST YEARS CREDIT OF TK 60,000
01	ALTAF HOSSAIN	MAJHI RESPONSIBLE FOR TAKING DADON TO PAY WAGED FF ADVANCE SALARY + OTHER RATIONS + FRINGES	LAST YEAR POOR CATCH, SO TK 3,500 OUTSTANDING FROM LAST YEARS CREDIT OF TK 13,000
13	MD ROBIUL	9 SHARE FF INCL MAJHI, EACH EQUALLY LIABLE FOR CREDIT HANDLED BY MAJHI	LAST YEAR TK 25,000 OUTSTANDING FOR 9 CREW
20	GASUDDIN	ALL WAGED FF ; NO CREDIT RESPONSIBILITY ON THEM, THEY GET TK 1000 ADVANCE BEFORE SEASON, ONLY MAJHI LIABLE	LAST YEAR TK 6,000 OUTSTANDING
31	MD HOSSAIN	8 SHARE FF INCL MAJHI, EACH EQUALLY LIABLE FOR CREDIT HANDLED BY MAJHI	LAST YEAR TK 26,000 OUTSTANDING FOR 8 CREW
64	ENAYET HOSSAIN	8 SHARE FF INCL MAJHI, EACH EQUALLY LIABLE FOR CREDIT HANDLED BY MAJHI	LAST YEAR TK 2,000 OUTSTANDING
69	KASHEM	8 SHARE FF INCL MAJHI, EACH EQUALLY LIABLE FOR CREDIT HANDLED BY MAJHI	NO CREDIT OUTSTANDING FROM LAST YEAR
25	BOSU	PAY ONE MONTH'S ADVANCE (TK 1000) TO EACH FISHING CREW	LAST YEAR'S DEBT OUTSTANDING TK 30,000
75	ABUL KHAIR	EIGHT SHARE FISHING CREW UNDER MAJHI'S RESPONSIBILITY WITH EQUAL SHARES	LAST YEAR'S DEBT OUTSTANDING TK 25,000
95	REZAUL HAQ	EIGHT SHARE FISHING CREW UNDER MAJHI'S RESPONSIBILITY WITH EQUAL SHARES	LAST YEAR'S DEBT OUTSTANDING TK 20,000
128	AMIR HOSSAIN	TEN SHARE FISHING CREW UNDER MAJHI'S RESPONSIBILITY WITH EQUAL SHARES	LAST YEAR'S DEBT OUTSTANDING TK 8,000

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136	DHONU MAJHI	TEN SHARE FISHING CREW UNDER MAJHI'S RESPONSIBILITY WITH EQUAL SHARES	LAST YEAR'S DEBT OUTSTANDING TK 23,000
14	ABUL KASHEM	ALL 8 FISHING CREW UNDER MAJHI'S COMMAND TAKE CREDIT AND IS LIABLE JOINTLY	LAST YEAR'S DEBT OUTSTANDING TK 2,000
164	EUNUS MAJHI	FOUR WAGE FISHING CREW AND FIVE SHARE FISHING CREW ALL UNDER MAJHI'S COMMAND	LAST YEAR'S DEBT OUTSTANDING TK 40,000

FF = fisherfolk

N
 KASHY OF BENGAL
 N
 RASTAR PARA
 N
 KADWAR PARA



PADDY FIELD

DASHA...
 USK...
 MULTIPURPOSE
 CENTRE
 (SCHOOL)

Rakhaipara

SECTION 4: RAKHAINPARA

THE COMMUNITY

Location

Rakhainpara is a settlement in Khurushkul *thana*, Cox's Bazar district, on the south-east coast of Bangladesh (Map 1). It is set back from the sea, in the middle of padi fields owned by people from nearby settlements, and cut off from Cox's Bazar by a narrow estuary. However, access to the sea is possible along paths leading to the long shallow shoreline where outside of the *hilsa* season fish-drying takes place.

History

The Rakhainpara community is part of the larger Rakhain ethnic group who migrated from Burma during the first part of this century. The Rakhain are Buddhists and have their own language, few of them being able to speak Bangla. Although many Rakhain migrate to and from Burma, according to community elders this particular community has been located along the Khurushkul coast for the last six decades.

Rakhainpara was ideally suited to those who had skill and experience in using gill nets, set bagnets and bottom longlines. Originally most men owned and operated their own nets and boats, and were able to live from the sea. The Rakhain women brought with them weaving skills and installed handlooms beneath their houses, which are built in stilts. But many handlooms were lost in the 1991 cyclone, and the ones found today belong to Cox's Bazar merchants who buy the woven cloth on a piece basis.

Over the years, the Rakhain fishermen, once amongst the most skilled and knowledgable in the area, have been reduced from owner-operators to working as hired crew on others' boats. It is ironic that the Rakhain introduced many fishing skills into the Cox's Bazar area, but are now employees of Muslim-Bangla owners

who started fishing less than twenty years ago. Yet there is not the same ethnic ill-feeling such as is found between Muslims and Hindus further along the coast', and the present settlement site of 1.5 acres was a gift from a Muslim-Bangla zamindar, Muzaffar Ahmed Chowdhury.

THE ENVIRONMENT

The Weather

The weather is as central to survival and prosperity as the sea. The community was severely affected by the 1991 cyclone, and in May 1994 storms destroyed four houses'.

Between the months of Joishtho/Ashar and Sraban/Bhadra there are rains. The months of Agrahan/Poush until Choitro/Boishak are usually the dry season. For most of this time the sea is calmer and there is less climatic hazard. But the weeks at the end of this season are the most storm-prone and the storm of 1991 and 1994 occurred during Boishak month just before the monsoons begin.

COMMUNITY SOCIAL STRUCTURE

The Settlement

Rakhainpara is located on a small plot of land surrounded by the arable land of the neighbouring communities. Houses are made of wood and are mostly on stilts. These have proved more resilient to storms and also provide a work and storage area underneath.

The sea is a few minutes' walk away, the arable land separated

7 See section on Delipara.

7 HH codes 25, 62, 77, 87

from the shore by an embankment that during the set bagnet season is filled with fish drying operations.

Inside the settlement there is a cyclone shelter that also acts as a temple and community centre. There are two working tubewells, but for the most part the community does not have its own basic resources (water, firewood, timber).

Demography

There are 94 households, thirteen of which are female headed (14%). There is a fairly equal distribution across the age ranges (Table 10), although the largest group of male headed households is 35 years or under and for females between 36-50 years.

Occupation

The majority of Rakhainpara inhabitants (87% of household heads) are engaged in fishing in one way or another (Table 11). This includes waged fish crews, longline crews, boat captains, a mechanic, net makers, a fish trader and a dried fish processor. Of these almost 79% work on fishing boats. However, only one person currently owns his own boats.

	Total		Male headed		Female headed	
	households	%	households	%	households	%
Total	94		81	86%	13	14%
Age of HH head						
<=35 years	38	40%	35	43%	3	23%
36-50 years	35	37%	29	36%	6	46%
>50 years	21	22%	17	21%	4	31%

	Total		Male headed		Female headed	
	households	%	households	%	households	%
Total	94		81	86%	13	14%
Primary Occupation						
Fish labourer	39	41%	33	41%	6	46%
Long liner	20	21%	20	25%	0	0%
Majhi	14	15%	14	17%	0	0%
Net maker	5	5%	5	6%	0	0%
Other	16	17%	9	11%	7	54%

Looking beyond the household head the same degree of involvement in fisheries is evident amongst all males, but there are a large number of women who have independent incomes from weaving. Away from fishing, there is a broader range of occupations than in Delipara - small shops, petty traders and tailors. But opportunities in such fields are limited and depend on access to capital. This is especially problematic for non-married women who cannot enter into fishing and for whom weaving does not provide an adequate income to meet the household's needs. Amongst such women there is likely to be a greater diversity of employment activities including sewing, selling and weaving.

Social Organisation

Religion

The people of Rakhainpara are Buddhists, although the surrounding communities are Muslim. The cyclone shelter serves also as a Buddhist temple and community centre, and there is an elderly monk living there. In the past, the monk was the senior village elder, but while he is not without influence today, younger household heads have succeeded in moving community decision-making into a more secular domain.

Gender

Women are excluded from the main economic activity, fishing, and do not play much part in fishing-related activities such as trading, largely because the men themselves are not greatly involved in post-harvest fisheries. They are involved in weaving and a variety of other economic activities, but as the cases of households where women are the main income earners show, this is not as lucrative as fishing even if it does provide an important, and non-male controlled, source of income in male-headed households.

Women take most of the responsibility for reproductive

Caught In Their Own Nets

activities. If a woman divorces or is otherwise left without a husband, she is by custom responsible for the children. Women may also be responsible for elderly parents.

Most widows and female divorcees, unlike their male counterparts, do not remarry. Thus, with the responsibility for both their children's and parents' subsistence, their economic burden is considerably greater than men in a similar position.

Nonetheless, the early indications from the AZAD savings initiative suggest that women are able to organise effectively when given the support and motivation.

Social Activities

Economic Groups

The family is not as significant an economic group as it is in Delipara. This is primarily because such a large proportion of the community is engaged as contracted or waged labour. The local NGO, AZAD, has recently organised three savings groups (*samity*) in the community, two for women and one for men. The male *samity* has fifteen members, while the female ones have 24 and 20 members respectively. It is noticeable in the male *samity* that the members are all under 33 years old. All are labourers on fishing craft.

At the beginning of 1993 there were two *bohoddar* (fishing boat-owners), each with regular captains and crews. One of these ceased to operate during 1993, but the other still has two captains (*majhi*) and fourteen crew members (see case study, Annex 3). These form an economic production unit similar to those found in Delipara. The *bohoddar* employs the *majhi* and crew under a form of share arrangement. A *majhi* receives Tk 40 for every Tk 1,000 of the catch while crew members receive Tk 20 per Tk 1,000. This payment is made after the *bohoddar* has been paid for the catch and after all outstanding expenses have been deducted from

the proceeds. The *bohoddar* gives advances prior to the start of the fishing season. In the case of the *majhi* this was Tk 4,000 in 1993, and for crew members Tk 2,000.

In order to meet the costs of crew and maintenance, the *bohoddar* depends on access to credit. Although the *dadondari* system prevalent in Delipara is found too in Cox's Bazar, there are also normal money-lenders and the *bohoddar* prefer to approach these, paying interest at roughly 6% per month.

Women weavers are indentured to merchants that provide raw materials, but this does not give them access to additional credit and if they had enough capital to buy thread and repair their handlooms it is possible that they would be able to revert to the independent production system which existed before the 1991 cyclone.

Role of Government and State

Following the 1991 cyclone, a cyclone shelter was built on community land.

Role of NGOs

AZAD is a small NGO working with Rakhainpara and other settlements of Khurushkul. It was established with the help of leading members of Cox's Bazar society, and its day-to-day affairs are managed by two local inhabitants who have sold part of their assets to fund activities. AZAD has established a school in the area and has an office less than half an hour's walk from Rakhainpara. It has yet to receive any donor support, but with locally-raised funds and community participation has succeeded in starting a variety of activities including non-formal education and savings and loans. As part of the latter, AZAD has helped set up three *samity* in Rakhainpara.

VILLAGE ECONOMY

Wealth Ranking

There is also one household head who has a fish drying operation, and although earnings fluctuate from month to month the capital required to run such operations make this person wealthier than most others in the community

Control over Economic Resources

Those engaged in fish drying do not require land as the operations take place on temporary lots along the coast. However, they must invest each year in bamboo racks, mats, shelters and hooks in addition to non-capital expenditures such as wages.

There are 51 handlooms in operation and about six more that could be repaired. These are controlled by individual households. Prior to the 1991 cyclone there were more than 100 handlooms, but during the cyclone over 30 households lost their handlooms completely while others have been unable to repair them for want of money.

One household has a cow, but the raising of ducks and chickens is popular. Households have their own houses which are constructed of wood and elevated on stilts. Beneath the house is used for storage and weaving. Attempts to introduce other types of housing have not been successful, and in the May 1994 storm it was the non-elevated housing that was destroyed.

Economic Activities

Economic activities are divided between productive (i.e. those that directly generate income) and reproductive (i.e. those that ensure the continuation of the family).

Productive Economic Activities

Fishing

The main income generating activity for men is fishing. Most men are waged fishermen, primarily engaged in *hilsa* fishing and longlining, and rarely have the economic resources to organise their own operations. However, there are also fourteen *majhi* and one active *bohoddar*.

The fishermen's year is divided between the *hilsa* season, the set bagnet season and the longline season. For the *hilsa* season the fishermen are contracted to one of the large mechanised boats operating from Cox's Bazar. During this time they are only in the settlement during the slack periods of the month¹⁰. A separate contract is arranged for the set bagnet season while those engaged in longlining begin about half way through the set bagnet season. For an experienced fisherman who is contracted during both seasons, the total value of the contracts is Tk 10,000-12,000, although new hands may receive only Tk 8,000.

The set bagnet season begins in Aswin/Kartik and lasts until Magh/Falgun, but after a peak of approximately three months or six *jo* the use of larger mechanised vessels become less viable, and smaller craft with smaller set bagnets are used, operating just off the coast.

The average catch for a set bagnet craft with six nets, landing twice per day, is about 262.5 kg or seven *maunds*¹¹, although as already noted for Delipara, there are weekly and monthly fluctuations in the catch, and during a *jo* period the catch may

¹⁰ See Delipara section.

¹¹ 1 maund = 37.5 kg.

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be as high as 25 *maund*. These figures include fish that have rotted once caught which can make up 20-40% of the catch.

Longlining follows a similar basic system to set bagnet and *hilsa* operations. The *bohoddar*, who owns the boat and the lines, recruits a *majhi* and a crew of about seven people. The catch is sold by the *bohoddar* and the income divided into fifteen shares. The *bohoddar* takes six shares, the *majhi* 1.5 shares and the remaining 6.5 shares are divided amongst the crew. However, in some cases the crew are paid a straight daily wage of Tk 60.

The main longline catch is *poa* (croaker - red and white), although on rare occasions other large species are caught. Red croaker fetches Tk 5,000 per *maund* and white ones fetch Tk 4,000. These are bought by a Cox' Bazar fish processing plant.

Longlining takes place between Bhadra/Aswin and Agrahon/Poush. The average weekly operational cost during this period is Tk 10,000 and the value of the catch varies between Tk 20,000-35,000 or Tk 110,000 per month. Thus, typical net earnings for a longlining boat are in the region of Tk 70,000 per month.

There is less employment during the set bagnet season, and those who cannot find work on boats seek casual employment along the shoreline where the *bohoddar* and fish traders have fish drying operations. The set bagnet craft land their catch on the shore and, if not committed to a boat-owner, it is auctioned to the highest bidder, who prices it according to his estimate of quantity (per *kati* [basket]), species composition and quality. Only a few species such as *chanda* (pomfret) and *poa* (croaker) are sorted before auction.

During this season coast near the village is lined with racks, mats and storage huts. In 1993, six Rakhain men had their own fish-drying operations with a total turnover of Tk 216,200 (Table 12). However, the majority of fish dryers are from neighbouring

communities such as Rastarpara and Kauwerpara.

Fish-dryers buy unsorted fish for approximately Tk 400-500 per *maund* and a season's revenue ranges between approximately Tk 290,000 and Tk 400,000 per boat.¹² The added value of the fish can be seen from the price of dried fish in Cox's Bazar where a kilogram of dried *churi* fetches Tk 2,000, *faisha* Tk 1,300, croaker (*poa*) Tk 1,200 and stingray Tk 800.

There is considerable monthly fluctuation in the net income of fish dryers. For instance, one Rakhain dryer made Tk 5,000 on Tk 25,000 of fish one month, but only Tk 250 on Tk 20,000 the next. The dryers regularly borrow money in order to purchase fish, especially as obtaining the best price depends on being able to store fish until the monsoon season when prices rise by up to 50%. To an extent the dryers avoid the need to borrow money by buying fish on a deferred payment basis from *bohoddar*. Where credit is required, it is usually borrowed from informal money-lenders or *bohoddar*, but sometimes from relatives or friends.

Some fish dryers also trade in wet fish. They may also have their own fishing boats and crew.

Outside of fishing and fish trading, there are also net-makers.

¹² Based on a sample of six boats.

Table 12: Rakhainpara Community Members Operating Fish Drying and Marketing Activities using Cash Loan

01. NAME: A BU RI		HH CODE = 78	
FISH PURCHASE	3 DEC 93	TOT QNTY =	90 MND
		TOT VAL @ TK 10/KG	=TK 30,000
CREDIT TK	30,000	INTEREST (@10%/MNTH)	=TK 3,000
LABOUR + OTHER EXPENSES			=TK 2,300
		<u>TOT COST</u>	<u>=TK 35,300</u>
DRY FISH SELLING		TOT QNTY = 30 MNDS	
CHURI	5 MND @ TK 2000/MND	=TK	10,000
FAISHA	10 MND @ TK 1300/MND	=TK	13,000
POA	10 MND @ TK 1200/MND	=TK	12,000
SMALLSHRMP+ASSRTD	5 MND @ TK 900/MND	=TK	4,500
		TOT VAL OF SALES	=TK 39,500
		TOTAL COST	=TK 35,300
		<u>NET RETURN</u>	<u>=TK 4,200</u>
<hr/>			
02. NAME MON SEE PRU		HH CODE 48	
FISH PURCHASE	5 JAN 94	TOT QNTY =	
		TOT VAL @ TK/KG	=TK 25,000
CREDIT TK	20,000	INTEREST (@10%/MNTH)	=TK 2,000
LABOUR + OTHER EXPENSES			=TK 2,000
		<u>TOT COST</u>	<u>=TK 29,000</u>
DRY FISH SELLING		TOT QNTY = 29 MNDS	
CHURI	4 MND @ TK 2000/MND	=TK	8,000
FAISHA	10 MND @ TK 1300/MND	=TK	13,000
POA	9 MND @ TK 1200/MND	=TK	10,800
SMALLSHRMP+ASSRTD	5 MND @ TK 900/MND	=TK	4,500
		TOT VAL OF SALES	=TK 36,300
		TOTAL COST	=TK 29,000
		<u>NET RETURN</u>	<u>=TK 7,300</u>
<hr/>			
03. NAME MONG SING		HH CODE 8	
FISH PURCHASE	5 JAN 94	TOT QNTY =	80 MNDS
		TOT VAL@ TK/KG	=TK 28,000
CREDIT TK	25,000	INTEREST (@10%/MNTH)	=TK 2,500
LABOUR + OTHER EXPENSES			=TK 2,200
		<u>TOT COST</u>	<u>=TK 32,700</u>
DRY FISH SELLING		TOT QNTY = 30 MNDS	
CHURI	5 MND @ TK 2000/MND	=TK	10,000
FAISHA	10 MND @ TK 1300/MND	=TK	13,000
POA	10 MND @ TK 1200/MND	=TK	12,000
SMALLSHRMP+ASSTD	5 MND @ TK 1000/MND	=TK	5,000
		TOT VAL OF SALES	=TK 40,000
		TOTAL COST	=TK 32,700
		<u>NET RETURN</u>	<u>=TK 7,300</u>
<hr/>			
04. NAME SHA CHA		HH CODE 11	
FISH PURCHASE	5 JAN 94	TOT QNTY =	60 MNDS
		TOT VAL@ TK/KG	=TK 20,000
CREDIT TK	20,000	INTEREST (@10%/MNTH)	=TK 2,000
LABOUR + OTHER EXPENSES			=TK 1,500
		<u>TOT COST</u>	<u>=TK 23,500</u>
DRY FISH SELLING		TOT QNTY = 23 MNDS	
CHURI	3 MND @ TK 2000/MND	=TK	6,000
FAISHA	7 MND @ TK 1300/MND	=TK	9,100
POA	9 MND @ TK 1200/MND	=TK	9,500
SMLL SHRMP+ASSRTD	5 MND @ TK 900/MND	=TK	4,500
		TOT VAL OF SALES	=TK 29,200
		TOTAL COST	=TK 23,500
		<u>NET RETURN</u>	<u>=TK 5,700</u>

05. NAME MONG PRU

HH CODE 52

FISH PURCHASE DEC 93
CREDIT TK 20,000
LABOUR + OTHER EXPENSES

TOT QNTY =
TOT VAL@ TK/KG =TK 25,000
INTEREST (@10%/MNTH) =TK 2,000
=TK 2,000
TOT COST =TK 29,000

DRY FISH SELLING

TOT QNTY = 28 MNDS

CHURI 4 MND @ TK 2000/MND =TK 8,000
FAISHA 10 MND @ TK 1300/MND =TK 13,000
POA (SMALL) 9 MND @ TK 1200/MND =TK 10,800
SMLLSHRMP+ASSRTD 5 MND @ TK 800/MND =TK 4,000
TOT VAL OF SALES =TK 35,400
TOTAL COST =TK 29,000
NET RETURN =TK 6,400

06. NAME KWAW CHA

HH CODE 63

FISH PURCHASE DEC 93
CREDIT TK 25,000
LABOUR + OTHER EXPENSES

TOT QNTY =
TOT VAL@ TK/KG =TK 25,000
INTEREST (@ 5%/MNTH) =TK 2,500
=TK 2,000
TOT COST =TK 29,500

DRY FISH SELLING

TOT QNTY = 28 MND

CHURI 4 MND @ TK 2000/MND =TK 8,000
FAISHA 10 MND @ TK 1300/MND =TK 13,000
POA (SMALL) 9 MND @ TK 1200/MND =TK 10,800
SMLLSHRMP+ASSRTD 5 MND @ TK 800/MND =TK 4,000
TOT VAL OF SALES =TK 35,800
TOTAL COST =TK 29,500
NET RETURN =TK 6,300

Weaving

The women are skilled weavers of shirting, *lungi* and bags, and use handlooms installed beneath their houses. A standard handloom costs Tk 8,000-10,000 to make. The vast majority depend on merchants to advance them thread and in return the product must be sold to the merchant. For cloth, the weavers receive Tk 800 per 120 yards which takes approximately 30 days to produce. For bags, weavers are paid Tk 15 per bag and can make one bag per day.

Other

There is a greater diversity of income generating activities than in Delipara, reflecting greater integration with the surrounding communities and the lack of an occupation-specific sub-caste. Given that the Rakhain have as long a history of involvement in fishing as the people of Delipara, it is not reasonable to conclude that the diversity of occupation is due to less skill or interest in fishing.

Some of these economic activities are a result of access to capital (e.g. shop ownership), some are connected to specific skills (e.g. mechanic), and some are a consequence of gender divisions of labour (e.g. women involved in general trading and sewing).

Reproductive Activities

Because of their involvement in weaving, women as a whole play a more active part in productive economic activities than those in Delipara. Nonetheless, as the Ma Sen Da case study shows (Annex 3), this does not mean that they are any less responsible for managing reproductive activities.

TECHNOLOGY

Fishing Technology

The craft on which the Rakhainpara crews work are 22 or 33 h.p., 30-38 foot vessels most of which operate out of Cox's Bazar. At the tail end of the season, traditional sampan-type craft are used (25-30 foot). The nets are similar to those in Rehanian and Delipara.

Post-harvest Technology

During the set bagnet season fish are dried along the coast. This is done by placing the fish on bamboo racks, on mats and sometimes on the sand if there is no other place. A few of the Rehanian people are engaged directly in this, and probably more have the skills to do so but lack the capital.

MARKETING AND CREDIT

Marketing

Because most of the fishermen are employees of some kind and do not have boats or nets of their own, they have little or no say in how the fish is marketed. Only the fourteen who are *majhi* have some influence on how the boat and net owners sell the catch, and there is now only one *bohoddar* in the community, as well as one fish dryer.

The fish is sold at auction at the landing sites, and except where the *bohoddar* has a drying operation during the set bagnet season, the interest of the fishermen in marketing ends there. There are *dadondar* operating in the area, and the system is similar to that described for Delipara. However, the *dadondari* system depends on boat-ownership, and the one boat owner in Rakhainpara is able to borrow money from alternative sources which are far more readily available in the Cox's Bazar district

than is the case in North Salimpur.

Credit

Individual households nonetheless require credit. Much of this consists of advances on earnings when a contract to work on a *bohoddar's* boat is made. These advances are made before the two main seasons begin and are typically for a quarter of the contract amount. However, the fishermen complain that the amount promised before the season is higher than the amount they eventually receive. This may reflect a lower catch than anticipated by the *bohoddar* during the 1993-1994 period, or a hidden charge for the advance.

For those who are not engaged in fishing or those who fail to get employment on a boat during a season, there is no immediate source of credit available. As mentioned previously, weavers receive raw materials from their buyers, but although individuals may go to the merchants for loans in time of need, this is not the same systematised arrangement found in fishing. Shops and kiosks provide a source of credit for food and other basic needs, and there seems to be lending between households of the community, reportedly without interest. The degree to which individuals go to money-lenders to meet subsistence needs is not known, although it is likely that shop-keepers and others in the village provide small loans. Recently the NGO, AZAD, has started three savings groups, but it is too early to judge their success.

ANALYSIS AND CONCLUSIONS

In terms of skills and markets the Rakhain have considerable potential. They are not generally locked into the *dadondari* system that is so much a feature of Delipara fisherfolk's existence, and although this is largely due to the fact that as predominantly *majhi* and labourers they offer no attraction to *dadondar*, it is also the case that there is a greater variety of

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lending opportunity, even if at high rates of interest.

But for most people, there is no access to credit for investment to take advantage of the opportunities in fishing, post-harvest fisheries and other income generating activities such as weaving. The majority of households depend on advances from boat-owners or *majhi*, or in the case of weavers from merchants. Because the community as a whole lacks assets, there is little chance that improvement in general economic welfare can be achieved by internal engines of growth (e.g. through family or social mechanisms).

Indeed, in recent years the economic assets of the community have declined. Many handlooms were damaged or destroyed in the 1991 cyclone and only some of these have been repaired or replaced. In recent years there have only been two *bohoddar*, and one of these went bankrupt in 1993.

There is a limited but diverse range of other income generating activities such as net-making being conducted, and again these skills offer opportunity for expansion. Non-married women are especially likely to have diverse sources of income, although this is partly due to their gendered inability to enter into more lucrative fields, and also their need to balance productive and reproductive roles which tradition prescribes to women.

In general, although opportunities exist in a variety of sectors including post-harvest fisheries, the critical problem is access to capital. The position of women would need to be given special consideration, but for both sexes there are clear openings such as weaving and fish drying, as well as in fishing.

SECTION 5: CONCLUSIONS

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, natural resources (e.g. through erosion) and development momentum that occurs because of natural disasters seriously influences 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 organisations with which the people have often only had contact 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 in 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

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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 rather 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 on 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 pers. comm.), 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 Rehanja, 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

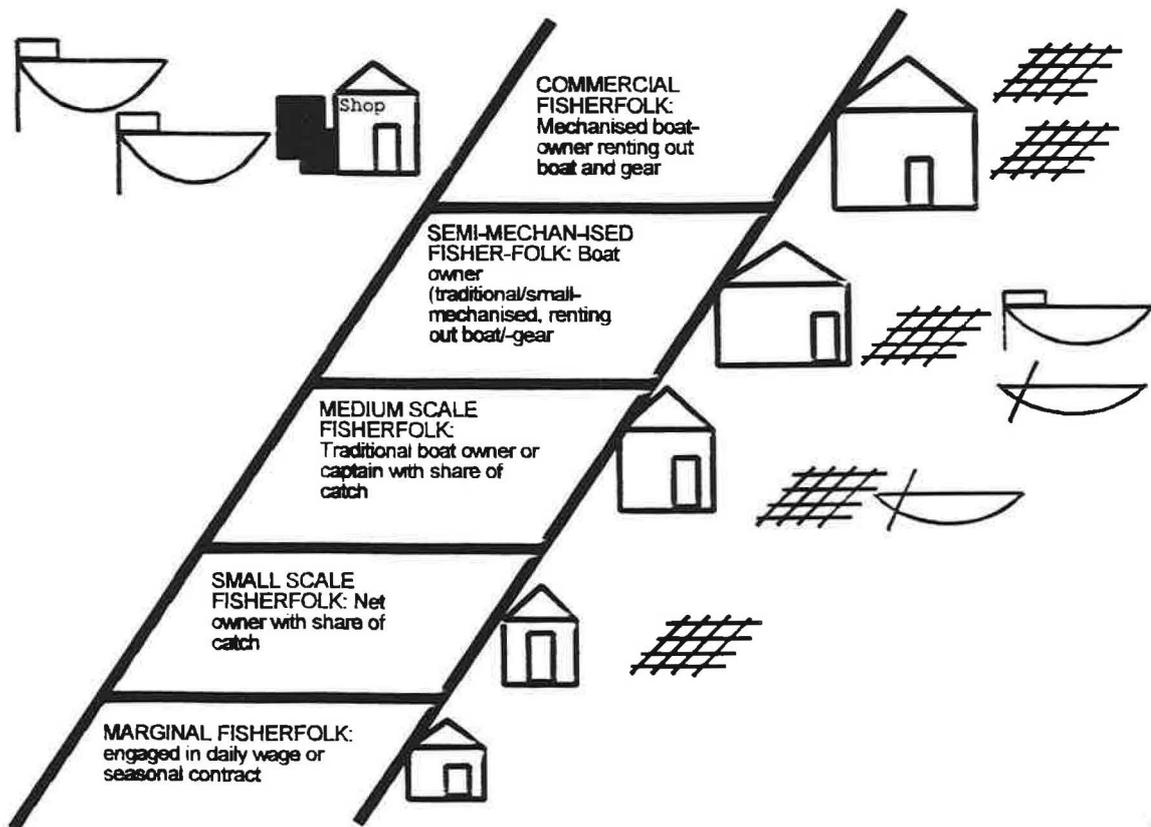
or because of market gluts. In the short term, increasing the capability of the set bagnet communities to process this rejected fish would increase incomes. In the medium term the introduction of more boats able to go to the *hilsa* nets during bad weather would increase the amount of fish for sale. 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 ORGANISATION

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 mechanised vessel. In reality, the number of people able to move up the ladder is decreasing in many communities, and natural disasters together with competition from capitalised landowners has led to a proportional increase in the number of marginal and small scale fishermen.

Figure 1: Ladder of Economic Progress in Coastal Fishing Communities



SOCIAL ORGANISATION

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 cooperation, 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 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 economic function.

The relationship between community members and the sea is also partly determined by social norms. The Rakhain people, although traditionally fisherfolk, do not feel that they have cultural ties to the sea. The Rehanian 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.

But many of the problems facing the set bagnet communities cannot be addressed at the level of individual villages. The different set bagnet communities face many problems in common (e.g. 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 mobilising 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 (e.g. 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 widowed, 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 (e.g. 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 non-married women in Muslim set bagnet communities are

less disadvantaged than in 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 organisers 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 at a small-scale, and some male community members are fish traders. But the bulk of the fish trade is controlled by people from outside of 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

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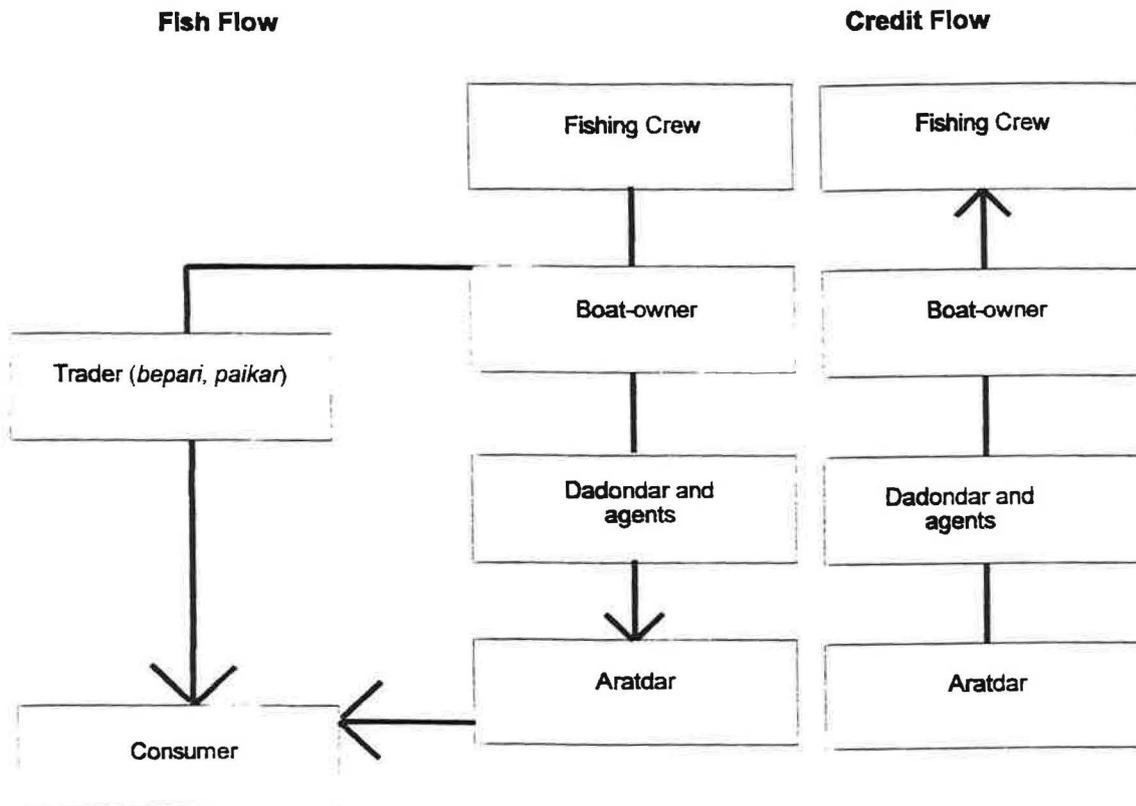
other traders might be prepared to pay, the *dadondar* provides a readily accessible form of credit which is essential to many communities survival. Unlike formal sources of credit, the *dadondar* acknowledge the catch as a capital asset and are willing to lend money prior to the actual fish harvest.

However, the *dadondari* system is pernicious because it creates a monopolised marketing system which gives the fisherfolk no choice or incentive. Any efforts to add value to the fish (e.g. 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 encourage 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 (e.g. through improved education and health).

Some attempts have been made to end dependence on *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 1,000 and one who borrows Tk 100,000 are equally bound to hand over all their fish for an entire season and thereonafter until the loan is repaid. Thus savings and loans schemes that are slightly late in giving loans or unable to provide sufficient loans for a boat-owner's overall needs, cannot

release the communities from the *dadondar*'s hold and possibly increase the chance that the loans will not be repaid.

Figure 2: Relationship Between Credit Flow and Marketing



The impact of the savings and loans schemes on the *dadondari* system is also connected to the relationship between creditor and debtor. As Figure 2 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. They 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

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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 severely affected with the loss of most capital assets (e.g. Delipara after the 1991 cyclone), 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 traders and informal money-lenders. Larger credit schemes such as those of the Gramin Bank, do not appear to reach the coastal fishing communities. Moreover, the savings and loans schemes can provide an important catalyst for community organisation which in turn acts as a motor for other development activities.

ORGANISATION AND REPRESENTATION

The government's fisheries programme pays almost no attention to the situation 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 addressing the specific needs of the set bagnet fishery. Most communities do not receive regular assistance from development organisations, 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 ODA-PHFP case studies from India show, a broader role for such groups is both an efficient way of implementing activities and desirable for group sustainability (Rogers & Blowfield, 1993).

As mentioned earlier, inter-community organisation has not received much attention in the past, although it is increasingly recognised that without networking and cooperation the marginalised set bagnet communities will continue to be at a disadvantage compared to agriculturalists 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-FAO pre-harvest fisheries conducted a training and outreach programme in the early 1990s to increase the technical and organisational skills of NGO and government personnel and to encourage working with coastal fishing communities. There are many lessons to be learnt from this programme (Roy, ?????), 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-FAO work provided the model upon which BOBP-ODA's

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sustainable income enhancement activity was built. This activity is still continuing and should be coordinated with the set bagnet community programme.

NGOs also have a limited capacity to identify and analyse 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 cooperative action grows. The same skills would also benefit government officials in developing more appropriate coastal fisheries policies.

Annex 1: Study Guidelines

SET BAGNET COMMUNITIES SOCIO-ECONOMIC BASELINE STUDY

STUDY GUIDELINES

Objectives

The objectives of the study, as set out in the Project Outline, are as follows:

- To research, describe and analyse from the perspective of poor fisherfolk the social and economic system in three villages engaging in set bagnet fishing activity.
- To make available the results of the above research in a form(s) usable by organisations working with set bagnet fishing communities as input into their planning and monitoring activities.

Locations

The study will be implemented in three villages chosen based on the following criteria:

- The estuarine set bagnet fishery is a major contributor to the livelihood of the fisherfolk in the village.
- Villages represent different types of technical and marketing constraints and opportunities.
- Each village represents a different religious/cultural mix.
- Potential to coordinate study implementation and findings with the BOBP-funded Sustainable Income Enhancement project.
- The villages are in stratum covered by the BOBP bio socio-economic study.
- Villagers are willing to participate in the study.

(Provisional village locations are: North Salimpur village [Latifpor area of Chittagong], one village in the Cox's Bazaar

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region, and one village on Hatia island.)

Methodology

The study will compile primary longitudinal data (thirteen months) on the three villages with an emphasis on qualitative data supplemented by limited quantitative data over the same period, and secondary data to provide a historical perspective. Primary data will be compiled using selected community participatory techniques (e.g. mapping, wealth ranking, village histories), plus selective household case studies, open-ended interviews with randomly selected villagers and non-villager key respondents. Given the extended period available, emphasis will be placed on personal relationships rather than a pre-determined selection of study techniques.

Provisional Data Analysis Framework

Based on previous studies (e.g. Bennett 1991; Thomson et al 1993), input from the first workshop of the Sustained Income Enhancement project, and the study team's preliminary visit to a selection of set bagnet fishing communities in the Chittagong area, the following provisional framework for analysis has been developed:

	Fishing Activity	Other Economic Activity (including debt/-credit)	Marketing/Trade	Social and Reproductive Activity	Resource Ownership /Access
Household					
Gender					
Age					
Economic Class					

Blowfield & Haque

Caste					
Residence					
Religion					
Season					

Preliminary Focus Areas

The study will provide sufficient data to describe and analyse the following aspects of the social and economic life in the three villages, and other aspects as arise during the study's implementation:

Village social structure

- 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;
 - villager-assessed wealth ranking of households;
 - family ties of different households;
 - resources used by the community.

- History of the village.

- Description of village power structure including:
 - control over the resources (Who has the power to allocate?);
 - the role of religion;

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- the role of gender;
 - the role of family;
 - the role of economically-determined relationships (e.g. trader-fisher, boat owner-boat user, small trader-large trader, employer-employee).
- Description of the economic activities of the village covering:
 - all types of 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);
 - the economic value of the activity (for production, for reproduction).
- Description of the social activities of the village covering:
 - all types of activity;
 - who is involved in 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).
- Identification of formal and informal social and economic alliances within the village, for instance:
 - trader groups;
 - religious groups;
 - fishing groups;
 - loan groups;

Blowfield & Haque

- community groups;
- cooperation, 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;
 - government.
- Description of conflict with external parties and its resolution.

Household and extended family case studies

Case studies will be built up of a cross-section of households using classifications developed during the preliminary village mapping exercise. Possible classifications will include households of different religions, households of different wealth, households with different economic activities, male and female headed households, etc.

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

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members;

- outward migration;
- economic activities of household members (past and present);
- 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);
 - 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;
 - saving and investment (long-term and short-term).

- Description of trading relations including:
 - credit systems (amounts, seasons, use,

etc);

- trading groups and individual traders;
- impact of trading relations on livelihood strategies.

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;
 - quantities of different fish types caught during different seasons using different gears.
- Description of the utilisation 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 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 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);

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- who is fish then sold to (by trader, by type and by season);
- prices of fish at different levels of trade chain;
- amount of fish for own consumption (by trader, by type and by season).

Other considerations:

- The position of poor fisherfolk in the context of their immediate community (e.g. farmers, non-fish traders).

Annex 2: Project Frameworks Resulting from Study

	Objectively Verifiable Indicators	Means of Verification	Assumptions
<p>Goals:</p> <p>a. Enhanced sustainability of livelihood strategies amongst the present population of coastal fishing communities in Bangladesh.</p>	<ul style="list-style-type: none"> ● Increased diversity of economic activities by set bagnet communities. ● Increased skills base of the communities. ● Increased representation of communities in relation to local and national development. 		
<p>b. Reduced pressure from economic exploitation on the marine resource in Bangladesh.</p>	<ul style="list-style-type: none"> ● Increased diversity of non-fisheries income generating activities in set bagnet communities. ● Increased non-fisheries skills base within the communities. ● Enhanced economic value of the existing fish catch. ● Improved policy-making capacity in relation to the marine resource. 		

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	Objectively Verifiable Indicators	Means of Verification	Assumptions
<p>Purpose:</p> <p>To develop models of institutional support for assisting set bagnet communities in establishing socially equitable approaches towards sustainable poverty alleviation through addressing post-harvest fisheries concerns.</p>	<ul style="list-style-type: none"> ● Three models of working with set bagnet communities through different-sized intermediary institutions. ● Institution building activities for at least ten development organisations/agencies working with set bagnet communities. 	<ul style="list-style-type: none"> ▶ Evaluation of gender-impact. ▶ Evaluation of impact by socio-economic level within the community. ▶ Evaluation of institutional sustainability and replicability. 	<ul style="list-style-type: none"> ■ Climatic conditions permit project implementation as scheduled. ■ Fish catch is sufficient each season not to disrupt economic life communities. ■ NGOs continue to have the resources to operate their overall programmes.

	O.V.I.	Means of Verification	Assumptions
<p>Output:</p> <p>1.1 Development of institutional models for addressing post-harvest fisheries issues in set bagnet communities.</p>	<ul style="list-style-type: none"> ● Three models developed and field-tested working through three different institutional frameworks (one medium-sized NGO, one local NGO, one community group). 	<ul style="list-style-type: none"> ▶ Project records. ▶ Assessment by participating organisations. ▶ Evaluation by ODA-FHFP IMU. 	
<p>Activity:</p> <p>1.1.1 Development and implementation of community-level training course in basic fish handling, processing and marketing.</p>	<ul style="list-style-type: none"> ● Materials developed. ● Training course implemented in three communities. ● Experiences from courses used as input into Output 1.2. 	<ul style="list-style-type: none"> ▶ Assessment of materials. ▶ Project records. ▶ Uptake in Output 1.2 	<ul style="list-style-type: none"> ■ Output 1.2 implemented as scheduled.
<p>1.1.2 Enhancement of community access to formal third party sources of credit, capital, marketing channels and alternative (non-fisheries) income generating opportunities.</p>	<ul style="list-style-type: none"> ● Sources of credit and capital identified. ● Information disseminated to three communities. ● Community groups formed in three communities. 	<ul style="list-style-type: none"> ▶ Project records. ▶ Dissemination materials. ▶ Community evaluation. 	

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	O.V.I.	Means of Verification	Assumptions
1.1.3 Increased availability of seed capital for post-harvest fisheries including processing and marketing.	<ul style="list-style-type: none"> ● Three sustainable and replicable institutional models of financial services in different institutional settings. ● Seed capital proportionally available to all socio-economic categories of the communities. ● Seed capital proportionally available to male and female groups. ● 90% repayment of loans to management body. Project records. 	<ul style="list-style-type: none"> ▶ Project records. ▶ Group records. ▶ Community evaluation. 	<ul style="list-style-type: none"> ■ Where existing NGO financial services exists, NGOs are able to adapt these to specific set bagnet community needs.
1.1.4 Increased availability of seed capital for alternative (non-fisheries) income generating activities.	<ul style="list-style-type: none"> ● Three sustainable and replicable institutional models of financial services in different institutional settings. ● Seed capital proportionally available to all socio-economic categories of the communities. ● Seed capital proportionally available to male and female groups. ● 90% repayment of loans to management body. 	<ul style="list-style-type: none"> ▶ Project records. ▶ Group records. ▶ Community evaluation. 	<ul style="list-style-type: none"> ■ Where existing NGO financial services exists, NGOs are able to adapt these to specific set bagnet community needs.

	O.V.I.	Means of Verification	Assumptions
1.1.5 Increased availability of female-specific seed capital.	<ul style="list-style-type: none"> ● Three sustainable and replicable institutional models of financial services in different institutional settings. ● Seed capital available to women for productive and reproductive (consumptive) activities. ● 90% repayment of loans to management body. 	<ul style="list-style-type: none"> ▶ Project records. ▶ Group records. ▶ Community evaluation. 	<ul style="list-style-type: none"> ■ Where existing NGO financial services exists, NGOs are able to adapt these to specific set bagnet community needs.
1.1.6 Increased capacity of community groups to represent community interests.	<ul style="list-style-type: none"> ● Male and female groups formed in three communities. ● Groups able to develop, implement and manage programme of activities. ● Communities able to conduct community evaluations. 	<ul style="list-style-type: none"> ▶ Community evaluation. ▶ Project records. 	
	O.V.I.	Means of Verification	Assumptions
Output: 1.2 Enhanced capacity of government and NGOs to answer the specific needs of set bagnet communities.	<ul style="list-style-type: none"> ● Enhanced skills base of DOF and at least 10 NGOs working with set bagnet communities. 	<ul style="list-style-type: none"> ▶ Assessment by NGOs and DOF. ▶ Evaluation by ODA-PHFP IMU. 	<ul style="list-style-type: none"> ■ DOF willing to participate on regular basis.

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	O.V.I.	Means of Verification	Assumptions
<p>Activity:</p> <p>1.2.1 Development and implementation of institution-level training course in post-harvest fisheries technology.</p>	<ul style="list-style-type: none"> ● Training materials. ● Participation of representatives of DOF and at least 10 NGOs in training course. ● At least three community level training activities run using knowledge gained from the course. 	<ul style="list-style-type: none"> ▶ Assessment by participants. ▶ Project records. 	<ul style="list-style-type: none"> ■ Community-level activities can be implemented within project time-frame.
<p>1.2.2 Development and implementation of institution-level training course in marketing for set bagnet communities.</p>	<ul style="list-style-type: none"> ● Training materials. ● Participation of representatives of DOF and at least 10 NGOs in training course. ● At least three community level training activities run using knowledge gained from the course. 	<ul style="list-style-type: none"> ▶ Assessment by participants. ▶ Project records. 	<ul style="list-style-type: none"> ■ Community-level activities can be implemented within project time-frame.

	O.V.I.	Blowfield & Hague Means of verification	Assumptions
1.2.3 Strengthening institutional capacity in relation to gender issues in set bagnet communities.	<ul style="list-style-type: none"> ● Women in development issues affecting set bagnet communities identified. ● Three training activities on women in development issues affecting set bagnet communities implemented. ● At least three NGOs/community organisations incorporating set bagnet community-specific WID issues in their programmes. 	<ul style="list-style-type: none"> ▶ NGO assessment. ▶ Evaluation by ODA-PHFP IMU. 	
1.2.4 Core support to set bagnet community representation network.	<ul style="list-style-type: none"> ● At least 30 set bagnet communities participating in network. 	<ul style="list-style-type: none"> ▶ Project records. 	
1.2.5 Strengthening institutional capacity in relation to policy issues concerning set bagnet communities.	<ul style="list-style-type: none"> ● Major policy issues identified. ● Information disseminated on major issues to government and NGOs. ● Policy-related training needs identified. ● One policy-related skills training course implemented. 	<ul style="list-style-type: none"> ▶ Project records. ▶ Disseminated materials. 	
1.2.6 Support for community level activities arising from above training courses.	<ul style="list-style-type: none"> ● Five training activities implemented by NGOs and/or government. 	<ul style="list-style-type: none"> ▶ Project records. ▶ Evaluation by ODA-PHFP IMU. 	

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	O.V.I.	Means of Verification	Assumptions
Output: Project administration.	<ul style="list-style-type: none"> ● Administrative and logistic support to above outputs and activities. 	<ul style="list-style-type: none"> ▶ Project documentation 	
Activity: Training in community evaluation.	<ul style="list-style-type: none"> ● Three ODA-PHEP staff trained in community evaluation techniques. ● Availability of community evaluation results for external evaluator. 	<ul style="list-style-type: none"> ▶ Training documentation. ▶ Results of community evaluation. 	
Routine administration.	<ul style="list-style-type: none"> ● Administrative requirements of project realised. 	<ul style="list-style-type: none"> ▶ Project records. 	
External evaluation.	<ul style="list-style-type: none"> ● Annual external evaluations conducted. 	<ul style="list-style-type: none"> ▶ Written reports. 	
Staff recruitment.	<ul style="list-style-type: none"> ● Appointment of suitable women in development coordinator. ● Appointment of suitable coordinator for three pilot models. ● Appointment of consultants as required. 	<ul style="list-style-type: none"> ▶ External evaluation of appointees' work. 	<ul style="list-style-type: none"> ■ Expert personnel of necessary quality are available.

Annex 3: Rakhainpara Case Studies

Rakhainpara Case Study 1

MA SEN DA (HH code 53)

Ma Sen Da is 50 years old and has been separated from her husband for many years now. She has built her livelihood on two occupations: fabric trading and weaving of traditional handloom fabrics.

At nineteen, she was given in marriage to a man from the Moghpara in Choupaldondi union. Her husband could barely make ends meet, was lazy, and did not want to work. Soon, she realised he had too many bad habits to be reconciled with, and two years after their marriage, she left her husband's home to return to her parent's. When she did so, she had with her one son of four months.

Rakhain tradition holds that if a father passes away or divorces/separates with the mother, the mother will have custody of the child(ren). A woman who is widowed/divorced/separated may marry again, but little evidence is found of this happening.

About thirty years have passed since then, and Ma Sen Da's child has grown up, married and for the last seven years has lived in another Rakhain community in his father-in-law's home as is customary. She looks after her very old father as her mother passed away a few years ago.

Ma Sen Da goes to Cox's Bazar to buy fabric (for making ready-made garments), ladies blouse, petticoats, and children' wear. She sells these from door to door amongst the Rakhain as well as in the surrounding Muslim communities. Her daily income from this venturing fetches Tk 70-80. She also has a loom which she operates in her spare time. Her household monthly expense comes to Tk 2,000 which she manages from these two occupations.

Ma Sen Da's household belongings are listed below:

01. aluminium cooking pots (<i>patil</i>)	5 pcs.
02. aluminium cooking pots (<i>dekchi</i>)	2 pcs.
03. aluminium jug	2 pcs.
04. aluminium glass	2 pcs.
05. aluminium plate	3 pcs.
06. aluminium bowl	2 pcs.

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07. aluminium dish	1 pc.
08. aluminium water holder (<i>kalash</i>)	2 pcs.
09. ceramic saucer (quarter plates)	4 pcs.
10. ceramic bowl	3 pcs.
11. cap/hat	2 pcs.
12. blanket (<i>katha</i>)	2 pcs.
13. pillow	3 pcs.
14. wooden bench	2 pcs.
15. wooden handloom	1 pc.
16. wooden chair	2 pcs.
17. clothes	4 sets.

Rakhainpara case study 2

MONG CHING AUNG (HH Code 78)

Mong is 37 years old and has a son who turned two this year. His four daughters are twelve, nine, seven and four years old. He has two mechanised fishing boats with 22 and 33 hp engines. He also has four set bagnets.

Mong has been married for fourteen years now, to a woman from the Rakhain community in Ramu. He started going to sea on fishing boats with his father three years before his marriage. He has been living away from his parents for seven years now. He was given a set bagnet at that time by his father.

He started off his new life as a *majhi* with the set bagnet and, in a years time made enough to save Tk 10,000. With his savings and Tk 40,000 loaned from his father in law, Mong bought a boat with a 10 hp engine and started as a *bohoddar*. In his second year, he made two more nets.

During 1991-92, his net earning after meeting all expenses was Tk 80,000. He had to pay a fat interest on the loan and was left with Tk 45,000. He again took out a loan and bought another (his fourth) net and a boat powered with a 24 h.p. engine.

During 1992-93, his income was Tk 96,000, and after paying interests charged, had Tk 50,000 left. After paying for the boat and net he had hardly any money and so had to resort to borrowing once again. During 1993-94, he obtained a loan at an interest rate of Tk 50 per Tk 1000 per month.

This year, he has netted enough fish to earn Tk 90,000. He paid Tk 50,000 as interest, and was left with Tk 40,000. Under Mong's *bohoddari* are team of two *majhi* and fourteen crew members.

An estimate of Mong's annual expenses is given:

daily food and other necessities	= @	Tk	50
annually	=	Tk	18,000
medical care (incl doctor's fee)	=	Tk	1,500

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entertaining relations + guests	=	Tk	2,500
clothes and footwear	=	Tk	3,500
religious ceremonies	=	Tk	2,500
educational expenses	=	Tk	2,500
miscellaneous	=	Tk	2,000
 total annual expense	=	Tk	 32,500

An estimate of how the majhi and the crew share entitlement is described:

All the costs before and during the fishing season are borne by the *bohoddar*. After all costs of the fishing expeditions are met, the income is distributed as follows:

The majhi gets 2 shares out of sixteen equal shares;

Each crew member gets 1 share;

Before each season, each of the two majhi's are given an advance of Tk 4,000, and each crew is given Tk 2,000.

The responsibility for the boat at sea is entirely with the majhi.

A list of the fishing teams under Mong's *bohoddari* is described below:

sl	hrcode	name and position in team	
01	51	Chwa La Aung, majhi, s/o Sha Mong;	
02	77	Sing Mong, majhi	
03	60	Aung Thoi Pru, crew	
04	24	Alung, crew	
05	76	U Ching Mong, crew	
06	38	U Ba Sing, crew	
07	67	Aung Sing, crew	
08	77	U Thoin Mong, crew	s/o Sing Mong code 77;
09	82	Mong Thoi We, crew	s/o Le Ri;

10	67	Ching Thoi Aung, crew
11	18	Aung Khaw Mwa, crew
12	42	Ka Mong, crew
13	Mohesh*	Mong Thoi, crew,
14	Chopol*	Mong Kwa Thoi, crew
15	Ramu*	Aung Ching La, crew
16	Ramu*	Ne Wa Mong, crew

notes:

Mohesh* member of Rakhain community settled in Moheshkhali;
Chopol* member of Rakhain community settled in Chopoldondi;
Ramu* member of Rakhain community settled in Ramu.

GLOSSARY

aratdar	leading figure in fish trading network
AZAD	Cox's Bazar NGO
behundi jal	set bagnet
bera	bamboo fence
bohoddar	fishing boat-owner (often also the operator)
chanda	pomfret
chandi	<i>hilsa</i> net (Rehania)
CODEC	Coastal Development Centre - a Chittagong-based NGO
dadondar	fish-trader cum money-lender
dittiya	second day of full moon
far	the nets and poles used for catching <i>hilsa</i>
haat	measurement of length/size
hilsa	
jo	fortnightly peak fishing period during <i>hilsa</i> season
jol kar	fishing tax
jolodas	fishing sub-caste of Hindu believers
kalshi	brass water-container
katha	type of clothing
kati	basket used as measure for selling <i>hilsa</i>
khol	unmechanised fishing boat (Rehania)
majhi	leader of fishing team
mandir	temple
maund	unit of weight measure (37.5 kg)
mukkho	secretary to Sardar
paikar	medium-sized fish trader
panchami	fifth day of full moon
poon	measurement of fish quantity (80 pieces)
po unna	net-owners using another persons boat
poa	croaker
prasad	religious food offerings
samity	CODEC-run savings & loans group
sardari/sardar	Delipara community leadership system
seer	0.9 kg

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shallish	form of traditional legal trial
Shitola	Hindu deity
Sraboni Purnima	Hindu sea goddess
tempo	mechanised boat (Rehania)
thana	government administrative area
Tk	taka (Bangladesh currency)
tong	<i>hilsa</i> net (Delipara)

BIBLIOGRAPHY

Bennett C.J. (1991) Report on a Visit to Bangladesh to Study Socio-economic Aspects of Estuarine Set Bagnet Fisheries for the BOBP Fisheries Programme; R1776(R), NRI, Chatham

Rogers, J.F., M.E. Blowfield (1993) Report on a visit to Bangladesh - Use of ice and value addition by artisanal communities; R1981(R), NRI, Chatham

Roy, R. (1994) Learning by Doing in Bangladesh: extension system development for coastal and estuarine fisherfolk communities; BOBP, Madras