

Socio-Economic Baseline Survey of Open Water Fisheries under Fourth Fisheries Project

PROFILE OF EIGHT WATER BODIES

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1. Introduction

This report provides a detailed discussion on individual water bodies of the socio-economic baseline survey of eight open water fisheries under the Fourth Fisheries Project (FFP) introduced by the Department of Fisheries, Bangladesh. BRAC conducted this study on request from the FFP. The study was undertaken in order to establish a socio-economic baseline in the intervention sites of the Open Water Fisheries Management (OWFM) components for present planning and further impact assessment. The study has been designed following the Sustainability Livelihoods Framework formulated by the Department for International Development (DFID), UK. A brief discussion on conceptual aspect of the framework has been added. Data was collected from 24 sample villages, selected proportionately representing the eight water bodies. The survey produced two types of output: (a) Summary Report and (b) Profiles of Eight Water Bodies, which includes the village profiles as well. The summary report gives a brief analysis on eight sampled water bodies. The present report contains profiles of eight individual water bodies based on information collected mostly through Participatory Rural Appraisal (PRA), supported by household survey. The baseline survey has also produced a set of quantitative data that have been linked with the profiles of each water body. The methodology, study locations and other related information are presented in the following pages.

1.1 Background

Bangladesh has 4.34 million hectre of inland open water bodies including river, canal, *beel*, flood-land, pond, etc. Production of fish in these water bodies is rapidly declining due to natural and human factors. In addition to decline in fish production the bio-diversities and fish species in these water bodies are also decreasing sharply. The open water fisheries are further characterized by intense fishing competition by new entrants pushed out from other sources of income and employment. A few relatively wealthy and powerful people very often control the fisheries and detract the livelihoods of the poor fishermen.

In order to arrest the extinction of fish species and bio-diversities and increase the production of fish the Department of Fisheries introduced a number of projects, one after another, since early part of the last decade. Finding the projects not very effective, the Department of Fisheries in collaboration with the Bangladesh Water Development Board, donors and few others have undertaken the FFP for the year 2000-2004. The project is a comprehensive one and is in progress.

To achieve the above objectives the FFP has introduced several physical establishments – Floodplain Stocking, Fish Sanctuary, Fish Habitat Restoration, Construction of Fish Pass and Rehabilitation of Fish Friendly Regulators, and *Hilsa* Management and Conservation – in the water bodies throughout the country. Further, the FFP has introduced Open Water Fisheries Management (OWFM) – a sustainable organic management for effective functioning of the establishments in the water bodies.

The enhancement of fish stock has been planned to achieve through stock enhancement and conservation activities. Along with these activities, steps have been initiated to ensure equitability and sustainability through newly created village development committees (VDCs)

and fisheries management committees (FMCs). The committees are likely to enhance the capability of a greater number of people to participate in resource management and increase their livelihood opportunities with the help of local non-government organizations (NGOs).

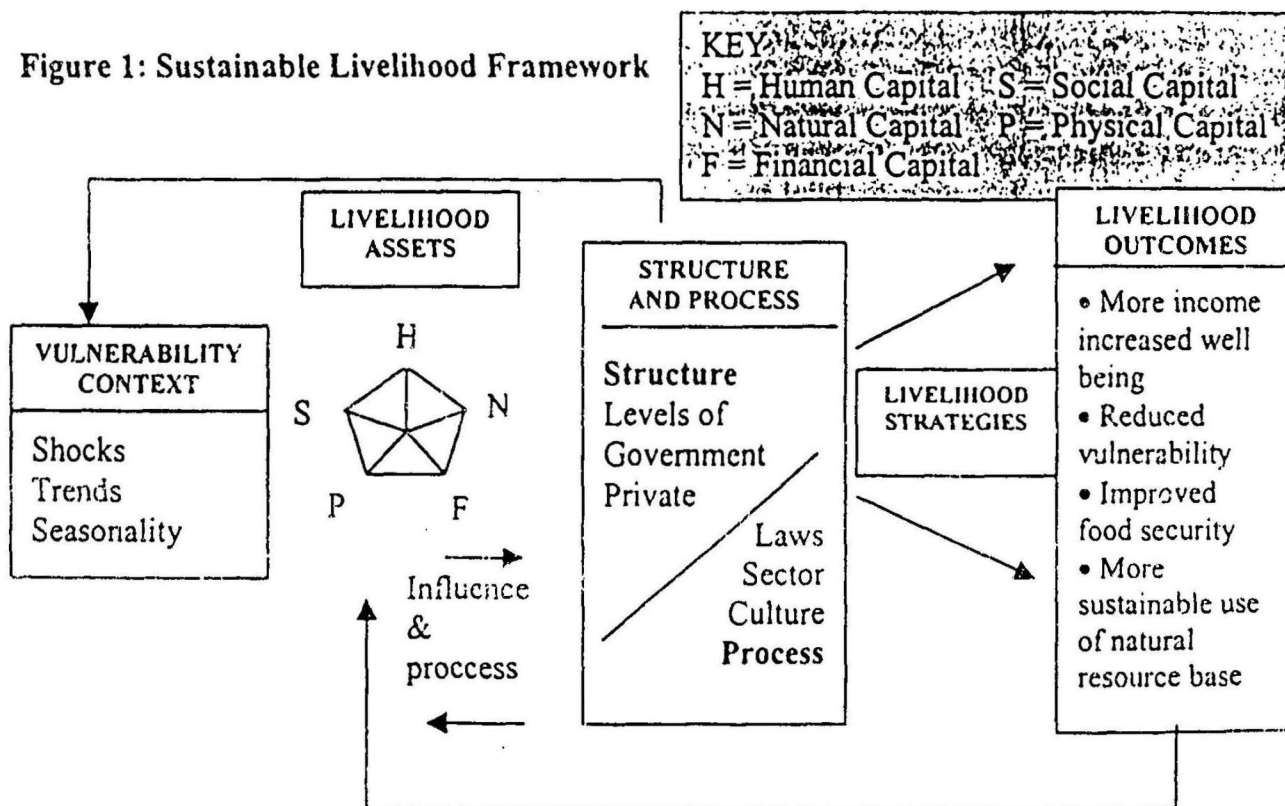
1.2 Sustainability Livelihood Framework

Sustainability Livelihood Framework provides an analytical base for livelihood assessment and obtains a broad view of people’s needs and livelihood strategies. It combines economic and social aspects of development with vulnerability or resilience, environmental sustainability and builds up on the existing strength of poor people.

A livelihood is defined as comprising of the capabilities, assets and activities required for a means of living. Thus livelihoods are shaped by a multitude of different forces and factors that are themselves constantly changing. A livelihood is considered sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future not undermining the natural resource base.

The framework is a tool to improve our understanding of livelihoods, particularly the livelihoods of the poor. In particular, the framework (1) provides a checklist of important issues and sketches out the way these link to each other; (2) draws attention to core influences and processes; and (3) emphasizes the multiple interactions between the various factors which affect livelihoods.

Figure 1: Sustainable Livelihood Framework



The framework in Figure 1 shows the key components that flow from contextual/trend analysis through livelihood assets or resources, institutional process and livelihood strategies before determining livelihood outcome.

1.2.1 Vulnerability context

The vulnerability context frames the external environment in which people exist. People's livelihoods and the wider availability of assets are fundamentally affected by critical trends as well as by shocks and seasonality – over which they have limited or no control. The factors that make up the vulnerability context, e.g., shocks, trends, seasonal shifts in price, etc., are important because they have direct impact upon people's asset status and the options that are open to them in pursuit of beneficial livelihood outcomes.

The vulnerability context is the part of the framework that lies furthest outside people's control. In the short to medium term and on an individual or small group basis there is little that can be done to alter it directly.

1.2.2 Livelihood assets

It seeks to gain an accurate and realistic understanding of people's strengths (assets or capital endowments) and how they endeavor to convert these into positive livelihood outcomes. The approach is founded on a belief that people require a range of assets to achieve positive livelihood outcomes. No single category of assets on its own is sufficient to yield all the many and varied livelihood outcomes that people seek.

The asset pentagon lies at the core of the livelihood framework, 'within' the vulnerability context. Five types of assets are included in the framework (Figure 1). These are: Natural capital, Human capital, Social capital, Physical capital, and Financial capital. A brief elaboration of each type of assets is added in the following paragraphs. It is important to note that a single physical asset can generate multiple benefits. If someone has secure access to land he or she may also be well endowed with financial capital, as they are able to use the land not only for direct productive activities but also as collateral for loans.

Natural capital: It is the natural resource stocks from which resource flows and services (e.g., nutrient cycling, erosion protection) useful for livelihoods are derived. There is a wide variation in the resources that make up natural capital, from intangible public goods such as the atmosphere and bio-diversity to divisible assets used directly for production (trees, land, etc.).

Human capital: Human capital represents the skills, knowledge, ability to labour and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives. Human capital appears in the generic framework as a livelihood asset, that is, as a building block or means of achieving livelihood outcomes. Its accumulation can also be an end in itself. Many people regard ill health or lack of education as core dimensions of poverty and thus overcoming these conditions may be one of their primary livelihood objectives.

Social capital: It is social resources upon which people, particularly the rural poor, draw in pursuit of their livelihood objectives. These are developed through: (1) **network and connection**, either vertical (patron/client) or horizontal (between individuals with shared interests) that increase people's trust and ability to work together and expand their access to wider institutions, such as political or civic bodies; (2) **membership of more formalized groups**

which often entails adherence to mutually-agreed or commonly accepted rules, norms and sanctions; and (3) **relationships of trust, reciprocity and exchanges** that facilitate co-operation, reduce transaction costs and may provide the basis for informal safety nets amongst the poor.

Physical capital: Physical capital comprises the basic infrastructure and producer goods needed to support livelihoods. Infrastructure consists of changes to the physical environment that help people to meet their basic needs and to be more productive. Producer goods are the tools and equipment that people use to function more productively.

Financial capital: Financial capital denotes the financial resources that people use to achieve their livelihood objectives. It includes flows as well as stock and it can contribute to consumption as well as production.

1.2.3 Structure and process

Transforming structures and processes within the livelihood framework are the institutions, organizations, policies and legislation that shape livelihood. They operate at all levels, from the household to the international arena, and in all spheres, from the most private to the most public. They effectively determine: (1) access to various types of capital, to livelihood strategies and to decision-making bodies and sources of influence; (2) the terms of exchange between different types of capital; and (3) returns from economic and other livelihood strategy.

Structure: Structures are the hardware in the framework – the organizations both private and public – that set and implement policy and legislation, deliver services, purchase, trade and perform all manner of other functions that affect livelihoods. They draw their legitimacy from the basic governance framework.

Process: Processes can be thought of as software in the framework. They determine the way in which structure and individual operate and interact. They are both crucial and complex: not only are there many types of processes operating at a variety of different levels, but there is also overlap and conflict between them. Distinguished processes are policy, legislation, institution, culture, and power relations.

1.2.4 Livelihood strategies

The livelihood approach seeks to promote choice, opportunity and diversity – the overarching term used to denote the range and combination of activities and choices that people make/undertake in order to achieve their livelihood goals (including productive activities, investment strategies, reproductive choices, etc.). The ability to pursue different livelihood strategies depends on different livelihood resources people have in their possession. In simple terms, the resources are categorized as natural (stocks and flows), financial (cash, credit/debt, savings), physical (infrastructure), human (skill and knowledge) and social (norms of cooperation).

1.2.5 Livelihood outcomes

Livelihood outcomes are the achievements or outputs of livelihood strategies. The livelihood outcomes introduced in the framework are categories that would make this section of the framework manageable.

1.3 Methodology

The main task in this survey research is to gather data and enhance understanding so that multiple interactions between various factors affecting livelihood of the people within the catchment of FFP could be analyzed in the light of the framework. The livelihood assessment is essentially an analysis of relationship between people, behaviours and resources; therefore sought indicators that are able to reveal the relationships.

Both qualitative and quantitative approaches were used in collecting the information. However, the study adopted the basic principles of participatory approaches quite extensively. Due to this approach the villagers had the freedom to identify the poor by their own definition. The definition is a pointer to asset endowments that has led to a detailed analysis of asset ownership of poor and non-poor households. The exercises have organized around the following five key themes of the framework:

- Vulnerability context: external environment in which people exist.
- Livelihood assets: people's strength and how they are used.
- Structure and process: organizations and institutions that operate in the society.
- Livelihood strategies: choice, opportunity and diversities.
- Sustainable livelihood outcomes: achievement or outputs of livelihood strategies.

The baseline data collection was undertaken in eight selected water bodies – equally divided between floodplain/*beels* stocking¹ and fish sanctuaries². Out of total 101 villages, data were collected from 24 villages as samples, selected proportionally representing the water bodies.

¹ Floodplain/*beel* includes the areas, which get seasonally inundated due to flowing over of water from the rivers. Stocking has been developed in the floodplains in protected reservoirs so that fish may grow and breed in the flowing season.

² Refers to the habitat created for seasonal and round the year fish species in selected areas within the rivers, *beels* and ox-bow lakes.

Table 1.1: Sample water bodies under OWFM and related statistics

Water bodies	FFP intervention	Number of village	Households		Sample	
			Total	Fishing	Village	Household
1. Padma Narisha Ujanjala Dohar, Dhaka	Sanctuary	4	1,174	450	2	32
2. Tangon River Pirganj, Thakurgaon	Sanctuary	8	399	289	1	16
3. Bangali Nadi Shariakandi, Bogra	Sanctuary	11	2,742	1,530	3	48
4. Kumar River Faridpur	Sanctuary	13	740	444	2	32
5. Borobila Beel Rangpur	Stocking	22	2,980	2,022	4	64
6. Dasherhat Chhara, Kurigram	Stocking	12	2,177	1,866	3	48
7. NPBS Gaibandha	Stocking	22	4,408	2,673	6	96
8. Shoshikor Madaripur	Stocking	9	1,814	1,162	3	48
Total		101	16,434	10,436	24	384

1.3.1 Data collection tools

Qualitative approach: This approach helped and was largely used in building village profiles. The profile contains a picture of village resources, proportion of the poor relative to other socio-economic groups, and pattern of access to different resources including fisheries of different socio-economic groups.

Three techniques of Participatory Rural Appraisal (PRA) – wealth ranking, seasonal calendar, and resource mapping – were employed in collecting the data. The **wealth ranking** provided a picture of economic strata of the villages – rich, middle class, upper poor, poor and destitute households including the fishermen. **Seasonal calendar** has been employed to understand the seasonal variation of the employment opportunities, deficit of food and availability of fishes in the study villages. It also reflects the most vulnerable time considered by the villagers when it becomes imperative for them to adopt alternative strategies to cope with the situation. Bangla calendar months were mentioned by the villagers in describing the time of food insecurity, which has been converted to the corresponding months of the English calendar. The **resource mapping** provided the profile of a whole village particularly in terms of the resources present therein.

Quantitative approach for household survey: Information collected through PRA was backed up by data collected through questionnaire from sample households. The survey was conducted by administering a short questionnaire, designed for both structured and unstructured responses, in 16 households systematic-randomly selected from pre-defined wealth category groups through PRA in each village. However, in a few cases the ranking of wealth through PRA did not match with the economic solvency data collected through household survey. It may be worthwhile to mention in this context that PRA exercises depend on the knowledge and conceptualization of an issue of the informant group. So there may remain a chance of over or under reporting about the information of those households if the informant groups do not know very well. It would have been better if this item of information could be checked with the village group again. But this

inconsistency became apparent after the two types of data were processed when such verification was not possible. Table 1.2 shows the proportion of the sample households for the household survey in different wealth groups in the sample water bodies.

Table 1.2: Proportion of samples for household survey

Water bodies	Wealth category			
	Rich/middle	Upper poor	Poor	Destitute
Padma Narisha Ujanjala (n=32)	25.0 (8)	28.1 (9)	31.3 (10)	15.6 (5)
Tangaon Nadi (n=16)	56.3 (9)	12.5 (2)	25.0 (4)	6.3 (1)
Bangali Nadi (n=48)	14.6 (7)	27.1 (13)	33.3 (16)	25.0 (12)
Kumar Nadi (n=32)	12.5 (4)	9.4 (3)	34.4 (11)	33.8 (14)
Barobila Beel (n=64)	28.1 (18)	10.9 (7)	17.2 (11)	43.8 (28)
Dasherhat Chara (n=48)	18.8 (9)	37.5 (18)	29.2 (14)	14.6 (7)
NPBSS (n=96)	30.2 (29)	18.8 (18)	17.7 (17)	33.3 (32)
Shashikar (n=48)	22.9 (11)	20.8 (10)	14.6 (7)	41.7 (20)
Total (n=384)	24.7 (95)	20.8 (80)	23.4 (90)	31.0 (119)

Note: Figures in the parentheses indicate the number

In household survey focus was given on deriving information on the following issues:

<u>Demography:</u>	Provided information such as family composition, occupation and education status, etc. relating to the households.
<u>Landholding:</u>	Reflected the well-being of households.
<u>Days employed:</u>	Provided information on the livelihood strategies of different types of household across seasons.
<u>Food deficit:</u>	Provided information on the seasonal pattern of food insecurity indicating the economic status of household.
<u>Coping strategies:</u>	Indicated the strategies adopted in times of income or asset loss and the pattern of borrowing.
<u>Housing:</u>	Provided information on the condition of housing indicating the economic status of household.
<u>Health-seeking behaviour:</u>	Provided information on the practices for getting treatment in case of illness.
<u>Expectation from FFP:</u>	Provided information on expected impact by beneficiaries of FFP.

1.3.2 Data analysis

Information was collected during September-October, 2001. Twenty-five trained staff working in BRAC programs were employed to collect the qualitative information from 24 villages. It was recorded manually during the informal group meetings in the villages and entered in computer at the end of data collection. Finally the data were compiled in the computer files to facilitate analysis and drafting of reports. The information based on PRA sessions facilitated by the BRAC teams in 24 villages covered more than 160 pages, which required further processing for analysis. Sixteen program staff of eight local NGOs, engaged by the Department of Fisheries for implementing the open water fisheries management, collected the quantitative information from the sample villages. In all 384 households were included as sample. The quantitative information was also computerised.

Socio-Economic Baseline Survey of Open Water Fisheries

Profile of

Padma Narisha Ujanjala, Dohar, Dhaka

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Padma Narisha Ujanjala

The water body Padma Narisha Ujanjala is situated in Dohar upazila in Dhaka district. There is a fish sanctuary in the water body operated by Proshika under the Fourth Fisheries Project. There are four villages under this project and out of these two villages Debinagar and Kutubpur have been selected to study the livelihood conditions of the villagers.

1. Vulnerability Context

The water body is an extension of river Padma that flows to *ujan* (upstream) towards Narisha and Dohar, thus water body is called Padma Narisha Ujanjala. The village Debinagar is situated on a *char* in river Padma. It is believed that once upon a time there were *Debies* (goddesses) whom the Hindus worship. Therefore, the village is called Debinagar. The area surrounding the water body Padma Narisha Ujanjala comprises 12 mouzas and one of those is Kutubpur. The village Kutubpur was named after that mouza.

There are around 6,500 people living in these two study villages. Only 367 households have been identified while PRA was practised. All the residents are Muslims and the stated literacy rate is 23. One of the main sources of livelihood of the villagers is the river Padma Narisha Ujanjala. Fifty-three percent of the household heads are engaged in agricultural work, 30% is fishing, 9% is day-labour and the rest 9% is involved in other economic activities.

The villages seem to be very much neglected, as little development interventions are visible. There are no government high school, college or club in the villages. As river erosion affects the village the political leaders or the villagers are not interested in the development of the village. As the educated people move out of the villages effective local leadership has not grown. Because of these factors development work in the village is very much restricted. The village elite of the villages has a role in arbitration, negotiation of marriage and raising contribution for the mosques and madrasa. Apart from that they play a dominant role in distributing VGD cards and helping in getting relief from the government during flood. There is a direct relation between the local elite and religious leaders in the village. In some cases the religious leaders implement their decisions through the elite such as, not allowing the women to go out and to have education, and force girls to get married at early age. They also arrange *waaz mehfil* (a gathering to disseminate rules and techniques of religion) in the villages.

Activities of government organisations are observed during flood or other natural calamities. The government provide relief materials such as saline, water purification tablet, clothes, etc. It is stated that the administration often allows the fishermen to catch *jatka* (young hilsha fish) from the water body by taking bribe from them.

The villagers usually migrate out, as there is no opportunity of education and economic improvement in the village. They go out to Dhaka in search of job. *Hartals* (political disruption) affect all section of the village – fishermen, farmers and day-labourers. The fishermen cannot sell their fish in the market. They sell it in the village at a lower price. Similarly the farmers cannot sell their produces and the day-labourers do not get any work.

2. Livelihood Assets

The people living in the Padma Narisha Ujanjala villages have been grouped into four wealth - categories as perceived by the villagers. The groups are rich and middle class, upper poor, poor and destitute. Table 2.1 provides information about the number of households under each wealth category and their livelihood assets.

Table 2.1 Well-being pattern in Padma Narisha Ujanjala villages

Wealth category	Household # 367	Livelihood assets
Rich and middle class	28% (103)	• Possess 5-7 acres of land. • Have large business in the market. • Good savings in the bank. • Children of few households are schooling abroad. • Own orchard and livestock. • Good and secured housing. • Sustained income through service.
Upper Poor	17% (63)	• Own homestead and 50-200 decimals of land. • Possess small-scale business. • Few are engaged in low salaried services. • Occasionally sell manual labour.
Poor	31% (115)	• Own homestead. • Do share cropping. • Day-labourer, rickshaw/van pulling. • Fishing.
Destitute	23% (86)	• No cultivable land. • Majorities have homestead of their own. • Depend on fishing. • Lack of regular source of income. • Depend on others for living.

About three-fourth of the study households belong to the poorer section broadly and 23% is in the lowest wealth category.

2.1 Natural capital

The villagers consider river and land as their natural resources. They catch fish from the river for their own consumption. All categories of people have equal access to the river. During rainy season the fishermen get hilsha fish and during dry season they catch boal, chital and pangas in the river. They use the water of the river for irrigation as well as for household purposes.

The land is very fertile, as it is located beside the river. There are two crop seasons – robi and kharif. During robi season they cultivate boro paddy, peanuts, kolai, chillies, and onion. During kharif season, high yield variety paddy, jute and sugarcane are cultivated.

2.2 Human capital

Education, labour and health are considered as major items of human capital. It was stated that the villagers are lacking access to such human capitals that is interrupting the socio-economic progress of the villages.

Education

There is one government and one non-government primary school in the study villages. In government primary school students have 'food for education' cards. Children cannot pursue further education after completing of primary school due to absence of junior high school in that area. It was reported that for fear of river erosion no one become interested to set up educational institutions in the villages. The poor cannot afford sending their children to any school far away from the village. The villagers mentioned that when the boys grow up parents send them outside the village to earn money and the girls wait to get married. The villagers themselves established three madrassas in their areas where children receive religious education.

Labour

People having various occupations and vocations live in the study villages. Migrating out for income generation is very common in this area. People go to work in Dhaka city and send remittances for their families living in the village. Most of the people living in the villages are illiterate so they can not play any role in development. They are mainly involved in agriculture and fishing. Limited number of villagers pulls rickshaw or van. A few women work outside their house for income earning. They come from the poorer section of the village.

Health

Only 14 safe latrines have been identified in two study villages. People have access to drinking water from tube-wells. They have very little knowledge about mother and child health and pregnancy care. Workers of the family planning department come from upazila sadar to provide services to the women and children. Through satellite clinics, they vaccinate the children against six diseases. They also provide some antenatal care to women. The *shasthya shebika* (health worker) from the neighbouring village come to impart health education but that is very nominal. By and large the villagers depend on quack and traditional healers for medical treatment.

2.3 Social capital

The informant groups regarded the services of the social institutions such as school, madrasa, mosque, NGOs and kazi office as their social capital. In the kazi office the villagers register their marriage and divorce. The informant group reported that early marriages are not registered here. People from neighbouring villages come to register their marriages in the kazi office.

2.4 Physical capital

An unpaved road running through the villages is used as shelter during flood. People use boats for transportation. The villages do not have electricity. There are a few deep tube-wells which are used for irrigation purposes. Some households own ponds and use these for fish cultivation. The study villages have five mosques, one common graveyard, two rice mills, one fish depot and one *kheya ghat* (riverbank, which is used for ferryboat).

2.5 Financial capital

Villagers earn their living from cultivation and fishing in the river. The villagers working outside the village send remittances. Three NGOs are operating in the study villages from which

villagers can get loans for income generating activities. There are two ricemills and a fish depot in the villages, which provide employment to some people.

3. Structure and Process

3.1 Government institutions

There is one government primary school in the study villages and one family planning centre. The children receive primary education from that school. People visit the upazila sadar as and when needed mainly for legal services, better education and health care.

3.2 Non-government Organizations, Community-based Organizations and Co-operatives

Grameen Bank, Proshika and Samaj Sheba Kendra have extended their activities in the villages. They provide loan and skill training to poor women on different income earning activities like poultry and livestock rearing and sewing. They also provide health awareness to their members and help to get safe latrine and tube-well at nominal cost. Proshika is implementing the Fourth Fisheries Project in this area. The program is directed to increase the fish production in the open water body and ensure access of the villagers to the water body as needed for their livelihoods. There is a non-government primary school in the village run by the Islamic Foundation. The children of the village can study there. They provide books and other necessities for education to the children and salary to the teachers.

3.3 Informal organizations

There are five mosques in the study villages where the villagers pray. Occasionally the mosques organise *milad mehfls*. Children receive education on religion in the madrassas.

3.4 Private sectors

There are two private ricemills and five deep tube-wells existing in the study villages. The villagers use the mills for paddy husking and with the deep tube-wells they irrigate their lands. Moreover, there is a fish depot privately owned where fishermen sell fishes.

4. Livelihood Strategies

According to the perceptions of the villagers, the people of the study villages fall under four wealth categories. Livelihood strategies of different wealth groups are delineated in table 4.1.

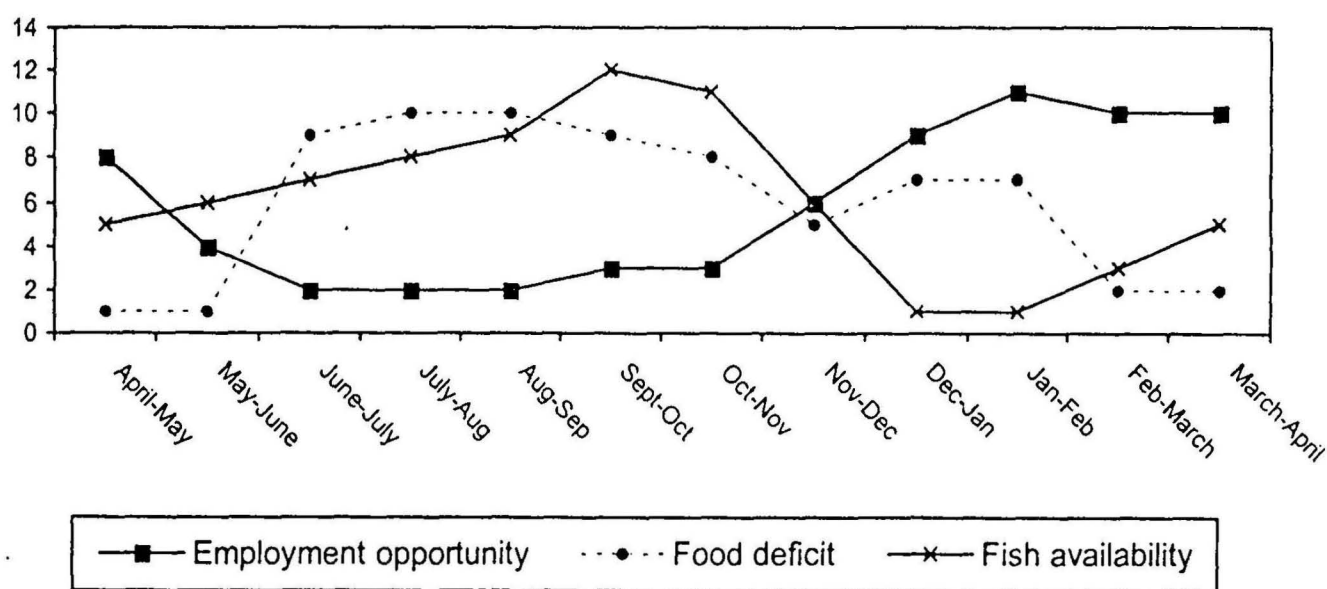
Table 4.1 Livelihood strategies of different wealth groups

Wealth category	Livelihood strategies
Rich and middle class	• Employed as day-labourer in agricultural land. • Minimal agricultural expenses as cultivate with own equipment. • Maximum utilization of assets. • Earn income from different sources. • Invest savings in the bank. • Remittance from family members staying outside the village.
Upper poor	• Work hard as labourer. • Take loan from NGOs for income generation. • Children go only to free primary schools for education. • Engage children for income earning.
Poor	• Work hard everyday. • Sometimes migrate out to the cities for work. • Women and children are involved in cash earnings. • Take loan from NGOs. • Children do not go to school.
Destitute	• Live on wage labour. • Women and children do work for both food and cash. • Migrate out for earning a living.

4.1 Seasonal differences on livelihoods

Figure 1 shows the seasonal variation of employment opportunities, food deficit and availability of fish in the two study villages on which the vulnerability of the villagers depend mostly.

Figure 1: Seasonal vulnerability in the villages



Employment opportunity

The respondents informed that from the beginning of June to the end of October they face scarcity of employment in the villages. During this period there is no work in the field for farmers. There is too much of water all over the places. Therefore, crops cannot be produced. The wage labourers also remain unemployed during this period. They pull van and rickshaw in these months and some of them migrate out to cities in search of job. In September and October the fishermen earn high as because fish is available in plenty at that time.

Starting from November work is available for income earning. January-February is the peak season in terms of the availability of work. During this period the crops are harvested. So the farmers and day labourers get plenty of work. In these months the wage raises from Tk. 100 to 125 per day.

Food deficit

Since the scarcity of employment opportunity prevails during the months of June-October the villagers encounter food deficit during this period. The fishermen cannot catch fish during January-February because of less fish availability, they also face food deficit. From February to May there are plenty of jobs available, therefore no one have food deficit in these villages. During food deficit the villagers become dependent on the moneylenders and different organisations. The day labourers migrate out of the village to cities. Sometimes they sell their assets.

Availability of fish

The peak season for getting fish is September and October and the lowest is in the months of December to February. Price of fish goes down due to excessive catch in this season. So the fishermen cannot maximise their income. In this period they often borrow from moneylenders to buy fishing equipment.

Worst time of the year

The informant group considered the months with food deficit (December-March) as the most vulnerable time of the villagers in a year. Apart from that they often encounter flood. During the crisis they receive support from the government and non-government organisations and sometimes cope with the situation by depending on their savings and stored in food. The respondents reported that as the village is situated beside the river Padma that creates flood they store some food for the hard time instead of looking for help from outside.

The villagers sell assets like livestock, poultry, land and trees at the time of their need. To cope with situation like producing crops, renovating roofs, marriage of daughter or son, medical care for illness and so on they sell their assets. Some of the rich people sell asset in order to buy land and shops in the bazaar, or send their son abroad. The relief materials they get from the government and non-government agencies at the time of floods are not adequate. The affected villagers have to sell out assets to meet the crisis.

5. Livelihood Outcomes

The following table provides a brief view of sustainable livelihood outcomes for different wealth category people in the water body area.

Table 5.1 Sustainable livelihood outcomes for different wealth groups

Wealth category	Sustainable livelihood outcomes
Rich and middle class	• Self sufficient in food. • Have surplus. • Good health. • Literate children. • Enjoy honour from the villagers. • Can have a good future generation.
Upper Poor	• Sometimes encounter food deficit. • Children cannot have higher education. • Lack good health, which creates income erosion. • Cannot invest.
Poor	• Frequent food deficit. • Illiterate children. • Ill health and malnourished. • Lack of credit worthiness.
Destitute	• Food deficit through out the year. • Illiterate children. • Ill health and malnourished. • Despondent and demoralised.

6. Expected Impact of Fourth Fisheries Project by Beneficiaries

The informant group felt that the villagers are not quite sure whether the project will have positive impact on the livelihoods and income of the villagers. They feared that they might not have access to the water body for fishing. However, the implementing NGO is playing a crucial role in this regard. They are trying to make the people understood about the objectives and the expected impacts of FFP. Nonetheless, the fishermen will face problem not to catch fish in the area of sanctuary for a certain period but the rest part of the river is open for all season. So it may not be a big problem for them as the informant group perceived. Still they think that the effectiveness of FFP depends to some extent on the role of the members of VDC and FMC. If they act sincerely in implementing the project, FFP should impact positively on fish resource and on the livelihoods of the villagers.

7. Key Findings of Padma Narisha Ujanjala based on Household Survey

7.1 Introduction

The methodologies used in conducting this baseline survey have earlier been discussed in some details. For the purpose of the survey, household members of the sample villages were classified into four wealth categories (WC) through PRA exercises, such as, Rich/Middle, Upper Poor, Poor and Destitute. In the household survey, sample was taken from each study village proportionately according to the aforesaid wealth grouping. This part of the report contains analysis of the data collected through questionnaires from the sample households in the Padma Narisha Ujanjala water body area. It is located in Dohar upzila of Dhaka district.

7.2 Findings

Total sample households (HHs) in this water body were 32. Highest proportion of the HHs of this water body was categorized through PRA as poor (31.3%), followed by upper poor (28%), rich/middle class (25%) and destitute (15.6%) (see methodology for the criteria of categorization).

Table 7.1 shows distribution of HH heads by their occupation (main¹, secondary², always fishing³, sometimes fishing⁴ and subsistence fishing⁵ - as defined by M & E Specialist of Fourth Fisheries Project). Over 32 percent of heads of the HHs had secondary occupation and 38 percent of heads of the HHs had fishing occupation. Of the rich HH heads, 25 percent had secondary occupation and only about 13 percent had subsistence fishing occupation whilst in the upper poor, over 44 percent had secondary occupation, 33 percent had 'always fishing' and just over 22 percent had 'sometimes fishing'. Among the poor, 40 percent of heads of the HHs had 'always fishing', 30 percent had secondary occupation and 10 percent had sometimes and subsistence fishing occupation; but in the destitute category, only 25 percent had secondary occupation.

Table 7.1: Distribution of HH heads by occupation and wealth category

Wealth category	Secondary occupation	Fishing occupation		
		Always fishing	Sometimes fishing	Subsistence fishing
Rich/middle (n=8)	25.0 (2)	0	0	12.5 (1)
Upper poor (n=9)	44.4 (4)	33.3 (3)	22.2 (2)	0
Poor (n=10)	30.0 (3)	40.0 (4)	10.0 (1)	10.0 (1)
Destitute (n=4)	25.0 (1)	0	0	0
Total (n=31)*	32.3 (10)	22.6 (7)	9.7 (3)	6.5 (2)

Note 1: Figures in the parentheses indicate the number.

Note 2: All HHs had the main occupation. * One case of Padma Narisha Ujanjala was not available in the data set provided by the Department of Fisheries.

Note 3: Multiple responses were considered.

¹ Main occupation means primary employment of the HH from which it gains its income

² Secondary occupation means the next most important means of livelihood for the HH

³ Always fishing means professional fishers – those who engage in fishing as their main livelihood

⁴ Sometimes fishing means occasional fishing

⁵ Subsistence fishing means those HHs who fish to supplement HH diets

Table 7.2 shows socioeconomic and demographic characteristics of the households. The sex ratio was much higher in three groups of HHs, viz., upper poor (184.4), rich/middle (144.6) and poor (141.7) respectively. This means that more males than females were in these HHs. On the other hand, the number of males were about half of the females in the destitute HHs. Average age of the HH heads was highest amongst the rich/middle class (46) and lowest amongst the poor (36). The age-dependency ratio⁶ was highest amongst poor (119) and lowest amongst rich/middle group (78). Age-dependency ratio 119 means, there were 119 persons in the dependent ages (under 15 and over 64 years) for every 100 persons in the working age group (15-64 years). On average the HH heads had 4.0 years of schooling in rich/middle category, 0.4 years in upper poor, 0.9 years in poor and 1.8 years in destitute category. About 19 percent of the HHs were involved with fishing and half of them were from the poor group; none of them was from rich/middle class. Over 34 percent of the HHs were involved with NGO activities, this was nearly 46% in poor group, 36.4% in upper poor and 18.2% in destitute class.

Table 7.2: Household composition in the Padma Narisha Ujanjala

Wealth category	Average sex ratio= (male/female) ×100	Average age of HHH	Age dependency ratio	Average years completed in school (%)		HH involved with fishing (%)	HH involved with NGO (%)
				HHH	HH Member		
Rich/middle (n=8)	144.6	46	77.6	4.0	2.6	0	0
Upper poor (n=9)	184.4	39	84.7	0.4	1.3	33.3 (2)	36.4 (4)
Poor (n=10)	141.7	36	118.7	0.9	1.1	50.0 (3)	45.5 (5)
Destitute (n=5)	46.7	40	115.0	1.8	2.0	16.7 (1)	18.2 (2)
Total (n=32)	139.6	40	98.3	1.7	1.7	18.8 (6)	34.4 (11)

Note: Figures in the parentheses indicate the number

Table 7.3 reveals the average land ownership patterns of the HHs of this water body. On average the HHs had 14 decimals of homestead own land, this was 21.4 decimals in the rich/middle class, 12.3 decimals in the poor 11.2 decimals in the upper poor respectively. On the average the HHs had 50.8 decimals of cultivated own land, and it was highest amongst the rich/middle class (64 decimals) and lowest amongst the destitute (15.2 decimals). An unexpected result was observed that the average amount of fallow own land was highest amongst the poor (23.1 decimals). It reveals from this table that the rich were rather comfortable to leased-out than that of leased-in land. On the contrary, the other three groups were very interested to leased-in than that of leased-out land.

⁶ The age-dependency ratio is the ratio of persons in the dependent ages (under 15 and over 64 years) to those in the "economically productive" ages (15-64 years) in a population

Table 7.3: Average amount of land (in decimal) owned by HHs by wealth and land category

Wealth category	Owned land				Leased-out land	Leased-in land
	Homes- tead	Cultiv- ated	Pond/ Doba	Fallow	Cultivated	Cultivated
Rich/middle (n=8)	21.4	63.8	0.6	0	41.3	0
Upper poor (n=9)	11.2	58.7	0.9	2.8	5.0	25.7
Poor (n=10)	12.3	51.2	1.4	23.1	0	10.6
Destitute (n=5)	10.6	15.2	0.6	0	0	6.6
Total (n=32)	14.0	50.8	0.9	8.0	11.7	11.6

Table 7.4 shows the percentage of the materials used in construction of main rooms of the houses. The floors of main room of almost all houses were made of mud. About 66 percent wall of main rooms of the houses were made of tin, this was 87.5 percent in rich. Over 34 percent wall of main rooms of the houses were made of natural item⁷, this was 50 percent in poor and 40 percent in the destitute. The roofs of main rooms of all houses were made of tin.

Table 7.4: Percentage of materials used in construction of main rooms of the houses by WC

Wealth category	Floor		Wall		Roof
	Brick	Mud	Tin	Natural	Tin
Rich/middle (n=8)	12.5 (1)	87.5 (7)	87.5 (7)	12.5 (1)	100.0 (8)
Upper poor (n=9)	0	100.0 (9)	66.7 (6)	33.3 (3)	100.0 (9)
Poor (n=10)	0	100.0 (10)	50.0 (5)	50.0 (5)	100.0 (10)
Destitute (n=5)	0	100.0 (5)	60.0 (3)	40.0 (2)	100.0 (5)
Total (n=32)	3.1 (1)	96.9 (31)	65.5 (21)	34.4 (11)	100.0 (32)

Note: Figures in the parentheses indicate the number.

Table 7.5 reveals the percentage of the houses by nature of ownership and wealth category. More than 90 percent houses' were owned by the inhabitants themselves.

Table 7.5: Percentage of the houses by nature of ownership and WC

Wealth category	Ownership pattern	
	Owned	Owned by other/rented
Rich/middle (n=8)	100.0 (8)	0
Upper poor (n=9)	88.9 (8)	11.1 (1)
Poor (n=10)	100.0 (10)	0
Destitute (n=5)	60.0 (3)	40.0 (2)
Total (n=32)	90.6 (29)	9.4 (3)

Note: Figures in the parentheses indicate the number

Table 7.6 presents the percentage of HHs who took one meal in a day during 2000-2001. The table indicates that in rich group one HH took one meal in a day for about a year and two HHs took one meal in a day in July-September, which is unexpected. It was also observed in the poor group, virtually one HH took one meal in a day from June to November. Rest of the HHs took more than one meal in a day.

⁷ Natural items means bamboo, jute stick, hay, leaves of tree, straw etc.

Table 7.6: Percentage of HHs taken one meal in a day by wealth category during 2000- 2001

Wealth category	Apr – May	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr
	Baishak	Jaistha	Ashar	Shrabon	Bhadro	Ashwin	Kartik	Augrahay.	Poush	Magh	Falgun	Chaitra
Rich/middle (n=8)	12.5 (1)	12.5 (1)	12.5 (1)	25.0 (2)	25.0 (2)	25.0 (2)	12.5 (1)	12.5 (1)	12.5 (1)	12.5 (1)	12.5 (1)	0
Upper poor (n=9)	0	0	0	0	0	0	0	0	0	0	0	0
Poor (n=10)	0	0	10.0 (1)	6.3 (1)	20.0 (2)	10.0 (1)	10.0 (1)	0	0	0	0	0
Destitute (n=5)	0	0	0	0	0	0	0	0	0	0	0	0
Total (n=32)	3.1 (1)	3.1 (1)	6.3 (2)	9.4 (3)	12.5 (4)	9.4 (3)	6.3 (2)	3.1 (1)	3.1 (1)	3.1 (1)	3.1 (1)	0

Note: Figures in the parentheses indicate the number

Table 7.7 illustrates the strategies adopted by the HHs in case of income or asset loss. About 66 percent of HHs adopted borrowing as a strategy in case of income or asset loss, this was 90 percent in upper poor category and 80 percent in destitute category. Nearly 16 percent of HHs coped with the economic crisis by borrowing with interest. Just 22 percent of HHs coped with the economic crisis by drawing money from their bank savings, this was highest (75%) in rich category.

Table 7.7: Percentage of HHs adopted the strategies in case of income or asset loss by wealth category

Wealth category	Strategies					
	Borrowing	Borrowing by interest	Draw money from their bank savings	Lease or sell the land	Sell the livestock or crops	Expenditure from their own savings
Rich/middle (n=8)	25.0 (2)	0	75.0 (6)	0	0	0
Upper poor (n=9)	88.9 (8)	11.1 (1)	0	0	0	11.1 (1)
Poor (n=10)	70.0 (7)	30.0 (3)	10.0 (1)	0	0	0
Destitute (n=5)	80.0 (4)	20.0 (1)	0	20.0 (1)	20.0 (1)	0
Total (n=32)	65.6 (21)	15.6 (5)	21.9 (7)	3.1 (1)	3.1 (1)	3.1 (1)

Note 1: Figures in the parentheses indicate the number.

Note 2: Multiple responses were considered.

For economic categorisation, HH members were classified into four self-rated groups: surplus, break-even, occasional deficit and always deficit (see Table 7.8). More than 30 percent of the HHs had always deficit. Twenty five percent of the HHs had occasional deficit and breakeven. This is surprising that some rich, middle and upper poor of the HHs were also faced the scarcity situation.

Table 7.8: Percentage of the HHs economic status within last 12 months by wealth category

Wealth category	Status			
	Always deficit	Occasional deficit	Breakeven	Surplus
Rich/middle (n=8)	25.0 (2)	0	0	75.0 (6)
Upper poor (n=9)	33.3 (3)	22.2 (2)	44.4 (4)	0
Poor (n=10)	20.0 (2)	50.0 (5)	30.0 (3)	0
Destitute (n=5)	60.0 (3)	20.0 (1)	20.0 (1)	0
Total (n=32)	31.3 (10)	25.0 (8)	25.0 (8)	18.8 (6)

Note: Figures in the parentheses indicate the number

Table 7.9 shows the percentage of HHs who took loans in different months of 2000-2001. About 41 percentage of the HHs took loans during August-October, the highest (60%) being the destitute, followed by the poor. The second highest period of taking loan was during March-April, this was also highest for the destitute and poor (40%). One fourth of the HHs took loans in July-August, this was also highest in the poor destitute (40%), followed by the poor (30%).

Table 7.9: Percentage of HHs taking loans in different months of 2000-2001

Wealth category	Apr – May	May – Jun	Jun – Jul	Jul – Aug	Aug – Sep	Sep – Oct	Oct – Nov	Nov – Dec	Dec – Jan	Jan – Feb	Feb – Mar	Mar – Apr
	Baishak	Jaistha	Ashar	Shrabon	Bhadro	Ashwin	Kartik	Augrahan	Poush	Magh	Falgun	Chaitra
Rich/middle (n=8)	0	0	12.5 (1)	12.5 (1)	25.0 (2)	25.0 (2)	12.5 (1)	0	0	0	0	0
Upper poor (n=9)	0	0	11.1 (1)	22.2 (2)	33.3 (3)	44.4 (4)	11.1 (1)	0	0	22.2 (2)	33.3 (3)	55.6 (5)
Poor (n=10)	10.0 (1)	0	10.0 (1)	30.0 (3)	50.0 (5)	40.0 (4)	20.0 (2)	0	0	10.0 (1)	20.0 (2)	40.0 (4)
Destitute (n=5)	40.0 (2)	20.0 (1)	20.0 (1)	40.0 (2)	60.0 (3)	60.0 (3)	20.0 (1)	0	40.0 (2)	40.0 (2)	20.0 (1)	40.0 (2)
Total (n=32)	9.4 (3)	3.1 (1)	12.5 (4)	25.0 (8)	40.6 (13)	40.6 (13)	15.6 (5)	0	6.3 (2)	15.6 (5)	18.8 (6)	34.4 (11)

Note: Figures in the parentheses indicate the number

Table 7.10 shows the percentage of HH heads, who remained unemployed in certain parts of the year and what they did at that time. Half percent of the HH heads remained unemployed, the highest being the destitute (80%) and lowest the rich/middle (12.5%). During the unemployment period most of all had no work.

Table 7.10: Percentage of the HH heads remain unemployed in certain parts of the year and things done at that time by WC

Wealth category	Remain unemployed	Things done when unemployed		
		Indirect earning	Direct earning	Training/no work
Rich/middle (n=8)	12.5 (1)	0	0	100.0 (1)
Upper poor (n=9)	55.6 (5)	20.0 (1)	20.0 (1)	60.0 (3)
Poor (n=10)	60.0 (6)	16.7 (1)	16.7 (1)	66.7 (4)
Destitute (n=5)	80.0 (4)	0	0	100.0 (4)
Total (n=32)	50.0 (16)	12.5 (2)	12.5 (2)	75.0 (12)

Note: Figures in the parentheses indicate the number

Table 7.11 presents the health-seeking behaviour of the sample HHs. Over 53 percent people sought treatment from MBBS doctors during illness with the highest being the rich/middle (88%) and lowest being the upper poor (33.3%). Nearly 47 percent went to village doctors during their illness with the highest being the upper poor (67%) and lowest the rich/middle (13%).

Table 7.11: Health-seeking behavior of the HHs by WC

Wealth category	Health-seeking behavior	
	MBBS doctor	Village doctor
Rich/middle (n=8)	87.5 (7)	12.7 (1)
Upper poor (n=9)	33.3 (3)	66.7 (6)
Poor (n=10)	50.0 (5)	50.0 (5)
Destitute (n=5)	40.0 (2)	60.0 (3)
Total (n=32)	53.1 (17)	46.9 (15)

Note: Figures in parentheses indicate the number

According to the perception of 88 percent of the sample HHs, the fish production had decreased in last five years (see Table 7.12). They felt that programmatic interventions of the fisheries department would be beneficial.

Table 7.12: Percentage of the HHs perception about fish production in open water bodies in last five years

Wealth category	Fish production	
	Decreased	Non response
Rich/middle (n=8)	87.5 (7)	12.5 (1)
Upper poor (n=9)	88.9 (8)	11.1 (1)
Poor (n=10)	80.0 (8)	20.0 (2)
Destitute (n=5)	100.0 (5)	0
Total (n=32)	87.5 (28)	12.5 (4)

Note: Figures in parentheses indicate the number

Profile of Two Villages under the Water Body Padma Narisha Ujanjala

Under the water body Padma Narisha Ujanjala two villages have been taken up to understand the livelihood conditions of the villagers through participatory rural appraisal (PRA). The villages Debinagar and Kutubpur are situated under Dohar upazila of the district Dhaka.

I. Profile of Village Debinagar

1. Contextual Analysis

1.1 Historical background

The village Debinagar is situated on an island of Padma. It is not known when how the village was developed, but it is said that during British emperor one of the Hindu Zaminder named the village Debinagar. In the village a lot of gods and goddesses were kept. Therefore it was called Debinagar. In the course of time the influence of Zaminder has abolished. Now all the villagers are Muslim. The village covers one and half km. land by the river Padma. It is a long village from north to south. The river Padma is approximately 200 yards away from the village. The mainly livelihood of the villagers is fishing in Padma. The total population of the village is 3000. Fifty percent of the population is female. Among the population 35 percent is young, 55 percent is adult (adult ranges from 18 to 50 years), and 10 percent is old.

The main source of living of the villagers is the river Padma Ujanjala. It is known that how the river was named such name. Most of the villagers report that as the river flow from Laxmikul, Dhaka to Narisha Baghra and Dohar border, it is named such name. The river is 15 km long. 6 km is under the fourth fisheries project. The villagers hope that in this six kilometre area the development of fish sanctuary will help to increase fish recourses.

1.2 Village infrastructure

The village is poor and neglected. As there is no local representative from the village, it is deprive from any government support. There are two kancha roads in the village, which are not hoped to be pitched in future. There are 3 mosques, one hafizia madrasha, one fish Arot, a graveyard, one kazi office, a Grameen bank and Samaj Sheba Kendra, and a children school conducted by Islamic Foundation in the village. The villagers report that in village infrastructure the villagers have equal access. They further report that during the month of Ashwin and Kartik when the fish supply increase then the outside fishermen come to fishing by providing subscription to the influential in the village. There is no electricity in the village. During dry season the villager usually walk and during monsoon they use boat as transport.

1.3 Political/ administration

There is no local political representative from the village. The thana town is four kilometres away. Therefore, the administration thinks that the village does not need any development.

Hartals do not influence the lives of common villagers. But the fishermen sell their fish in low price during hartals. The labourer cannot earn in those days. The local elite is not involved with the political leaders. In marriage, games and arbitration the role of local elite is main. They do not pay heed to the suggestions of the common people as it is thought as low esteem.

As the educated villagers go out of the villager no local leadership has grown yet. Therefore, there is no development. Apart from that due to the river erosion development is hampered. There is a deep relation between the local elite and religious leaders in the village. In some regards the religious leaders implement their decisions through the elite such as, not allowing the women to go out, to be educated, and early marriage. They also arrange waaz mehfil in the village.

In the arbitration most of the conflict resolve in the village when they cannot solve the problems the villagers go to the government courts. In the water bodies influence of the government administration is observed. During flood or other natural calamities the government comes to help with saline, water rectifying tablet, clothes, etc.

1.4 Education

Due to the fear of abolishing the land in Padma, no school, college or Madrasha is established in the village. The villagers themselves established a Madrasha in the village to educate religion to their children. 80 percent of the villagers are illiterate. The 20 percent go to a distant village for education. The government started adult literacy programme and food education programme but did not continue. Only a non-government children's school called Shishu is in the village where the children are provided primary education. The mosques and Madrasha provide only religious education. Among the 20 percent educated people, 12 percent is male and 8 percent is female. After finishing the primary education only five percent go for higher education. Other males go for earning income and the females get married.

1.5 Health

Only five to seven households among 175 have access to slab latrine. There are fifty tubewells for 3000 population in the village. For health awareness there is no person for giving advice. They do not have any knowledge about mother and child health and pregnancy care. They are mostly depended on nature in these regards. The shasthya shebika from the neighbouring village come to impart health messages but that is very nominal. The villagers resort to quack and traditional healers. They have to go to a distant place for vaccinating their children. They do not have much knowledge about family planning.

The staffs of family planning come from thana sadar to provide satellite services to the women and children. They provide vaccine to the children of six immunised diseases. They also provide ANC care to the women.

1.6 Cultural

There is no games or other recreations for the villagers. There are only seventeen radios in the village and as there is no electricity and lack of ability the villagers have no television. There is no club or Jubo Shongho in the village. The villagers report that sometimes they sing during

fishing. As most of the children migrate out of the village after growing up so there is no such cultural attitude has developed.

2. Village resources

2.1 Natural capital

The village is beside the river. The river is approximately three kilometre away from the village. The villagers catch fish in the river for their living. They also use the water for irrigation and cooking purpose. They take bath in the river. Everybody in the village have access to the river.

The land is very fertile, as it is located beside the river. The villagers yield jute, sugarcane, and peanuts and among rabi crops they produce kolai, mshuri, and chillies. During crisis the villagers overcome to sell their produced crops.

2.2 Human capital

40 percent of the population are involved in different income generating activities and 15 percent of the villagers work in cities. They send remittance from outside. Most of the villagers are illiterate so they do not play any role in development. They mainly involved in fishing. Limited numbers of villagers pull rickshaw or van for their living. A few women work outside for income earning. They may be 20 percent of the whole population.

2.3 Social capital

The social resources in the village are three mosques, one hafizi madrasa, an Islamic Foundation school, and a kazi office. All the villagers have access to these social resources in the village. They pray in the mosques and sometimes arrange milad mehfil there. In the madrasa the children of the village receive religious education. The villagers contribute to the salary of the teacher in madrasa. There are 78 students in the Madrasa (male 42 and female 36). There is an organisation called samaj sheba songothon. They provide loan to the destitute women in the village. They give training on poultry and livestock rearing and sewing. The villagers report that four percent of the people in the village get benefit from this organisation. In the Shishu school the Islamic Foundation provide primary education to 40 students. They give book and other necessities for education to the children and also salary to the teachers. In the kazi office the villagers register their marriage and divorce. The villagers report that no early marriage is registered here. The kazi charge Tk. 50 for each marriage. In the kazi office villagers from neighbouring villagers can come to register their marriages.

2.4 Physical capital

There are two kancha roads in the village. The villagers use these roads for communication. There is a graveyard, which is approximately 66 decimal. A generous person donated the land. The villagers and the neighbouring villagers have access to this graveyard.

2.5 Financial capital

The villagers earn their living from the agricultural crops and fishing from the river. The villagers those who work outside of the village send remittances. There is a Grameen Bank in the village where the villagers get loans. Any members can avail this facility but only two percent of the villagers are the members.

3. Institutional Processes: Importance and Roles

3.1 Government institutions

As the upazila sadar is only three km. away there is no government's institution in the village. If the villagers need legal support or education or health facilities they go to the thana. There is no one in the village working with government agencies.

3.2 NGOs, CBOs, Co-operatives

From Grameen Bank the villagers can take loan, which they use in income earning activities. There is a non-government primary school in the village run by Islamic foundation. The children of the village can study there.

3.3 Informal organisations

There are three mosques in the village where the villagers pray and sometimes organise milad mehfil. There is a hafizi madrasa where the children receive religious education.

3.4 Private sectors

As the villagers are very poor and illiterate there is no private institution as such has been developed in the village. But there is fish depot in the village. Four people work in this depot.

Table 3.1 Role of institutions

Name of institution	Activities	Rank	Explanation
Islamic Foundation School	Children irrespective socio-economic class receive primary education.	2	Nobody in the village is involved in the committee. The school run according to the rule of the organisation.
Family planning centre	Vaccinate the children and women, provide ANC care, and water rectify tablet.	4	Provide vaccine to the children and women. During natural calamities provide saline and water rectifying tablets. Make aware about pregnant mother and children.
Samaj sheba Kendra	Provide loan, slab and tubewell and training on poultry.	3	Provide loan to the destitute women for different income earning activities. Provide slab and tubewell and training on poultry.
Grameen Bank	Provide loan.	4	It provides seasonal and general loan.
Graveyard	The villagers are buried after death.	2	Irrespective of socio-economic class the villagers are buried after death. No charge is taken. The neighbouring villages also use it.
Mosques	The villagers pray five times a day and in Friday they organise wazz.	1	All the villagers can pray in the mosque. In Friday the Imam imparts wazz.
Madrasha	The children receive religious education.	1	Children receive lessons on the holy Quran here. The villagers contributed to the salary of the only teacher of Madrasa.
Kazi office	Register marriages and divorce.	4	Marriage of the adult male and female is registered. The divorce also registered.
Water bodies	In the Padma Narisha Ujanjala river there are different species of fish.	3	Padma Narisha a Ujanjala river is full of fishes. The villagers live on fishing. They also use the water for agricultural and domestic purpose.
Fish depot	In this depot transaction of fish occurs.	3	The villagers sell their fish here. They also take loan (dadon) from the depot to buy their equipment for fishing.

Note: 4 = Not good, 3 = moderate, 2 = good, 1 = very good.

4. Seasonal Vulnerability and Coping Strategies

Table 4.1 Seasonal differences in village Debinagar

Item	April -May	May- June	June -July	July- Aug	Aug- Sept	Sept- Oct	Oct- Nov	Nov- Dec	Dec- Jan	Jan- Feb	Feb- Mar ch	Mar ch- April
	<i>Bais hakh</i>	<i>Jaist ha</i>	<i>Asha r</i>	<i>Shra bon</i>	<i>Bhad ro</i>	<i>Ashw in</i>	<i>Karti k</i>	<i>Augr ahay an</i>	<i>Pous h</i>	<i>Mag h</i>	<i>Falg oon</i>	<i>Chait ra</i>
Temperature	9	12	10	8	6	5	3	2	1	2	3	5
Rainfall	6	9	12	11	9	7	5	4	1	1	2	3
Employment opportunity	12	6	3	2	1	1	1	4	7	9	10	11
Food deficit	1	1	5	8	11	11	12	6	4	3	1	1
Borrowing	1	1	4	5	12	12	9	6	10	1	3	2
Lean period	1	2	4	6	10	12	11	4	3	2	1	1
Fish availability	5	6	7	8	10	12	9	6	1	1	2	5

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Employment opportunity

The villagers inform that from the beginning of Ahar and Shrabon to the end of Kartik the villagers do not get work. The farmers do not have any work in the field. There is water all over the places. Therefore, the villagers cannot produce any crops. The wage labourers are unemployed during this period. Due to unemployment they have food deficit. Some of them live on their storage food and some migrate out to the cities.

From the month of Poush the work start to be available. Baishak in the peak season for work availability. In this month the wage becomes Tk. 100 to 125. In this month the day labourers get plenty of work.

4.2 Food deficit

In the months of Bhavra, Ashwin and Kartik there are food deficit in the village. The villagers report that during these months, there is no crops in farmers' house, the day labourer do not get any work and due to increasing water in the river the fishermen cannot catch fish. In the months of Falgoon, Chaitra, Baishak and Jestho the villagers do not have any food deficit. During Baishak and Jestho the farmers harvest their crops and the day labourers get work. The fishermen can catch fish in the river.

During food deficit the villagers become dependent on the moneylenders and different organisations. The day labourers migrate out of the village to the cities. Sometimes they sell their assets or borrow.

4.3 Borrowing

The villagers mostly borrow in the months of Bhadra and Ashwin. In this time they have food deficit and lack of availability of work. But in the month of Poush and Magh they also borrow. The farmers borrow for crop cultivation from different organisations and moneylenders. In Bhadra and Ashwin the fishermen borrow from moneylenders to buy fishing equipment.

4.4 Lean period

There is no sign of the dwellings during flood. The villagers become helpless. They have food deficit during this period. They try to cope with the situation with the food they have in the house. In that time the governmental and non-governmental organisations come to help them. Sometimes they sell their assets. The villagers report that as the village is situated beside the Padma in anticipating flood they store some food instead of looking for help from outsiders.

4.5 Selling asset

The villagers sell their asset like livestock, poultry, land and trees in times of need. In the situation like produce crops, tethered roof, daughter's or son's marriage, sickness they sell their assets. Some of the rich villagers sell asset to buy land, shops in the bazaar, or send son to the foreign country. During flood and famine when there is lack of necessary relief from the governmental and non-governmental agencies the villagers sell their assets.

5. Well-being Pattern in the Village

Table 5.1 Well-being pattern in village Debinagar

Wealth category Hhs 175	Livelihood assets	Livelihood strategies	Sustainable livelihood outcomes
Rich 22%	1. Land 15-20 bigha. 2. Big business in bazaar. 3. Have bank savings. 4. One or two children are at foreign countries. 5. Have garden. 6. Big rooms in house. 7. Good services.	1. Employ agricultural labour in the land. 2. Produce more crops. 3. Earn a huge profit from business. 4. Receive profit from Bank savings. 5. Sell fruit from the garden and earn profit. 6. Minimal agricultural expenses as cultivate by cattle.	1. Self-sufficient. 2. Have surplus. 3. Good health and less sickness. 4. Children get good education. 5. Get honour from the villagers. 6. Can have a good future generation.
Upper Poor 25%	1. Have homestead. 2. Land 1-5 Bigha. 3. Small business. 4. Moderate services. 5. In need sell labour. 6. Sons do small job at foreign countries.	1. Rickshaw puller. 2. Take credit from non-governmental organisations. 3. Food deficit in six months of the year. 4. Children go to free school. 5. Do not continue for high education.	1. Sometimes have food deficit. 2. Illiterate children. 3. Ill health. 4. Less income.
Poor 33%	1. Have homestead. 2. Do share cropping. 3. Day labourer. 4. Rickshaw puller.	1. Work hard everyday. 2. Women are involved in domestic help. 3. No one lend money. 4. Child labour. 5. Children do not go to school. 6. Migrate out for living.	1. Food deficit 8-9 months of the year. 2. Children do not go to school. 3. Suffer from malnutrition. 4. Ill health.
Destitute 20%	1. No homestead. 2. No cultivable land. 3. No business. 4. No sources of income. 5. Most of the time in year dependent on others for living.	1. Live on wage labour. 2. Women do domestic help for food. 3. No one give loan. 4. Child labour. 5. Whole family migrate out for work.	1. Food deficit through out the year. 2. Illiterate children 3. Bad character. 4. Suffer from illness. 5. Suffer from malnutrition. 6. Ill health.

Table 5.2 Well-being data of village Debinagar

Wealth category	Percentage (n = 175)	HH identification number
Rich	22% (39)	6, 9, 23, 24, 26, 35, 38, 50, 71, 77, 78, 91, 92, 93, 96, 97, 98, 100, 102, 106, 111, 114, 138, 140, 141, 143, 148, 149, 154, 155, 156, 159, 164, 166, 173, 174, 121, 129, 137.
Upper poor	25% (44)	10, 33, 43, 52, 53, 54, 55, 58, 69, 70, 73, 74, 75, 76, 83, 84, 85, 99, 103, 110, 115, 116, 119, 120, 122, 127, 128, 131, 133, 134, 135, 136, 139, 142, 144, 151, 167, 168, 170, 171, 152, 153, 158, 172
Poor	33% (58)	1, 2, 12, 13, 14, 15, 17, 28, 29, 31, 34, 37, 39, 40, 41, 51, 56, 57, 59, 60, 61, 63, 64, 65, 66, 67, 68, 79, 80, 81, 82, 86, 87, 88, 89, 90, 107, 108, 109, 112, 113, 123, 124, 125, 126, 130, 145, 146, 157, 161, 162, 163, 169, 20, 21, 22, 27
Destitute	20% (34)	4, 5, 7, 8, 11, 16, 18, 19, 25, 30, 32, 36, 42, 44, 45, 46, 47, 48, 49, 62, 72, 94, 105, 117, 118, 132, 147, 150, 160, 165, 175, 95, 101, 104

II. Profile of Village Kutubpur

1. Contextual Analysis

1.1 Historical background

The village was established in the Bengali year of 1355. The river Padma was about 5 km. away from the present village. The area was under the control of influential Zaminders. When this island raised it was 15 km long and 5 km broad. The Zaminder of that time immediately include that area in their territory.

On the west bank of Padma there was a village called Bilashpur. When that was disappeared by river erosion the villagers came to establish their dwelling in this Kutubpur Island. The Zaminder divided the area into 12 Mouza and named one of the Mouza Kutubpur. Afterwards according to that the village was named Kutubpur. The villagers of Bilashpur although staying in Kutubpur call the village Bilashpur. Therefore the government primary school of the village is called Bilashpur government primary school. There is a water body in the village, which is called Padma Narisha Ujanjala. The water flow from Laxmikul of Dhaka up to the Bakhra border. Therefore it is called Padma Narisha Ujanjala.

The total population of the village is 3500. Among them female is 1700 and male is 1800. All of the villagers are Muslim.

1.2 Village infrastructure

There are two kancha (unpaved) roads in the village, which are two-kilometre long. Apart from that the village infrastructure includes: a mosque, a madrasa, a government primary school, a Samaj Sheba Kendra, a Kendra of Grameen Bank, two rice mills, a family planning centre, five deep tubewells, a fish depot (Arot) and a ghat (river bank, which is used for ferryboat. The villagers have equal access to the infrastructure of the village.

1.3 Political/ administration

In terms of political context the village is highly neglected. The government has not thought about the development of the village. As river erosion affects the village the political leader or the villagers never thought about the development of the village. Therefore no government school, college or club is established in the village.

The fishermen, farmers and day labourers of the village are affected by the strikes. The fishermen cannot sell their fish in the market. They sell it in the village with low price. Similarly the farmers cannot sell their crops and the day labourers do not get any work.

The elite of the village have a role in arbitration, negotiation of marriage and arrange contribution to the mosques and madrasa. Apart from that they play a significant role in distributing VGD card and other help from the government and relief during flood.

The villagers usually migrate out of the village, as there is no opportunity of education and economic encouragement. Therefore no local representation has been developed in the village. The illiterate elite usually plays the role of local representative.

The religious leaders implement their decisions through the elite such as, not allowing the women to go out, to be educated and early marriage. They also arrange waaz mehfil in the village.

The administrative influence has been reflected on the water bodies. Such as they cooperate to catch jatka fish by taking bribe. Nevertheless, during flood and famine the administrative officers provide support to the villagers with relief.

1.4 Education

Only 15 percent children of the village go to school. Among them eight percent is female. The villagers inform that when the boys grow up the parents send them to outside of the village to earn money. Due to poverty the poor cannot send their children to school. Their children involved with different income earning activities.

There is a primary school in the village. 400 students read in this school. There are 315 students in the school who have food for education card. The villagers have established a madrasha where the children receive religious education.

1.5 Health

In the village only nine households have slab latrines. There are 130 tube-wells in the village. A non-government called Fazlullah Foundation has been testing the arsenic in tube-wells. They have pointed 15 tube-wells with arsenic. The field workers of family planning impart knowledge about ANC care and mother and child health. The women in the village usually resort to traditional healing.

1.6 Cultural

There is no cultural attitude in the village has been developed, as there is no club, school and college.

2. Village resources

2.1 Natural capital

The villagers mention the land and the river as natural resources. There are 80 hectares cultivable land in the village. The land is very fertile. The villagers grow vegetables, different crops like paddy, jute, sugarcane etc. The agricultural season is divided into two seasons one is Robi season and another is Kharif season. During Robi season they cultivate boro paddy, peanuts, kolai, chillies, and onion. In the Kharif season they cultivate HYV, jute and sugarcane.

In the river the fishermen catch different type of fishes. They have equal access to the river. During rainy season they get Hilsha fish and during dry season they catch Boal, Chital and Pangas in the river.

2.2 Human capital

Among the population of the village there is 65% adult, 25% young, and 10% elderly. Since the villagers are weak in economic progress they could not become human resource for the village. Some of the adult stay outside of the village and the some others are involved in daily labour.

2.3 Social capital

Four hundred children read in the primary school in the village. Among them the female students are 60%. The school is under the food for education programme. There are four teachers in the school. One is female among them.

In the mosque of the village the villagers have access to pray. They discuss about religion. The children go to the madrasha for taking lesson on the holy Quran. They also arrange annual wazz mehfil in the madrassa.

The family planning centre provides service to the pregnant women and children. They provide vaccine, tablets, saline and water rectifying tablet to the villagers.

2.4 Physical capital

The villagers can use the unpaved road of the village for communication. They plant different fruit trees and take shelter on the road during flood. They use the rice mill for paddy husking. The kheyra ghat is used for transportation through ferryboat. But some fees are needed to pay for transportation. Through five deep tubewells the villagers irrigate their land. The villagers use the ponds for the purpose of cooking and fish cultivation. There is a fish depot in the village where the villagers sell their fish.

2.5 Financial capital

There is a Kendra of Grameen Bank in the village where the destitute women of the village receive loans. In the Samaj Sheba Kendra the women receive training on different income generating activities along with loan.

3. Institutional Processes: Importance and Roles

3.1 Government institutions

There is a government primary school in the village and a family planning centre. The children receive primary education from that school.

3.2 NGOs, CBOs, Co-operatives

Grameen Bank and Samaj Sheba Kendra have extended their activities in the village. The destitute women receive loan from Grameen Bank and Samaj Sheba Kendra provides training on different income earning activities along with loan.

3.3 Informal organisations

The villagers have mosques and madrasha as informal institution. The villagers pray in the mosque and the children receive education on religion in the madrasha.

3.4 Private sectors

There are two private rice mill in the village and five deep tubewells. The villagers can use the mills for paddy husking and through the deep tubewells they irrigate their lands.

Table 3.1 Role of institutions

Institution	Activities	Comments
Govt. primary school	Provide education and books free of cost.	Children can get education free of cost. During flood they can get shelter in the school.
Family planning centre	Provide ANC care and immunisation to women and children	The field workers provide family planning methods. They provide ANC care and vaccine to the children. They make aware of slab latrine, safe water.
Samaj Sheba Kendra	Provide training and loan.	Women receive loan and training to generate different income generating activities.
Grameen Bank	Provide loan.	Provide loan only.
Mosque	Place of prayer, religious discussion.	The villagers can pray in the mosque and participate in religious discussion.
Madrasha	Provide religious education.	Children receive religious education.
Fish depot	Place for fish transaction.	The fishermen can sell their fish in the depot.
Rice mill	Place for paddy husking.	The villagers can use the mill for paddy husking.
Deep tube well	Use for irrigation.	The villagers use for irrigation and cooking purpose and bathing.

4. Seasonal Vulnerability and Coping Strategies

Table 4.1 Seasonal differences in village Kutubpur

Item	Apr l- May	May - June	June -July	July- Aug	Aug- Sept	Sept -Oct	Oct- Nov	Nov- Dec	Dec- Jan	Jan- Feb	Feb- Mar ch	Mar ch- Apri l
	<i>Bais hakh</i>	<i>Jaist ha</i>	<i>Asha r</i>	<i>Shra bon</i>	<i>Bha dro</i>	<i>Ash win</i>	<i>Karti k</i>	<i>Augr ahay an</i>	<i>Pous h</i>	<i>Mag h</i>	<i>Falg oon</i>	<i>Chai tra</i>
Temperature	12	11	10	8	6	3	2	1	1	2	6	12
Rainfall	5	10	12	12	11	8	5	3	1	1	2	4
Employment opportunity	4	2	1	1	2	4	5	7	11	12	10	8
Food deficit	1	1	12	12	9	7	4	3	10	10	3	2
Borrowing	1	1	12	12	8	6	3	3	10	10	5	2
Lean period	1	1	12	12	8	6	4	3	10	10	6	3
Fish availability	5	6	7	7	8	12	12	6	1	1	4	5

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Employment opportunity

Work availability is high in the month of Magh. But in Poush and Falgoon works are also available. Since during these periods the crops are yield the farmers and day labourers get plenty of work. In the months of Ashar, Srabon and Bhadra due to rain there is lack of work availability. The day labourers involve in pulling van and rickshaw in these months.

4.2 Food deficit

Since the day labour cannot sell their labour in the month of Ashar and Srabon and the farmers do not have any food in the house the villagers encounter food deficit during this period. Since the fishermen cannot catch fish during Poush and Magh, they run into food deficit. In the month of Poush and Magh the farmers also have food shortage as they run out of food in the house. From the months of Falgoon and Chaitra to Baishak and Jestho no one of the village has food

deficit. As they have work opportunities in those months. During food deficit the villagers borrow or sell their assets. The fishermen borrow from the moneylenders.

4.3 Borrowing

In the month of Ashar and Shrabon due to lack of work opportunities and food deficit the villagers borrow. They also borrow in the month of Poush as the fishermen do not catch fish to that extent and the farmers need money for harvesting. From the month of Jestho to Chaitra the villagers do not need to borrow as they have work availability.

4.4 Lean period

The villagers consider the months of Ashar and Shrabon as lean period. Apart from that the villagers often encounter flood and famine. During the crisis they receive support from the government and non-government organisations and sometimes cope with the situation by depending on their savings or selling their assets.

5. Well-being Pattern in the Village

Table 5.1 Well-being pattern in village Kutubpur

Wealth category Hhs 192	Livelihood assets	Livelihood strategies	Sustainable livelihood outcomes
Rich 24%	1. Land 15 to 20 Bigha 2. Big business. 3. Have Bank savings. 4. Sons live abroad. 5. Have garden. 6. Have livestock. 7. Have service.	1. Employ day labour in the land. 2. Earn income from business. 3. Have savings in the bank. 4. Sons send remittance from abroad. 5. Have income from garden. 6. Can do farming by livestock.	1. Self sufficient in food. 2. Have surplus. 3. Good health. 4. Literate children. 5. Receive honour from the villagers.
Middle class 9%	1. Land 5 to 15 Bigha. 2. Have business. 3. Have bank savings. 4. Big houses. 5. Have livestock.	1. Employ day labour in the land. 2. Earn income from business. 3. Sons send remittance from abroad.	1. Self sufficient in food. 2. Have surplus. 3. Good health. 4. Literate children.
Upper poor 10%	1. Have homestead. 2. Land 1 to 5 Bigha. 3. Small service. 4. Sell labour in times of need. 5. Sons do small income earning activities in abroad.	1. Rickshaw puller. 2. Take loan from NGOs. 3. Food deficit 6 months. 4. Child labour. 5. Go to primary school where provide education free of cost.	1. Sometimes encounter food deficit. 2. Illiterate children. 3. Ill health, which causes low income.
Poor 30%	1. Have homestead. 2. Do share cropping. 3. Involved in day labour. 4. Pull van, rickshaw, etc.	1. Work hard everyday. 2. Sometimes migrate out to the cities. 3. Women are involved in domestic help. 4. Take loan from NGOs. 5. Child labour. 6. Ill health.	1. Food deficit 8-9 months. 2. Children do not go to school. 3. Ill health and malnourish.
Destitute 27 %	1. No homestead land. 2. No cultivable land. 3. No income earning opportunities. 4. Dependant of others.	1. Live on day labour. 2. Women involved in domestic help. 3. No one give loan. 4. Child labour. 5. Migrate out for living.	1. Food deficit through out the year. 2. Illiterate children. 3. Ill health and malnourish.

Table 5.2 Well-being data of village Kutubpur

Wealth category	Percentage (n = 192)	HH identification number
Rich	24% (47)	1, 3, 7, 12, 23, 24, 25, 26, 27, 31, 32, 33, 40, 42, 43, 44, 46, 50, 52, 53, 54, 55, 59, 61, 63, 64, 66, 67, 75, 87, 88, 91, 92, 97, 100, 103, 107, 134, 135, 150, 156, 158, 159, 176, 179, 187, 189
Middle	9% (17)	4, 10, 17, 29, 51, 56, 68, 70, 71, 72, 77, 78, 114, 119, 120, 130, 153
Upper poor	10% (19)	5, 20, 58, 62, 74, 89, 90, 93, 98, 99, 101, 102, 110, 111, 115, 133, 168, 188, 190
Poor	30% (57)	6, 8, 11, 13, 14, 15, 16, 18, 19, 21, 22, 28, 30, 34, 35, 37, 38, 39, 41, 45, 47, 48, 49, 79, 80, 81, 104, 108, 109, 112, 113, 122, 124, 125, 128, 136, 137, 138, 139, 140, 141, 142, 143, 148, 151, 152, 154, 155, 161, 163, 167, 177, 178, 180, 181, 182, 192
Destitute	(27%) 52	2, 9, 36, 57, 60, 65, 69, 73, 76, 82, 83, 84, 85, 86, 94, 95, 96, 105, 106, 116, 117, 118, 121, 123, 126, 127, 129, 131, 132, 144, 145, 146, 147, 149, 157, 160, 162, 164, 165, 166, 169, 170, 171, 172, 173, 174, 175, 183, 184, 185, 186, 191

6. Expected impact by beneficiaries of FFP

If the FFP includes all the villagers, the fish resources will increase. But the members of VDC and FMC should be fair enough in implementing the project and for the benefit of the villagers.

Socio-Economic Baseline Survey of Open Water Fisheries

Profile of

Tangon River, Pirgonj, Thakurgaon

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Tangon River

Tangon is a river of northern Bangladesh that flows through Pirgonj upazila in Thakurgaon district. BRAC is managing a fish sanctuary in the river as per agreement with the fourth fisheries project. There are eight villages surrounding Tangon river and only one village has been taken up for the baseline survey to perceive the livelihood conditions of the villagers. The village is called Banuapara Uttar.

1. Vulnerability Context

This chapter attempts to throw some light on the socio-economic aspects with focus on livelihood of the people living around the open water fishery of the Tangon river.

Nothing has been known about naming of the village. Uttar means the north, so its assumed that the village is located on the north side of that area. Banuapara Uttar village is located eight kilometres away from upazila sadar, and there is a metal road to reach the village. The area of the village is approximately one and half of a square kilometre. The informant group mentioned that the population of the village is around 300. However, 42 households were identified in the PRA exercise on which the baseline survey was done. All of the villagers are Muslims. Ninety percent of the household heads are involved in agriculture, 5% in fishing and the rest 5% are day-labourers.

The administration of the village is quite strong. The chairman of Union Parishad and the members together with the elite resolve the conflict and other problems in the village. As reported the elite, religious leaders, and the common villagers work together towards development of the village.

2. Livelihood Assets

The villagers identified four wealth categories of people in the study village that are rich and middle class, upper poor, poor, and destitute. Table 2.1 presents the percentage of households under different wealth categories and their livelihood assets.

Table 2.1 Well-being pattern in Tangon river village

Wealth category	Household # 42	Livelihood assets
Rich and middle class	55% (23)	• Possess 5-20 acres of land. • Well-built house. • Own shallow machine, power tiller, big shop and livestock. • Do service and business. • Sons and daughters are educated and live abroad.
Upper poor	12% (5)	• Possess 150-200 decimals of land. • Own fishing net. • Children go to free school. • Member of NGO.
Poor	29% (12)	• Possess 50-100 decimals of land with homestead. • Own fishing net. • Own small shop. • Work hard for survival. • Migrate out to the cities for work.
Destitute	5% (2)	• Live on others' land. • Day-labourer. • Women work as maid to other's house. • Lacking of credit worthiness.

2.1 Natural capital

The river Tangon is the major common natural resource of the village. All villagers have access to the river to meet their everyday needs. Other uses of the river are fishing and irrigation. A canal flows through the village. Irrespective of socio-economic class, people catch fish from the canal. They also use the water for cooking and bathing.

The rich people own large agriculture farms where the poor are employed. They produce different varieties of crops that are the main source of livelihoods of the inhabitants of village Banuapara Uttar. There are fruit orchards owned by the rich people. The village has several bamboo groves, which are used for the purpose of housing and fuel.

2.2 Human capital

Education

Forty percent of the villagers are reported to be educated in Banuapara Uttar. There is one BRAC school and one madrassa in the village. Children of every socio-economic class have access there but children of poor households get priority in BRAC school. In the madrassa they receive religious education. They informed that children have to go eight kilometres away from the village to attend high school and college.

Labour

There are people with different occupations in the village like teacher, traditional healer, fishermen, and farmers. According to the informant group, people of the village who are staying abroad do not play significant role in the development of the village.

Health

There is no health care centre in the village. The villagers go to the upazila health complex for treatment of major illnesses. There is a traditional healer in the village who is popular among the villagers for low cost treatment.

2.3 Social capital

The social capital defines the benefits of membership and norms of co-operation. Three NGOs are working in this village mostly for the poor people. The informant group mentioned that a good rapport prevails among the members of different NGO groups. The NGO members are very much willing to help each other and often consult with others to resolve personal problems. They share their happiness and sadness among themselves.

2.4 Physical capital

Most of the households possess their own houses. The rich and middle class own brick built house whereas most of poor households have tin roofed houses. Electricity has not reached to the village. There is no metal road inside the village; the road network comprises seven unpaved roads only. There is one mosque and an *eidgah* (ground for prayer at Eid) and a common graveyard in the village.

2.5 Financial capital

Three micro finance agencies are playing the role of financial capital for the villagers of Banuapara Uttar. Traditional moneylenders are also mentioned as they extend their help in the crisis of the villagers.

3. Structure and Process

3.1 Government institutions

There is no government school or any institution in the village. The villagers go to the Sadar Upazila for activities as needed with government institutions.

3.2 Non-government Organizations, Community-based Organizations and Co-operatives

BRAC, ESDO and Grameen Bank are NGOs are operating their programs in the study village. They are engaged in providing micro-credit, technical and financial support in sectors such as health, education, fisheries, livestock, social forestry and other micro-enterprise development. Children of the village attend the local BRAC school for primary education. BRAC sometimes arranges group theatre for building awareness among the villagers on women abuse and other social issues.

3.3 Informal organizations

There is one mosque and one youth club in the village. Villagers pray in the mosque and have religious discussion. Sometimes they arrange *waaz mehfeel* (lectures and seminars on religious rules) in the mosque. The club organizes different games for the young.

3.4 Private sectors

No private entrepreneur found in the village.

4. Livelihood Strategies

The people of different wealth groups have adopted different livelihood strategies based on their available assets that are presented in table 4.1.

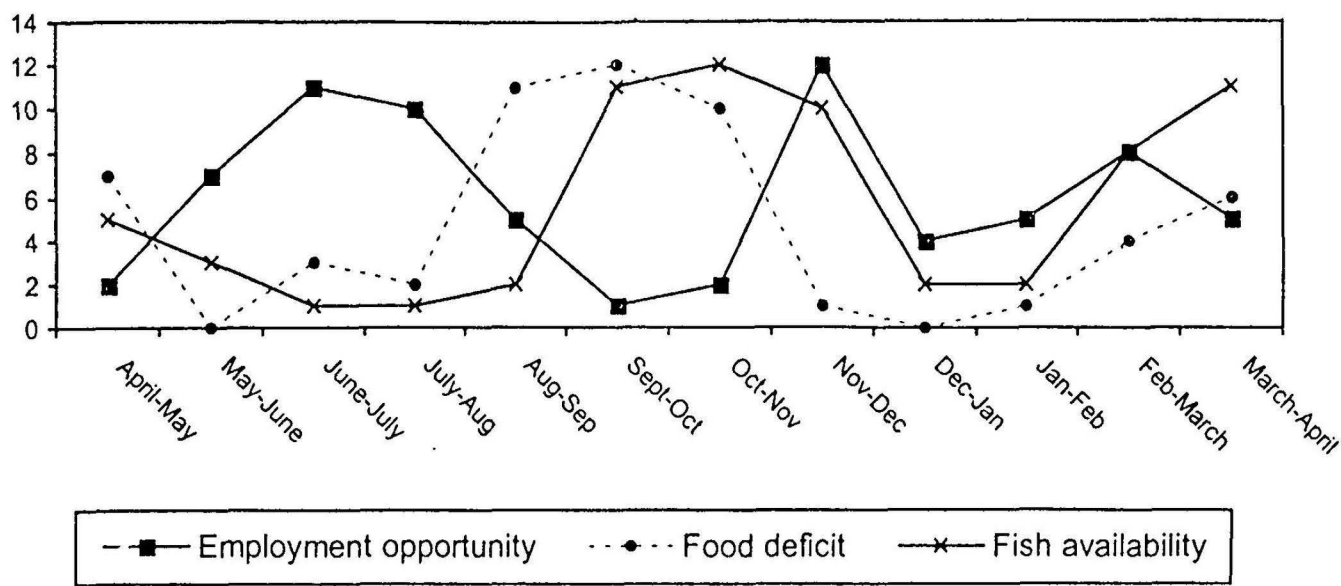
Table 4.1 Livelihood strategies of different wealth groups

Wealth category	Livelihood strategies
Rich and middle class	• Work hard with own resources. • Employ labour in own land. • Multiple income sources. • Invest regularly.
Upper poor	• Work hard for earning their living. • Are mostly self-employed. • Children are engaged in income earning activities. • Take loan from NGO for income generation.
Poor	• Work hard everyday for earning a living. • Sell manual labour in other's land. • Women also work for income earning. • Migrate out occasionally for earning. • Frequent borrow.
Destitute	• Sell manual labour for subsistence. • Women and children do work for subsistence. • Migrate out to the cities for income earning.

4.1 Seasonal differences on livelihoods

Figure 1 shows the seasonal variation of employment opportunities, deficit of food and availability of fish in the study village of river Tangon.

Figure 1: Seasonal vulnerability in the villages



Employment opportunity

There is a lack of employment opportunity in the month of September and October because in that period there is less work in the agriculture field. The day-labourers get fewer wages. In the month of November-December the crops are harvested so there are plenty of work in the village. The fishermen can catch plenty of fish during September-December in the water bodies. In the months of June-July the villagers get involved with paddy transplantation and in the month of February-March they are busy with the irrigation in wheat field. During the slack season of employment they survive through selling asset, taking loan from moneylenders or NGOs.

Food deficit

In the months of August to October villagers encounter food deficit, as there is no work in the field. Over December to February the villagers do not have any food deficit as they harvest the crop in that time. On contrary the fishermen cannot catch much fish during this period because water bodies dry up. In this period they usually mortgage out or sell their assets and borrow with high interest.

Availability of fish

Fishes are mostly available in plenty in the month of October to December because water bodies start drying up gradually. Fishermen have to fetch alternative strategies for subsistence during the months of June to August and December to January because the catch is quite low.

Worst time of the year

August to October is the worst period of the year for the villagers as they encounter lack of employment opportunities and food deficit. In the months of August and April also the villagers face difficulties due to outbreak of natural calamities like flood and drought. In the month of April they suffer from diseases like dysentery, diarrhoea, common cold and cough. January and February are very cold months in north Bangladesh of which this water body area is a part. In the

morning hours people face difficulty because they cannot go out to work due to cold. During lean period villagers sell their belongings and often borrow to survive.

5. Livelihood Outcomes

The following table provides a brief view of sustainable livelihood outcomes of the livelihood strategies for different wealth category people in the water body area.

Table 5.1 Sustainable livelihood outcomes for different wealth groups

Wealth category	Sustainable livelihood outcomes
Rich and middle class	• Self-sufficient for the whole year. • Have surplus food. • Have nutritious food. • Possess good health. • Have educated children.
Upper poor	• Periodic food deficit. • Can make no investment. • Fewer opportunities of earning. • Children get lower level of education.
Poor	• Often encounter food deficit. • Very limited sources of income. • Indebtedness to NGOs throughout year. • Ill health causings income erosion. • Illiterate children.
Destitute	• Food deficit throughout the year. • Illiterate children. • Malnourished. • Lack of credit worthiness.

6. Expected Impact of Fourth Fisheries Project by Beneficiaries

The fish resource tends to be declining day by day. Local people feel that due to failure of the last three fishery projects, the government has initiated this fourth one. There is a sluice gate in the project area that controls the water flow of the water body. It is reported that the influential persons often control the gate on their own interests. The informant group felt that the fourth fisheries project would be able to achieve its objectives if it can implement the fish sanctuary according to its set rules and the sluice gate abstains from corruption. The fishermen do not use *shuti* net or *ber* net that would help to protect the young fishes. The fishermen mentioned that it is necessary to form FMC only with the fishermen. The government administration should take proper steps to control 'free fishing' in the river. If they cannot provide and maintain in the sanctuary, people outside the project villages may harvest the benefit of the project. The success of the project depends on enforcing its rules and regulations properly, which would help increase and growth of fish, so the fishermen would get benefits.

7. Key Findings of Tangon River based on Household Survey

7.1 Introduction

The methodologies used in conducting this baseline survey have earlier been discussed in some details. For the purpose of the survey, household members of the sample villages were classified into four wealth categories (WC) through PRA exercises, such as, Rich/Middle, Upper Poor, Poor and Destitute. In the household survey, sample was taken from each study village proportionately according to the aforesaid wealth grouping, This part of the report contains analysis of the data collected through questionnaires from the sample households in the Tangon Nadi water body area. It is located in Pirgonj upzila of Thakurgaon district.

7.2 Findings

Total sample households (HHs) in this water body were 16. Highest proportion of the HHs of this water body was categorised through PRA as the rich/middle (56.3%), followed by poor (25%), upper poor (12.5%) and destitute (6.3%) (see methodology for the criteria of categorization).

Table 7.1 shows distribution of HHs heads by their occupation (main¹, secondary², always fishing³, sometimes fishing⁴ and subsistence fishing⁵ - as defined by M & E Specialist of Fourth Fisheries Project). Almost one third of the sample HHs had their secondary occupation, this was higher in upper poor and destitute category. About 15 percent of heads of the total HHs had always fishing occupation, followed by sometimes fishing (10.4%) and subsistence fishing occupation (8.3%).

Table 7.1: Distribution of HH heads occupation by the wealth category (WC)

Wealth category	Secondary occupation	Fishing occupation		
		Always fishing	Sometimes fishing	Subsistence fishing
Rich/middle (n=9)	11.1 (1)	44.4 (4)	33.3 (3)	22.2 (2)
Upper poor (n=2)	100.0 (2)	0	100.0 (2)	0
Poor (n=4)	25.0 (1)	75.0 (3)	0	25.0 (1)
Destitute (n=1)	100.0 (1)	0	0	100.0 (1)
Total (n=16)	31.3 (5)	14.6 (7)	10.4 (5)	8.3 (4)

Note 1: Figures in the parentheses indicate the number

Note 2: All HHs had the main occupation

Note 3: Multiple responses were considered

Table 7.2 shows socioeconomic and demographic characteristics of the households. Average sex ratio was highest amongst the poor (110 per 100 female) and lowest amongst the destitute (96 per 100 female). Average age of the HH heads was highest amongst the destitute (40) and lowest amongst the poor (31). Age-dependency ratio was highest amongst poor (108) and lowest amongst the upper poor (75). Average years completed in school by HH heads was highest

¹ Main occupation means primary employment of the HH from which it gains its income

² Secondary occupation means the next most important means of livelihood for the HH

³ Always fishing means professional fishers – those who engage in fishing as their main livelihood

⁴ Sometimes fishing means occasional fishing

⁵ Subsistence fishing means those HHs who fish to supplement HH diets

amongst the poor (7.3 years). The findings further reveal that a few of the sample HHs were involved with fishing and NGO activities.

Table 7.2: Household composition in the Tangon River

Wealth category	Average sex ratio = (male/female) ×100	Average age of HHH	Age dependency ratio	Average years completed in school (%)		HH involved with fishing (%)	HH involved with NGO (%)
				HHH	HH Member		
Rich/middle (n=9)	101.5	37	86.5	6.8	4.4	0	0
Upper poor (n=2)	95.8	33	75.0	5.5	4.2	0	0
Poor (n=4)	110.4	31	108.3	7.3	3.0	100.0 (1)	50.0 (1)
Destitute (n=1)	50.0	40	100.0	0.0	1.5	0	50.0 (1)
Total (n=16)	99.8	35	91.4	6.3	3.8	6.3 (1)	12.5 (2)

Note: Figures in the parentheses indicate the number

Table 7.3 reveals the average land ownership patterns of the HHs of this water body. On average the HHs had 305 decimals of homestead owned land, this was highest amongst the rich/middle (433.3 decimals) and followed by the upper poor (200.0 decimals). Whilst the average leased-out cultivated land was 50 decimals, and all of that land belongs to the rich category. The same scenery was also observed in case of leased-in cultivated land. Some fallow owned land was found among the rich category.

Table 7.3: Average amount of land (in decimal) owned by HHs by wealth and land category

Wealth category	Owned				Leased-out	Leased-in
	Homestead	Cultivated	Pond/doba	Fallow	Cultivated	Cultivated
Rich/middle (n=9)	10.4	433.3	0.7	33.9	88.9	58.3
Upper poor (n=2)	11.0	200.0	0	0	0	0
Poor (n=4)	10.0	137.5	1.9	0	0	31.3
Destitute (n=1)	5.0	25.0	25.0	0	0	0
Total (n=16)	10.1	304.7	2.4	19.1	50.0	40.6

Table 7.4 shows the percentage of materials used in construction of main rooms of the houses. The floors of main room of almost all houses were made of mud except the rich group (brick 33.3%). Besides the rich/middle group (brick 44.0%), the walls of main room of almost all houses were made of mud. The roofs of main room of almost all houses were made of tin.

Table 7.4: Percentage of materials used in construction of main rooms of the houses by WC

Wealth category	Floor		Wall		Roof	
	Brick	Mud	Brick	Mud	Tin	Natural
Rich/middle (n=9)	33.3 (3)	66.7 (6)	44.0 (4)	55.6 (5)	88.9 (8)	11.1 (1)
Upper poor (n=2)	0	100.0 (2)	0	100.0 (2)	100.0 (2)	0
Poor (n=4)	0	100.0 (4)	0	100.0 (4)	75.0 (3)	25.0 (1)
Destitute (n=1)	0	100.0 (1)	0	100.0 (1)	100.0 (1)	0
Total (n=16)	18.8 (3)	81.3 (13)	25.0 (4)	75.0 (12)	87.5 (14)	12.5 (2)

Note: Figures in the parentheses indicate the number

Data reveals that the inhabitants of this water body owned almost all sample houses. Data also indicates that all sample HHs’ members took more than one meal in a day during 2000-2001, except the one HH that was poor category.

Table 7.5 illustrates that the strategies adopted by the HHs in case of income or asset loss. Most of the HHs (62.5%) adopted the borrowing as a strategy in case of income or asset loss and this was 75% in the poor, 67% in the rich/middle category 50% in the upper poor category respectively. One fourth of the HHs coped with economic crisis by lease or sell the land and sell the livestock or crops.

Table 7.5: Percentage of HHs adopted the strategies in case of income or asset loss by WC

Wealth category	Strategies				
	Borrowing	Lease or sell the land	Sell the livestock or crops	Expenditure from their own savings	Non response
Rich/middle (n=9)	66.7 (6)	22.2 (2)	22.2 (2)	11.1 (1)	11.1 (1)
Upper poor (n=2)	50.0 (1)	50.0 (1)	50.0 (1)	0	0
Poor (n=4)	75.0 (3)	25.0 (1)	0	0	0
Destitute (n=1)	0	0	100.0 (1)	0	0
Total (n=16)	62.5 (10)	25.0 (4)	25.0 (4)	6.3 (1)	6.3 (1)

Note 1: Figures in the parentheses indicate the number

Note 2: Multiple responses were considered.

For economic grouping, the households were classified into four self-rated groups: surplus, break-even, occasional deficit and always deficit (see Table 7.6). None of the HHs of this water body had no always deficit. About 44 percent of the sample HHs had breakeven, 38 percent had surplus and some HHs (19%) had occasional deficit.

Table 7.6: Percentage of the HHs economic status within last 12 months by WC

Wealth category	Economic status		
	Occasional deficit	Breakeven	Surplus
Rich/middle (n=9)	11.1 (1)	22.2 (2)	66.7 (6)
Upper poor (n=2)	50.0 (1)	50.0 (1)	0
Poor (n=4)	25.0 (1)	75.0 (3)	0
Destitute (n=1)	0	100.0 (1)	0
Total (n=16)	18.8 (3)	43.8 (7)	37.5 (6)

Note: Figures in the parentheses indicate the number

Table 7.7 shows the percentage of the HHs who took loans in different months of 2000-2001. One fourth of the sample HHs took loans in September-October, most of them from poor and destitute category.

Table 7.7: Percentage of the HH taking loans in different months of 2000-2001

Wealth category	Apr - May	May- Jun	Jun- Jul	Jul- Aug	Aug - Sep	Sep- Oct	Oct- Nov	Nov- Dec	Dec- Jan	Jan- Feb	Feb- Mar	Mar- Apr
	Baish ak	Jaist ha	Ash ar	Shra bon	Bha dro	Ash win	Karti k	Augr ahay.	Pous h	Mag h	Falg oon	Chait ra
Rich/middle (n=9)	0	0	0	0	0	11.1 (1)	0	0	0	0	0	0
Upper poor (n=2)	0	0	0	0	0	0	50.0 (1)	0	0	0	50.0 (1)	0
Poor (n=4)	0	0	0	0	25.0 (1)	75.0 (3)	25.0 (1)	0	0	0	0	25.0 (1)
Destitute (n=1)	0	0	0	0	0	0	100.0 (1)	0	100.0 (1)	100.0 (1)	0	0
Total (n=16)	0	0	0	0	6.3 (1)	25.0 (4)	18.8 (3)	0	6.3 (1)	6.3 (1)	6.3 (1)	6.3 (1)

Note: Figures in the parentheses indicate the number

Table 7.8 shows the percentage of HH heads who remained unemployed in certain parts of the year and things done at that time. Half of the sample HH heads remained unemployed with the being highest for the rich (67%) and lowest for the upper poor (50%). During the unemployment period most of them were engaged in the indirect earning.

Table 7.8: Percentage of the HH heads remain unemployed in certain parts of the year and things done at that time by WC

Wealth category	Remain unemployed	Things done when unemployed	
		Indirect earning	Direct earning
Rich/middle (n=9)	66.7 (6)	83.3 (5)	16.7 (1)
Upper poor (n=2)	50.0 (1)	100.0 (1)	0
Poor (n=4)	25.0 (1)	100.0 (1)	0
Destitute (n=1)	0	0	0
Total (n=16)	50.0 (8)	87.5 (7)	12.5 (1)

Note 1: Figures in the parentheses indicate the number

Note 2: Multiple responses were considered.

Data indicates that almost all respondents sought treatment from village doctors during illness period except one rich HH (MBBS doctor). Data also shows that according to the perception of all sample HHs, the fish production had decreased in last five years and the people inferred that the activities of fisheries department would be beneficial.

Profile of One Village under the Water Body Tangon River

In the water body Tangon River participatory rural appraisal (PRA) has been applied in one village only to understand the livelihood conditions of the villagers. The village Banuapara Uttar is situated in Pirgonj upazila under the district of Thakurgaon in northern Bangladesh.

I. Profile of Village Banuapara Uttar

1. Contextual Analysis

1.1 Historical context

In the past the village was full of bushes and forest. The wild animal used to live in that place. In the course of time the forest was gradually disappeared and people started to live in that place one by one. Thus the dwelling had been developed and the village was named Banuapara Uttar Gram (village). At present it is called Banuapara. The village is situated in Pirgonj thana of Thakurgaon district. It is located 8 km away from the Thana Sadar and there is a metal road to reach the village. The village is one and half km long and one km. broad. The village is demarcated by Kastor village in the in the northwest side, Banuapara South village in the south, and Tangon water body in the east.

The population of the village is 300. All of the villagers are Muslims. 90 percent of them are involved with agriculture and the remaining 10 percent is fishermen.

1.2 Village infrastructure

There is no metal road in the village. The villagers use seven unpaved roads for communication. There is a mango grove, a jackfruit grove and a bamboo grove in the village. The villagers use the water body for their daily need of water. There is a mosque, an Eidgah (ground for prayer at Eid occasion) and a graveyard in the village.

1.3 Political/ administration

The villagers resolve their conflict with the help of the elite in the village. In the village the elite, religious leaders, and the common villagers work together for development of the village.

The administration of the village is quite strong. The UP chairman and the members resolve the conflict and other problems in the village. If there is any complicated case they go to the Thana to resolve.

1.4 Education

40 percent villagers are educated in the village. In BRAC school of the village the children irrespective of socio-economic class have access to study. Apart from that in the mosque they

receive religious education. In the madrasha also they learn religious lessons. They go 8 km. away from the village to attend school or college.

1.5 Health

There is no health care centre in the village. The villagers go to the Thana Sadar during illnesses. They trust in traditional healing. There is a traditional healer in the village.

1.6 Cultural

There is a club in the village where different games for the young are arranged. The villagers arrange Jari song, Pala song in the village. Besides BRAC sometimes arranges group theatre to aware the villagers of women abuse, social immorality, etc.

2. Village Resources

2.1 Natural capital

The fruit orchards are the natural resources of the village. Apart from meet the need of nutrition these provides fuel to the villagers. They use bamboo from the bamboo groves for the purpose of housing and fuel.

In the canal the villagers, irrespective of socio-economic class catch fish. They also use the water for cooking and bathing.

The villagers produce different varieties of crops in the village, which are the source of their income earnings.

2.2 Human capital

There are people with different occupation in the village like, teacher, traditional healer, fishermen, and farmers. The villagers inform that those people of the village are staying abroad is not that useful for the villagers. Nevertheless the villagers with other occupation are helpful for the whole village.

2.3 Social capital

In the mosque the villagers can pray and can arrange religious discussion. The children receive religious education from the madrasha. Sometimes they arrange wazz mehfil. The BRAC School provide primary education to the children of the village. The club in the village arrange games for the young in the village.

2.4 Physical capital

Although there is no metallic road in the village but the villagers use a metallic road to reach the village from Thana Sadar. The villagers use seven unpaved roads for communication in the village.

2.5 Financial capital

In the village some NGOs like ESDO (Eco Social Development and Organisation), Grameen Bank have extended their activities. Although there is no Kendra of Grameen Bank in the village but a few women are the members of the Kendra of neighbouring village.

3. Institutional Processes: Importance and Roles

3.1 Government institutions

There is no government institution in the village. The villagers go to the Thana Sadar for their activities with government institutions.

3.2 NGOs, CBOs, Co-operatives

In BRAC school the children of the village receive primary education. Apart from that ESDO and Grameen Bank have their activities in the villager. They provide loan to the villagers.

3.3 Informal institutions

Mosques, madrassa and club are the informal institution in the village. The villagers can pray in the mosque and have religious discussion. The madrassa provide religious education to the children of the village.

3.4 Private sectors

There is no private shop, poultry farm or sow mill in the village.

4. Seasonal Vulnerability and Coping Strategies

Table 4.1 Seasonal differences in village Banuapara Uttar

Item	April -May	May- June	June -July	July- Aug	Aug- Sept	Sept- Oct	Oct- Nov	Nov- Dec	Dec- Jan	Jan- Feb	Feb- Marc h	Marc h- April
	<i>Bais hakh</i>	<i>Jaist ha</i>	<i>Asha r</i>	<i>Shra bon</i>	<i>Bhad ro</i>	<i>Ashw in</i>	<i>Karti k</i>	<i>Augr ahay an</i>	<i>Pous h</i>	<i>Mag h</i>	<i>Falg oon</i>	<i>Chait ra</i>
Temperature	12	12	10	9	10	8	6	5	2	1	3	5
Rainfall	4	6	12	10	11	8	3	1	1			2
Employment opportunity	2	7	11	10	5	1	2	12	4	5	8	5
Food deficit	7		3	2	11	12	10	1		1	4	6
Borrowing	4	0	1	2	11	12	10	1		1	5	7
Lean period	9	8	5	4	11	10	1	1	5	10	7	12
Fish availability	5	3	1	1	2	11	12	10	2	2	8	11

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Employment opportunity

There is lack of work opportunity in the month of Ashwin and Kartik as there this is not the season of farming. The day labourers get fewer wages. In the month of Aughrahayan the crops are harvested so there are plenty of work in the village. The fishermen can catch plenty of fish. In the month of Ashar the villagers get involved with paddy transplantation and in the month of Falgoon they are busy with the irrigation in wheat field. During lack of employment they survive through selling asset, taking loan from moneylenders or NGOs.

4.2 Food deficit

In the month or Bhadra and Ashwin the villagers encounter food deficit, as there is no work in the field. During Augrahayan the villagers do not have any food deficit as they yield the crop in that time and the water dries up so the fishermen cant catch plenty of fish. During that time they usually mortgage out or sell their assets, borrow with high interest.

4.3 Borrowing

During the period of food deficit and lack of employment opportunity in the month of Ashwin and Bhadra they borrow. To repay the loan they sell their asset like livestock, homestead, boat, net etc.

4.4 Lean period

The month of Ashwin and Bhadra is the lean period for the villagers as they encounter lack of employment opportunities and food deficit. In the month of Chaitra and Bhadra they also have difficulties due to natural calamities like drought, flood and famine. In the month of Chaitra they suffer from diseases like dysentery, diarrhoea, common cold and cough, etc. In the month of Magh they cannot go out to work due to cold. During lean period they sell their asset like boat, land and tree or borrow to survive.

5. Well-being Pattern in the Village

Table 5.1 Well-being pattern in village Banuapara Uttar

Wealth category Hhs 42	Livelihood assets	Livelihood strategies	Sustainable livelihood outcomes
Rich 17%	1. Land 50 to 60 Bigah. 2. Own Shallow machine and power tiller, business. 3. Well-built house. 4. Have livestock. 5. Big shop at upazila sadar. 6. Children are literate. 7. Have government service. 8. Children live abroad.	1. Employ labour in own land. 2. Owner of many resources. 3. Industrious.	1. Self-sufficient. 2. Have surplus. 3. Good health. 4. Nutritious food. 5. Literate children. 6. Happiness in life.
Middle class 38%	1. Land 15 to 20 Bigha. 2. Well-built house. 3. Children are literate. 4. Have livestock. 5. Have business. 6. Big shop at upazila sadar.	1. Employ labour in own land. 2. Have limited resources. 3. Work hard with own resources.	1. More or less self-sufficient. 2. Have nutritious food. 3. Literate children. 4. Solvency in life.
Upper poor 12%	1. Land 4-5 Bigha. 2. Own net. 3. Children go to a free school. 4. Take loan from NGO. 5. Have semi-pucca house.	1. Take loan from NGOs. 2. Rickshaw puller. 3. Tempo and van puller. 4. Child labour. 5. Work hard for living.	1. Sometimes food deficit. 2. Sometimes borrow. 3. Fewer opportunities of earning. 4. Illiterate children.
Poor 29%	1. Land 2-3 bigha. 2. Some have fishing net. 3. Small shop. 4. Only homestead land. 5. Work hard for survival. 6. Migrate out to the cities for work.	1. Women involved in domestic help. 2. Sometimes migrate out for earning. 3. Work hard everyday for living. 4. Work in others land. 5. Often borrow.	1. Often encounter food deficit. 2. Fewer sources of income. 3. Illiterate children.
Destitute 5%	1. Live on others land. 2. Day labour. 3. Women work as domestic help. 4. No one provide loan.	1. Sell labour. 2. Women involve in domestic help. 3. Child labour. 4. Migrate out to the cities for income earning.	1. Food deficit through out the year. 2. Illiterate children. 3. Malnourish.

Table 5.2 Well-being data of village Banuapara Uttar

Wealth category	Percentage (n = 42)	HH identification number
Rich	17% (7)	2, 8, 15, 19, 20, 24, 40
Middle	38% (16)	1, 4, 7, 9, 10, 11, 27, 30, 31, 32, 33, 36, 37, 38, 41, 42
Upper poor	12% (5)	3, 26, 34, 35, 39
Poor	29% (12)	5, 6, 12, 13, 14, 16, 22, 17, 21, 25, 28, 29
Destitute	5% (2)	18, 23

6. Expected impact by beneficiaries of FFP

6.1 Comments of the fishermen

The project will increase the fish in the water body. The fish has been reducing day by day. The project will be able to reach its aim if the sluice gate abstains from corruption; the fishermen do not use shuti jaal or ber jaal. Indeed if the project could implement the fish sanctuary they it would help to increase the fish. In that regard Shaguni, C and B bridge and iron net on both sides should be made.

6.2 Comments of the PRA team

Due to the failure of the 1st, 2nd and 3rd fisheries the government has initiated this 4th fisheries project. If the project could able to implement its rules and regulation it will be helpful for the fishermen. If the project properly implemented the fish will be increased. The infrastructure of the river is appropriate for developing sanctuary. If the F.M.C is formed only with the fishermen, the project will be successful. The administration should take proper initiatives to control free fishing in the river. If the authority cannot manage to provide bushes for the sanctuary the other people from outside of the VCD village will give it. Then implementation of the sanctuary will be difficult.

Socio-Economic Baseline Survey of Open Water Fisheries

Profile of

Bangali Nadi, Sariakandi, Bogra

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Bangali Nadi

The water body Bangla Nadi is located in Sariakandi upazila of Bogra district. This is a fish sanctuary project, which is being implemented by a local NGO named Thengamara Sabuj Shongha (TMSS). The project is designed to help mainstream aquatic biodiversity conservation within the routine management of inland aquatic resources. Eleven villages encompassing the Bangali Nadi under the fourth fisheries project (FFP) and out of that three villages have been selected purposively where a good number of fishermen reside. The villages are Hindukandi, Baghber and Kuptala.

1. Vulnerability Context

Hindukandi, a *mouza* of Sariakandi union, has been developed from sedimentation of the river. In the past people used to avoid passing through this place due to the location of a crematorium. Hindus settled in the area first; Muslims followed them at a later stage. Among the migrants significant numbers were the victims of river erosion from different places. These people purchased land from the government afterwards. That *mouza* was called Colonypara earlier that was renamed as Hindukandi later due to election purposes. It is mentioned by the villagers that village Baghber was covered by dark and drizzly forest in the past. Only 10-12 Hindu families inhabited the village at that time. The place came to be known as Baghber because at that time *bagh* (tiger) often came out in the village from the jungle for preys. There were many *kups* (ditches) in Kuptala village and it was a low-lying area. Therefore the village was named Kuptala. In the past the area was an island and covered with scattered *kashbon* (catkin) all over the area thus crops were not grown.

The population of the villages started growing rapidly when victims of the river erosion started to flock in and occupy these lands. The area was characterized by barren and sandy soil having no trees. It evolved as a densely populated area very soon with a number of infrastructure development work such as roads, culverts, electricity and so on. The total area of the villages is approximately 0.5 square kilometres each. Price of land has soared up from Tk 400 to Tk 30,000 per decimal over the last two decades. About 632 households were identified in three sample villages on which the PRA exercises have been done. Eighty seven percent of them are Muslims and the rest Hindus. A congenial atmosphere prevails between the Hindus and the Muslims of this locality. Main occupation of about one fourth of the household heads is agricultural work and they do it on own lands. About 13% are involved in fisheries, 18% are day-labourers, and nearly 45% are involved in other self-employed activities as well as in salaried jobs.

Local people feel that the frequency of occurrence of thunderstorms and gusty rain has led to climatic changes. The amount of fish is reported to be dwindling over the last couple of decades. Common crops of this area are rice, jute and green chili. A sharp change took place in the village during the last couple of decades, which has impact on the environment. Agricultural system has been modernised with the introduction of chemical fertilisers and pesticides. Although the use of fertilisers and pesticides has ascended the production of crops, it left behind an irreversible damage for the fishery resources in the open water systems. Construction of roads created lot of ditches along the roadside. The air quality in and around the villages has declined, although to a limited extent, due to emission of noxious gas from the vehicles, which ply over the roads.

The government is running its Food for Work Program for road network development. Construction of bridge, embankment and sluice gate is also included in this program. Union Parishad chairman, members and other local leaders are active to strengthen local development activities such as development of roads, schools, madrassa, mosque, etc. The government as well as non-government organisations (NGOs) provide services in areas of education, health, family planning and nutritional program and loans for micro-enterprise development. In each village if any dispute or disturbance arises, the chairman and members of the Union Parishad and the local dignitaries sit together with common people to resolve the conflict through *salish* (informal village court). The sufferings of the villagers, particularly of the poor, increase considerably during *hartal* (political disruption) which causes drastic price rise. The vehicles that ply on the road become standstill, the result being loss of income for those labourers who had to travel far for work.

Superstitions and myths engrossed the villagers in the past. Women were compelled to observe *purdah* (veil) in the past and were denied of legal rights like expressing concerns in social and family affairs. There are stray incidents of early marriage in these villages, but marriage without dowry is uncommon. Marriages in Muslim families are held according to the Muslim family laws. Hindu marriages are performed according to traditional rites of Hindu religion. The opinion of women including that of the bride was hardly taken in marriage even in the recent past. These practices have changed considerably through the activities of the NGO's and relevant government agencies. Women are now enjoying the opportunity to defend their rights, express their opinion and even in some cases have the chance to raise their voice in resolving conflicts. They are also participating in different income generating activities along with the men. Women's participation in the local elections has become a very common phenomenon. People of the village can afford to attend cultural programs and see the televisions for entertainment.

2. Livelihood Assets

Available livelihood resources for different wealth groups and on the missing resources for their livelihoods are presented here. There are five wealth groups identified in the Bangali river villages. Those are consolidated into four groups in accordance with the pattern of assets holding of the villagers. Well-being pattern of different wealth category people in the Bangali river project areas are presented in table 2.1.

Table 2.1 Well-being pattern in Bangali river villages

Wealth category	Household # 632	Livelihood assets
Rich and middle class	16% (100)	• Possess 350-700 decimals of land. • Own cash Tk 100,000 or more. • Stable source of income with savings. • Possess brick built house, tube-well, sanitary latrine, shallow machine, mills, shops, livestock, and poultry farms. • Children are educated. • Service holder. Teacher. • Few own houses in Dhaka.
Upper poor	26% (165)	• Possess 100-200 decimals of land. • Cultivate with leased in land and have fish in pond. • Self-employed, do low status job. • Possess house, stationary shop, grocery, boat, and welding machine. • Some of them are timber traders.
Poor	34% (214)	• Possess own homestead. • Sell manual labour. • Mason, fish trader. • Do low status job • Own rickshaw, livestock, grocery shops, small business.
Destitute	24% (153)	• Own homestead only. Dwell in others' land. • Sell manual labour. • Some are hawkers. • Do work in other's boat and farm. • Few are female headed households.

The differences in well-being pattern of four wealth groups are mainly based on their income earning sources. The villagers mentioned that rich households have comparatively better access to various income sources, which make their livelihoods sustainable. Table 2.1 indicates that richer section of the village has less involvement in fisheries in the Bangali river.

2.1 Natural capital

Bangali Nadi is the major source of natural capital that runs along the boundaries of the study villages. Another major natural capital of the villages is land. The land is relatively high and most of it is being cultivated. All lands are not equally fertile. There are some areas with excessive sand in the soil. Common crops are jute, mustard, chili and onion. The villages are well known for producing chili. The poor and destitute groups have no ownership of land, but they are engaged in lands owned by the rich people.

Villagers are enjoying equal access to resources of the state. There is no restriction on fishing in the open water bodies within the catchment of the river. Except the rich, three other wealth groups used to catch fishes in the river for either subsistence or consumption before the inception of the FFP. However, the river regularly overflows its banks, which enriches the agricultural fields with alluvial soil that comes with floodwater. Often the floods are the results of opening up of sluice gates in the upstream. During flood the affected persons take shelter on the

embankments developed on both sides of the river. The government distributes relief among the flood affected during this period.

Table 2.2 Use of natural capital by different wealth groups

Wealth group	Bangali river	Land
Rich and middle class	Low	Very high
Upper poor	Medium	Medium
Poor	High	-
Destitute	High	-

2.2 Human capital

The major human capitals taken into consideration here are education, labour and health situation of the villages.

Education

The present literacy rate in the villages is stated to be 63%, which includes those who can write their names only. Only rich and middle class people mentioned education as a livelihood asset for themselves. There are several educational institutions in the villages operated by both government and NGOs. One of these is two madrassas. It was mentioned that the trend to educate girls of the upper poor, poor and destitute households rising since after government initiated Food for Education Program. NGOs have also prioritized girls’ education – a reflection of gender equity perspective. NGOs have introduced education programs for their group members for awareness raising on different socio-cultural issues.

Labour

The villages of Bangali river are inhabited by a variety of skilled professionals such as teacher, carpenter, mason, tailor, barber, fishermen, cottage industry worker, and so forth. Chairman and member of the municipality, and some politicians also reside in this area. Most of the professionals do not have regular jobs for living. They work either in or outside the villages on temporary basis. The opportunity for such employment often fluctuates seasonally. Only the poor and the destitute sell manual labour. Men and women work together during the harvesting season as labourers. Women are also involved in making cottage industry products as well as earth digging while the males pull rickshaws in most cases. Women are paid less than men.

There are no vocational training facilities in and around the villages from where the illiterate people could receive training. These workers acquired the required skills by working with their skilled predecessors. A number of educated youths received training from a centre of the Directorate of Youth Development located away from these villages. The World Vision, an NGO, has extended its agricultural extension network to train the youths about fishery, poultry, dairy and horticulture farms in the villages. Other NGOs provide skill training to their respective group members.

Health

Income loss due to illness is a common problem for the poor who sell manual labour almost everyday. Viral fever, cold and cough, chicken pox, gastric ulcer are the common diseases for the villagers. Lack of ability to have balanced diet is causing malnutrition. The patients get

required treatment from the nearby hospital and community health centers. Irrespective of the wealth groups, people have equal access to those health services. Even then visit to traditional healers for treatment is a very common practice for the upper poor, poor and destitute section of the villagers due to their traditional believes.

There are significant numbers of tube-wells owned by rich and middle class people for getting drinking water by the villagers. For washing and cleaning the poor people depend on the river. The health condition of the villagers appears to be apparently good. Likewise the rich and middle class own safe latrines. NGOs are active in pursuing the poorer section of the villagers to use as well as to own safe latrines at low cost.

2.3 Social capital

There are many NGOs and informal organizations working with the upper poor, poor and destitute people of the villages. These could help create fellow feelings among their members. The study did not focus on kinship network within interest groups that is a limitation of this profile.

The villagers maintain good rapport among themselves. They are very much willing to help each other and often consult with others to resolve personal problems. They share their happiness and sorrows among themselves.

2.4 Physical capital

Most of the households possess their own house. The rich and middle class own brick built house whereas most of the upper poor, poor and destitute households own tin roofed houses. Several NGOs have extended their housing programs disbursing loans with low interest so that some poor could build tin roofed house. There are a number of mosques, temples, schools, madrassas, and a rice mill in the villages.

The road network within the villages comprises some metal, brick soling and unpaved roads. All the villages have easy road access to the district town of Bogra. Different types of vehicles ply over these roads on which each wealth group has access to. Moreover, improved transportation facility creates scope for employment of the poor people. This good transport network is the result of the presence of the municipality office at the center of a sample village. There is a flood protection dam, made of cement concrete, alongside the river to protect the villages from river erosion. The destitute people take shelter on it when excessive rain flashes over their homesteads. Only the houses of rich and upper class people are connected with electricity supplied by the Rural Electrification Board.

2.5 Financial capital

Several NGOs are at work in these villages. The NGOs disburse loan without collateral to the villagers so they may undertake various income-generating activities. In the case of Kormo Shongstan Bank anyone with skill can apply for a loan. The villagers form co-operatives, which

help them accumulate savings for investment. There are lots of opportunities to open up new business in the local market.

Before NGOs introduced their development activities in the villages the poor did not have access to the traditional moneylenders, as they were not considered creditworthy. Nowadays, the poor villagers borrow money from the traditional moneylenders also during crises. But they have very little access to the loans of government institutions, as it requires collateral. The rich and middle class have land. Thus they can take loan from government bank.

The villagers have positive attitudes to savings through co-operative societies or informal groups operated by NGOs.

3. Structure and Process

3.1 Government institutions

Relief or any other government grants are distributed through the Union Parishad (UP). The UP is also responsible for distributing rice/wheat against Vulnerable Group Development (VGD) cards. The UP chairman and members are believed to be unfair to the upper poor, poor and destitute groups in case of distribution of government grants. The villagers express their concern about fund misappropriation by the UP chairman and the members. Usually the municipal commissioner and the local *mathar* (village leader) arbitrate for dispute resolution. UP is also involved in developing the roads of the village and conducting arbitration and protecting the affected for injustice.

There are government primary schools in the study villages. These educational institutions play an important role in promoting education in the villages. To conduct development activities the government has Food for Work program in the village. Apart from family planning, the government provides health care services and awareness on nutrition to the villagers. To ensure law and order and peace in the village the government's police department plays a significant role. Apart from some stray incidents of burglary, the law and order situation in the villages is satisfactory. The police department takes action against the lawbreaker.

The Krishi Bank provides loans for crop cultivation, to set up horticulture farms. The Kormo Sangathan Bank is financing those who has taken training from the Directorate of Youth Development. The government has constructed one flood protection dam and bridge on the river. It has also taken substantial initiatives to encourage the villagers to participate in the family planning program. It is also trying to ensure good health for the pregnant women through its 'Integrated Nutrition Project'. Necessary steps have also been taken by the government to ensure sanitary latrine facility, safe drinking water and primary education.

3.2 Non-government Organizations, Community-based Organizations and Co-operatives

The villagers receive several kinds of services from the NGOs in their villages. NGOs are working for improving the socio-economic condition of the villagers. NGOs provide loans, technical and financial support in sectors such as health, education, fisheries, livestock, social

forestry and other micro-enterprise development. These organizations also have awareness-building programs for discouraging early marriage, and improving environment; nutrition, sanitation, maternal health and so forth. Often they are involved in relief distribution programs. World Vision is the most influential role player among the NGOs in the villages concerned

The fishermen, for their common interests, form a number of small co-operatives and accumulate their savings to form capital. The members are entitled to borrow from these co-operatives for setting up their own business in the nearby market.

3.3 Informal organizations

A good number of mosques and temples are present in the villages. There are clubs and committees, which are acting as a symbol of unity, co-operation and communal harmony. The clubs help the needy by providing financial support.

3.4 Private sectors

The sample villages are inhabited by a variety of business group such as fish traders, shopkeepers, rice traders, timber traders and seasonal businessman. *Mohajoni* (lending money) was a lucrative business for the rich in the past who used to supply loan at a very high rate to the villagers but now the business declined due to introduction of the micro-credit programs.

Table 3.1 Access to institutions

Wealth group	Government institution	NGOs, CBOs, Co-operatives	Informal organization	Private sector
Rich and middle class	Very high	Low	High	Very high
Upper poor	Low	Very high	Medium	Medium
Poor	Low	Very high	Medium	Low
Destitute	Low	High	Low	Low

According to the villagers the NGOs operating in the villages are playing pivotal roles in the socio-economic advancement of the residents. They have come up with various resources for the development of the village. The awareness building programs of the NGOs have made them conscious about health, early marriage, education that is leading them to a new era.

4. Livelihood Strategies

The following table focuses on the combination of resources used by different wealth groups to pursue their livelihood strategies.

Table 4.1 Livelihood strategies of different wealth groups

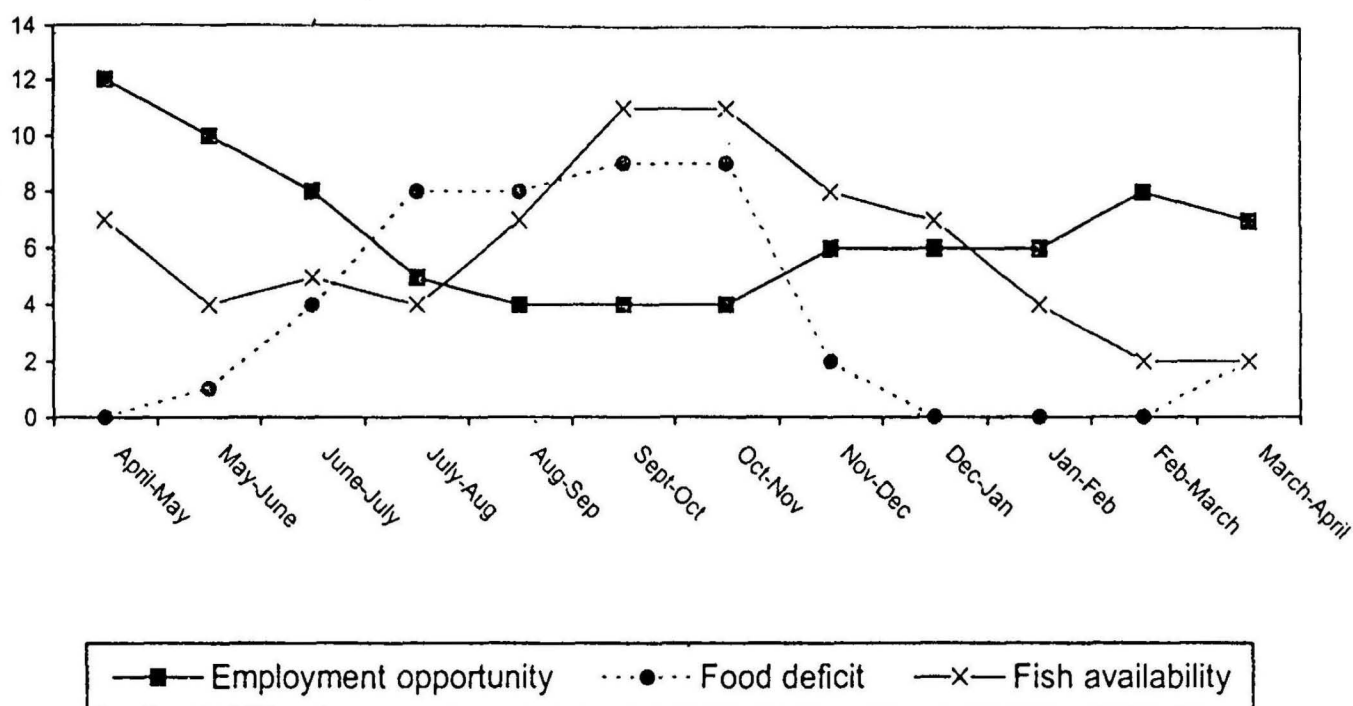
Wealth category	Livelihood strategies
Rich and middle class	• Diversified strategies for earnings. • Maximum use of resources. • Lease in shops. • Employ labour for cultivation, business. • Lend money on interest. • Educating children as future investment.
Upper poor	• Produce crops in own and leased lands. • Develop credit worthiness. • Have patron-client relations with landowners. • Diversify economic activities to protect income erosion. • Get loans from NGOs. • Children go to free school.
Poor	• Work hard everyday. • Women and children are engaged for earnings. • Frequently borrow without interest from neighbour, adjacent shop. • Get loan from NGOs. • Sell out small assets. • Seasonally migrate out to city.
Destitute	• Work hard everyday. • Women and children are engaged for earnings. • Occasional starvations. • Depend on others for livelihoods. • Take loan from NGOs. • Frequently borrow without interest from neighbour, adjacent shop. • Sell out household belongings of the house. • Migrate out to the city.

4.1 Seasonal differences on livelihoods

This part attempts to reveal the coping strategies of the villagers in different seasons. Most of the households of the sample villages depend on agricultural activities and fishing. It is worth mentioning that the day-labourers, around 58% of the total population of these villages, mostly depend on these two activities. Their livelihoods are largely influenced by seasonal fluctuation.

Figure 1 shows the seasonal variation of the employment opportunities and availability of fishes in the Bangali Nadi villages. It also shows the deficit of food indicating the most vulnerable time of the year.

Figure 1: Seasonal vulnerability in the villages



Employment opportunity

There is large opportunity of work in the months of April to June when harvesting of HYV paddy continues. Harvesting of paddy also take places during November to February. Employment opportunities moderately flourish in February to April and June to July when demand for rises for the cultivation of wheat, jute and chili.

The slack season of agriculture work prevails during the months of July to September due to heavy rainfalls. During September to November there is no farm work in the field. In this period, the poor try to get alternative work for subsistence like pulling rickshaw/van or to catch and sell fish available in the water bodies. Often the poor villagers migrate to distant places to find job. For obvious reasons they are forced to take loans for a short time. They take loans in the form of food-grains, cattle, plough, and firewood. In extreme cases they do not even bother to spend the savings or to sell their cattle, trees, chickens, jewelry or any other belongings they have.

Food deficit

It is obvious that food deficit occurs mostly during July-November when there is lack of employment. Food deficit is the lowest in December-March and in April-May because the villagers get involved in threshing paddy. When food deficit becomes predominant, villagers borrow food-grains and take loans from those who are better off. The poor who can afford savings either cash or kind form utilize those as their last resort. However, the most distressed has to depend on others for food.

Availability of fish

Fish is available in abundance in the months of September to November. In this period the water level in river, ponds and ditches goes down gradually and people can catch fish heavily. Scarcity of fish occurs during February to April, as there is less water in ponds and canals.

The price of fish goes up in April to June. As fewer fishes are available the price of fish shoots up. Price is low in September to November, as the supply of fish is high in the market. Even the poorest people can afford to buy fish during September-October.

Worst time of the year

Figure 1 implies that the worst time for the villagers is in the months of June to September. Scarcities of work and food deficit remain high at this time. Diseases such as cholera and diarrhea break out mostly during April-August.

During flood and drought the villagers take loan with interest from different co-operatives, institutions and NGOs. They try to get help from different government and non-government organisations. In case of emergency they sell out their cattle, chicken and food-grains. If the situation worsens they do not even bother to sell their furniture, roof tin and other household items.

5. Livelihood Outcomes

The livelihood outcomes for different wealth groups are presented in table 5.1.

Table 5.1 Sustainable livelihood outcomes for different wealth groups

Wealth category	Sustainable livelihood outcomes
Rich and middle class	• Financially well off. • Able to afford healthy food, and possess sound health. • Self-sufficient. • Well educated children. • Surplus in food and capital. • Use government institutional credit for investment. • Accumulate savings. • Inherit property.
Upper poor	• Financially stringent. • Seasonal deficit of food. • Siblings are moderately educated. • Low level of savings. • Lack of balanced diet. Physically feeble. • Do not inherit property except homestead.
Poor	• Often food insecure. • Children unable to have education. • Unhealthy food. • Malnutrition; chronic morbidity.
Destitute	• Always deficit in food. • Uneducated and malnourished children. • Chronic disease.

6. Expected Impact of Fourth Fisheries Project by Beneficiaries

The fishery resource in Bangali river is passing through a transition period. The rivers used to swarm with fishes but dwindling fisheries resource at present is forcing the fishermen to look for other jobs. They have to struggle a lot to get a job for not having necessary skills. So, they are very much eager to see the FFP implemented. It is stated that if FFP initiates their activities in the river, the fishermen would be able to catch fish all the year around. Their livelihoods would not be affected by seasonality. As there is less fish in the river during dry season they encounter problem in catching fish. If fish is cultivated in this time, then they will be able to catch fish from the deep part of the river. They need assurance to protect and manage the open water bodies in and around the village with technical and financial assistance from FFP.

The fishermen in the Bangali river area have been engaged in fisheries for a long time. They have gained experience in fish culture and management. That is why they want to remain in their profession. Expansion of fish culture will improve the livelihood strategies of the fishermen in a sustainable manner. Their source of earning will increase. It will ensure sufficient protein supply in their food. Simultaneously, expansion of fishery sector would allow the local fisherman to garner some profit leading them to socio-economic well-being.

7. Key Findings of Bangali River based on Household Survey

7.1 Introduction

The methodologies used in conducting this baseline survey have earlier been discussed in some details. For the purpose of the survey, household members of the sample villages were classified into four wealth categories (WC) through PRA exercises, such as, Rich/Middle, Upper Poor, Poor and Destitute. In the household survey, sample was taken from each study village proportionately according to the aforesaid wealth grouping, This part of the report contains analysis of the data collected through questionnaires from the sample households in the Bangali Nadi water body area. It is located in Sariakandi upzila of Bogra district.

7.2 Findings

Total sample households (HHs) in this water body were 48. Highest proportion of the HHs of this water body was poor (33.3%), followed by upper poor (27%), destitute (25%) and rich/middle class (14.6%) (see methodology for the criteria of categorisation). Neither of all occupational groups in this water body was found in the data set of the Department of Fisheries. Table 7.1 shows socioeconomic and demographic characteristics of the households. Household members' sex ratios were higher in all wealth categories, viz., 169 males per 100 females in the upper poor, 151 males per 100 females in the destitute and 143 males per 100 females in the rich/middle category respectively. This means that more males than females were in this HHs. Average age of the HH heads was highest amongst the rich/middle class (51) and lowest amongst the destitute (42). Age-dependency ratio¹ was highest amongst the upper poor (97) and lowest amongst the rich/middle (85). Age-dependency ratio implies the number of persons in the dependent ages (under 15 and over 64 years) for every 100 persons in the working ages (15-64 years). On average the HH heads had 2.7 years of schooling in rich/middle category, 2.9 years in upper poor, 2.6 years in poor and 0.6 years in destitute category. Over 29 percent of the HHs were involved with NGO activities, this was 36% in the rich/middle and 29% in the destitute category. Only one of the sample HHs was involved with fishing, which belonged to the destitute category.

Table 7.1: Household composition in the Bangali Nadi

Wealth category	Average sex ratio= (male/female) ×100	Average age of HH head	Age dependency ratio	Average years completed in school (%)		HH involved with fishing (%)	HH involved with NGO (%)
				HH head	HH member		
Rich/middle (n=7)	142.9	51	84.8	2.7	2.5	0	35.7 (5)
Upper poor (n=13)	169.2	46	96.8	2.9	3.2	0	14.3 (2)
Poor (n=16)	137.0	49	87.4	2.6	1.3	0	21.4 (3)
Destitute (n=12)	151.4	42	89.6	0.6	0.7	100.0 (1)	28.6 (4)
Total (n=48)	150.2	47	90.1	2.2	1.8	2.1 (1)	29.2 (14)

Note: Figures in the parentheses indicate the number

¹ The age-dependency ratio is the ratio of persons in the dependent ages (under 15 and over 64 years) to those in the "economically productive" ages (15-64 years) in a population

Table 7.2 reveals the land ownership pattern of the HHs. On average HHs had over 33 decimals of cultivated own land, this was highest in the rich/middle category (120.7 decimals), followed by upper poor (41.0 decimals) and poor (13.6 decimals). The average pond or *doba* own land was highest amongst the poor (6.5 decimals), which is unexpected. On average HHs had 41 decimals of fallow own land, this was highest in the rich/middle category (93.4 decimals), 51 decimals in upper poor and 41.3 decimals in the poor. Three categories, viz., rich/middle, upper poor and poor had only the cultivated leased-out land. The cultivated leased-in land was highest among the upper poor (38.0 decimals), followed by the poor (17.5 decimals). Moreover, Table 7.2 presents that the destitute had no cultivated land; the rich/middle category did not cultivate any leased-in land

Table 7.2: Average amount of land (in decimal) owned by HHs by wealth and land category

Wealth category	Owned				Leased-out	Leased-in
	Homestead	Cultivated	Pond/ <i>doba</i>	Fallow	Cultivated	Cultivated
Rich/middle (n=7)	14.4	120.7	5.9	93.4	11.9	0
Upper poor (n=13)	5.8	40.9	1.0	50.8	12.8	37.8
Poor (n=16)	5.4	13.6	6.5	41.3	19.6	17.5
Destitute (n=12)	2.2	0	0	0	0	1.8
Total (n=48)	6.0	33.2	3.3	41.1	11.7	16.5

Table 7.3 shows the percentage of materials used in construction of main rooms of the houses. The floors of main rooms of almost all houses were made of mud except for the rich group (brick 28.6%). About 71 percent walls of the main houses were made of tin, this was 86% in rich/middle group, followed by upper poor (85%), poor (70%) and destitute (42%). Over 27 percent walls of the main houses were made of natural item², this was highest in destitute category (58.3%). The findings further indicate that the roofs of main rooms of all houses were made of tin.

Table 7.3: Percentage of materials used in construction of main rooms of the houses by WC

Wealth category	Floor		Wall			Roof
	Brick	Mud	Brick	Tin	Natural	Tin
Rich/middle (n=7)	28.6 (2)	71.4 (5)	14.3 (1)	85.7 (6)	0	100.0 (7)
Upper poor (n=13)	0	100.0 (13)	0	84.6 (11)	15.4 (2)	100.0 (13)
Poor (n=16)	0	100.0 (16)	0	70.0 (12)	25.1 (4)	100.0 (16)
Destitute (n=12)	0	100.0 (12)	0	41.7 (5)	58.3 (7)	100.0 (1)
Total (n=48)	4.2 (2)	95.8 (46)	2.1 (1)	70.8 (34)	27.1 (13)	100.0 (48)

Note: Figures in the parentheses indicate the number

Table 7.4 reveals the percentage of houses by ownership pattern and wealth category. The inhabitants owned almost all houses themselves, except one house that was in partial ownership (2.1%) and rental (2.1%).

² Natural items means bamboo, jute stick, hay, leaves of tree, straw etc.

Table 7.4: Percentage of houses by ownership pattern and WC

Wealth category	Ownership pattern		
	Full ownership	Partial ownership	Owned by other/rented
Rich/middle (n=7)	100.0 (7)	0	0
Upper poor (n=13)	92.3 (12)	0	7.7 (1)
Poor (n=16)	100.0 (16)	0	0
Destitute (n=12)	91.7 (11)	8.3 (1)	0
Total (n=48)	95.8 (46)	2.1 (1)	2.1 (1)

Note: Figures in the parentheses indicate the number

Table 7.5 presents the percentage of the HHs, taken one meal in a day by wealth category during the 2000-2001. It was observed that only 17 percent of the HH members took one meal in a day in October-November, this was highest in destitute (33.3%). And some HH members (10.4%) took one meal in a day in September-October, this was also highest amongst the destitute.

Table 7.5: Percentage of HHs taken one meal in a day by wealth category during 2000- 2001

Wealth category	Apr – May	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr
	Baishak	Jaistha	Ashar	Shrabon	Bhadro	Ashwin	Kartik	Augraha.	Poush	Magh	Falgun	Chaitra
Rich/middle (n=7)	0	0	0	0	0	0	0	0	0	0	0	0
Upper poor (n=13)	0	0	0	0	7.7 (1)	7.7 (1)	7.7 (1)	0	0	0	0	0
Poor (n=16)	0	0	0	6.3 (1)	6.3 (1)	12.5 (2)	18.8 (3)	0	6.3 (1)	0	0	0
Destitute (n=12)	0	0	8.3 (1)	8.3 (1)	8.3 (1)	16.7 (2)	33.3 (4)	0	0	0	0	0
Total (n=48)	0	0	2.1 (1)	4.2 (2)	6.3 (3)	10.4 (5)	16.7 (8)	0	2.1 (1)	0	0	0

Note: Figures in the parentheses indicate the number

Table 7.6 illustrates the strategies adopted by the HHs in case of income or asset loss. More than 50 percent HHs adopted the borrowing as a strategy in case of income or asset loss, this was 58.3% in the destitute category, followed by the rich/middle category. Nearly 15 percent of the HHs coped with the economic crisis by borrowing with interest, this was 33.3% in the destitute category.

Table 7.6: Percentage of HHs adopted the strategies in case of income or asset loss by WC

Wealth category	Strategies					
	Borrowing	Borrowing by interest	Mortgage or sell the land	Sell the livestock or crops	Expenditure from their own savings	Non response
Rich/middle (n=7)	57.1 (4)	0	14.3 (1)	0	0	28.6 (2)
Upper poor (n=13)	46.2 (6)	7.7 (1)	0	23.1 (3)	15.4 (2)	7.7 (1)
Poor (n=16)	50.0 (8)	12.5 (2)	18.8 (3)	6.3 (1)	0	18.8 (3)
Destitute (n=12)	58.3 (7)	33.3 (4)	0	0	0	8.3 (1)
Total (n=48)	52.1 (25)	14.6 (7)	8.3 (4)	8.3 (4)	4.2 (2)	14.6 (7)

Note1: Figures in the parentheses indicate the number

Note 2: Multiple responses were considered.

Table 7.7 describes the percentage of the HHs economic solvency situation within last 12 months. More than 37 percent of the HHs had the breakeven, this was highest in poor and destitute (50.0%). Just over 27 percent had the occasional deficit, it was highest in the poor (31.3%) and lowest in the upper poor (23%). One sixth of the HHs had surplus, this was 31% in the upper poor, 17% in the destitute category.

Table 7.7: Percentage of HHs economic status within last 12 months by WC

Wealth category	Status			
	Always Deficit	Occasional deficit	Breakeven	Surplus
Rich/middle (n=7)	28.6 (2)	28.6 (2)	28.6 (2)	14.3 (1)
Upper poor (n=13)	30.8 (4)	23.1 (3)	15.4 (2)	30.8 (4)
Poor (n=16)	12.5 (2)	31.3 (5)	50.0 (8)	6.3 (1)
Destitute (n=12)	8.3 (1)	25.0 (3)	50.0 (6)	16.7 (2)
Total (n=48)	18.8 (9)	27.1 (13)	37.5 (18)	16.7 (8)

Note: Figures in the parentheses indicate the number

Table 7.8 shows the percentage of the HHs who took loans in different months of 2000-2001 About 23 percent of the HHs took loans in October-November, this was highest (42%) in the destitute, followed by the poor. About 15 percent of the HHs took loans usually from August-October and March-April and during August-October this was highest in destitute category; but in March-April this was highest in rich/middle category (29%).

Table 7.8: Percentage of the HHs taking loans in different months of 2000-2001

Wealth category	Apr - May	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr
	Baishak	Jaistha	Ashar	Shrabon	Bhadro	Ashwin	Kartik	Augraha	Poush	Magh	Falgon	Chaitra
Rich/middle (n=7)	14.3 (1)	14.3 (1)	0	14.3 (1)	14.3 (1)	0	14.3 (1)	0	0	0	14.3 (1)	28.6 (2)
Upper poor (n=13)	15.4 (1)	0	7.7 (1)	0	15.4 (2)	23.1 (3)	15.4 (2)	0	0	23.1 (3)	15.4 (2)	23.1 (3)
Poor (n=16)	6.3 (1)	6.3 (1)	12.5 (2)	7.7 (1)	12.5 (2)	6.3 (1)	18.8 (3)	6.3 (1)	6.3 (1)	6.3 (1)	6.3 (1)	12.5 (2)
Destitute (n=12)	8.3 (1)	8.3 (1)	16.7 (2)	8.3 (1)	16.7 (2)	25.0 (3)	41.7 (5)	16.7 (2)	0	0	0	0
Total (n=48)	8.3 (4)	6.3 (3)	10.4 (5)	6.3 (3)	14.6 (7)	14.6 (7)	22.9 (11)	6.3 (3)	2.1 (1)	8.3 (4)	8.3 (4)	14.6 (7)

Note: Figures in the parentheses indicate the number

Table 7.9 shows the percentage of HH heads who remained unemployed in certain parts of the year and things done at that time. About 38 percent remained unemployed with the being highest amongst poor (63%) and lowest amongst destitute (16.5%). During the unemployment period a few of them were engaged in the indirect earning.

Table 7.9: Percentage of the HH heads remain unemployed in certain parts of the year and things done at that time by WC

Wealth category	Remain unemployed	Things done when unemployed			
		Fishing/net making	Indirect earning	Direct earning	Training/no work
Rich/middle (n=7)	28.6 (2)	0	100.0 (2)	0	0
Upper poor (n=13)	30.8 (4)	0	25.0 (1)	0	75.0 (3)
Poor (n=16)	62.5 (10)	10.0 (1)	10.0 (1)	10.0 (1)	70.0 (7)
Destitute (n=12)	16.7 (2)	0	100.0 (2)	0	0
Total (n=48)	37.5 (18)	5.6 (1)	33.3 (6)	5.6 (1)	55.6 (10)

Note: Figures in the parentheses indicate the number

Table 7.10 presents the health-seeking behaviour of the HHs. About 88 percent sought treatment from MBSS doctors during illness with the being highest for rich (100%) and lowest for poor (81%). Over 10 percent sought treatment from village doctors during illness with the being highest for poor (19%).

Table 7.10: Health-seeking behaviour of the HHs by WC in Bangali Nadi

Wealth category	Health-seeking behavior		
	MBSS doctor	Village doctor	No where
Rich/middle (n=7)	100.0 (7)	0	0
Upper poor (n=13)	92.3 (12)	7.7 (1)	0
Poor (n=16)	81.3 (13)	18.8 (3)	0
Destitute (n=12)	83.3 (10)	8.3 (1)	8.3 (1)
Total (n=48)	87.5 (42)	10.4 (5)	2.1 (1)

Note: Figures in the parentheses indicate the number

According to the perception of almost all sample HHs, the fish production had decreased in last five years and most of the sample HHs inferred that the activities of fisheries department would be beneficial (see Table 7.11 and Table 7.12).

Table 7.11: Percentage of the HHs perception about fish production in open water bodies in last five years

Wealth category	Fish production	
	Increased	Decreased
Rich/middle (n=7)	14.3 (1)	85.7 (6)
Upper poor (n=13)	0	100.0 (13)
Poor (n=16)	6.3 (1)	93.8 (15)
Destitute (n=12)	0	100.0 (12)
Total (n=48)	4.3 (2)	95.7 (46)

Note: Figures in the parentheses indicate the number

Table 7.12: Percentage of the HHs expectation from activities of Fisheries Department

Wealth category	Expectation	
	Beneficial	Nothing
Rich/middle (n=7)	100.0 (7)	0
Upper poor (n=13)	100.0 (13)	0
Poor (n=16)	87.5 (14)	12.5 (2)
Destitute (n=12)	100.0 (12)	0
Total (n=48)	95.7 (46)	4.3 (2)

Note: Figures in the parentheses indicate the number

Profile of Three Villages under the Water Body Bangali Nadi

Under the water body Bangali Nadi three villages have been taken up to understand the livelihood conditions of the villagers through participatory rural appraisal (PRA). The villages Hindukandi, Baghber and Kuptala are situated under Shariakandi upazila of district Bogra.

I. Profile of Village Hindukandi

1. Contextual Analysis

1.1 Historical background

There was no human habitat at village Hindukandi, a mouza of Shariakandi union of Shariakandi thana. This entire mouza has been developed from sedimentation of the river. In the past people used to avoid this place due to the presence of a crematorium, only Hindus came first and later people started to flock into this area gradually. Among the migrants significant numbers were the victims of river erosion from 32 different places. These people purchased the land from the government afterwards. Although the Hindukandi mouza was called Colonypara in earlier it was renamed Hindukandi later due to election purposes.

The frequency of occurrence of thunderstorms, gusty rain has changed due the natural changes. The amount of fish was dwindling over the last couple of decades. Common crops of this area are rice, jute and green chili. The production increased significantly as a result of advanced agricultural practices.

Superstitions and myths engrossed the villagers in the past. These were wiped out by the expansion of education among them. People of the village can afford to attend cultural programs and see the televisions. Women were compelled to maintain *purdah* in the past and were deprived from their legal rights to express their concerns in social and family affairs. But now they are enjoying the opportunity to defend their rights, express their opinion and even in some cases they have the chance to raise their voice in resolving conflicts. They are also participating in different income generating activities with the men side by side.

1.2 Village infrastructure

A satisfactory infrastructure development took place in the village Hindukandi during the last few years. The area was characterized by barren and sandy land lacking trees of habitat but it has evolved as a densely populated area very soon with a number of infrastructure development work such as roads, culverts, electricity and so on. The road network within the village comprises of metal, brick soling and unpaved roads. A flood protection dam, made of concrete, has been constructed along the river to protect the village from river erosion. Different kinds of transport bus, auto-rickshaw, rickshaw, van ply over the roads of this village. This unique transport network is the result of the presence of the municipality at the center of the village.

The total area of the village is approximately 0.5 square kilometers. Price of land has soared up from Tk 400 to Tk 30,000 per decimal over last two decades. A congenial atmosphere prevails between Hindus and Muslims of this locality. A number of service institutes e.g. REB, Krishi Bank, Korma Shongstan Bank, government and non-government offices, schools, madrassa, a number of mosques are existing in the village. Different kinds of services are provided to the inhabitants of the village by different government and non-government organizations. They are rendering legal advice, credit facilities for development of micro-enterprises, electricity, health and education. The municipality is located at the center of the village and the inhabitants need to travel a short distance to avail medical and postal facilities because of their proximity. Recently the Rural Electrification Board (REB) has extended its network at the doorsteps of most houses. The agriculture extension network has facilitated to develop a number of poultry and fishery firms and a rice mill.

1.3 Political/ Administration

The government has expanded its 'Food for Work' program for infrastructure development (e.g.: roads, educational institute's etc). It is also focusing upon increasing health facilities, providing loans for micro-enterprise development particularly for those who have had taken training from the Jubo Unnoyan. The Korma Shangstan Bank is disbursing agricultural loan. If any dispute arise from unavoidable circumstances, then the Chairman, members of the union parishad, local dignitaries together with common people sit to resolve the conflict. There is a strong co-operation among the local politicians, representatives of the union parishad, for the common interests of the area. The existing congenial atmosphere is helping to maintain a good law and order situation in this locality. Schools, colleges, shops and transport remain out of their course during hartal hours, which eventually push the price of goods higher.

1.4 Education

The present literacy rate is stated 79%, which includes those who can only write their names. There are 3 non-government schools, one government school, 3 BRAC schools, 1 ESP school and a Madrassa in the village.

1.5 Health

Public health condition is fare in Hindukandi village. Most common disease in this area are fever, cough and influenza. The government hospital provides the necessary medical facilities.

1.6 Cultural

Almost 90% of the population is Muslim and the rest are Hindus. No social restrictions prevail for women in terms of their free movement. Marriage systems for the Muslims complies with the existing Muslim Family Act whereas marriage for the Hindus are accomplished according to their cultural and religious norms. Fisherman, sweeper, goldsmith are the most common professions among the Hindus. Women have the right to participate in decision making in social, cultural and family issues.

2. Village Resources

2.1 Natural capital

The village is characterized by the existence of River Bangali, which runs along the boundary of the village. Most of the land is cultivable but the fertility is not satisfactory. This is due to the excessive presence of sand in the soil. Common crops are rice, jute and mustard. The land is relatively high but there is no sign of forest. People take shelter on the embankment of the Bangali river during flood.

2.2 Human capital

Hindukandi is inhabited by a variety of skilled professionals such as teachers, chairman and member of municipality, carpenters, masons, politicians, tailors, cottage industry workers etc. They are involved in relevant work either in the village or elsewhere. Men and women work together during the harvesting season as labourers. There is a wage difference between the man and the women. Women are the less paid workers. Women are also involved in making cottage industry products as well as earth excavation while the males pull rickshaws.

Education

The current literacy rate is 79%. Among them many have taken training on swing, horticulture, carpentry, dairy, vaccination, and fishery from different government and non-government institutions while others have developed skills on awareness building on different social-cultural perspectives.

Health

The health condition of the villagers is good. They have the capability and the spirit to work. Still there exist an increased demand for supply of drinking water and better diet.

2.3 Social capital

The villagers maintain a good rapport among themselves by being co-operative to each other. They are very much willing to help each other and often consult others to resolve personal problems.

2.4 Physical capital

Most of the families possess their own house and agricultural land. The houses are made of bamboo, tin, bricks and tin while few are made of earth. Often they build their own house. There are no restrictions on luring fish from the government owned water bodies. There are a number of mosques, Hindu shrine, schools, madras and a rice mill in the village. The Agriculture Extension Department is in close co-operation with the farmers in establishing poultry, fishery and horticulture farms.

2.5 Financial capital

11 NGO's are rendering their service in Hindukandi. These NGO's disburse loan to the villagers to gear up various income generating activities. Krishi Bank, Kormo Shongstan Banks are on top of the list in loan distribution. Borrowers are bound to repay the loan on time. Farmers can apply for loan against their mortgaged land.

The villagers form co-operatives and accumulate their savings to form capital. The members are entitled to borrow from these co-operatives for setting up their own business in the nearby market. There is a great opportunity for the locals to set up business in the nearby market. They buy commodities from the wholesale market and sell it at an added price.

3. Institutional Processes: Importance and Roles

3.1 Government institutions

Government (Union Parishad): relief or any other government funds are distributed through the Union Parishad (UP). The Union Parishad is also responsible for distributing rice/wheat against VGD cards. The UP members also take part in local dispute resolutions and other social activities as per requirement. But above all the villagers express their concern about fund misappropriation by the UP chairman and the members.

Government Departments

There is one government primary school and 7 non-government primary schools, which is rendering free education to the children. They also supply free study materials. Krishi Bank provide loans for plantation, to set up horticulture firms etc. the Employment Bank is financing those who has taken training from the Jubo Union Directorate. The government has constructed one flood protection dam and bridge on the river.

Police

The police department is providing security to the villagers. They take actions against those that break the law and bring them to book.

Education and Health

The government has taken substantial initiatives to encourage the villagers to participate in the family planning program. It is also trying to ensure good health for the pregnant women through its 'Integrated Nutrition Project'. Necessary steps have been taken by the government to ensure sanitary latrine facility, safe drinking water primary education.

3.2 NGOs, CBOs, Co-operatives

Co-operatives: there are 12 NGO's working for socio-economic emancipation of the villagers. They are engaged in providing technical and financial support in sectors such as health, education, fisheries, livestock, social forestry and other micro-enterprise development. Often they are involved in relief distribution programs. World vision is the most influential role player among the NGO's in this locality.

3.3 Informal organizations

Nine mosque in the village are the centers for the Muslims to practice their religious rites. There is one club and a number of committees, which are acting as a symbol of unity, co-operation and communal harmony.

3.4 Private sectors

Hindukandi is inhabited by a variety of businessmen such as fishmongers, shopkeepers, rice-traders, timber traders and seasonal businessman. Mohazoni was a good business for the rich in

the past who used to supply loan at a very high rate to the villagers. But the Mohazoni business has been abolished.

Table 3.1 Ranking of activities of different organizations working in village Hindukandi

Serial no	Name of Organization	Description of Activities	Score
1	CARE	Earth excavation, road construction	3
2	PROSHIKA	Accumulate savings and disburse loan from the savings	3
3	ASA	Encourage for saving. Accumulate savings and disburse loan from the savings.	3
4	BRAC	Encourage villagers for savings; provide loan and technical support for poultry, fishery, dairy, horticulture. Vaccination and nutrition and insurance programs	1
5	Manabik Unnoyan Podokhep	Provide loan, free technical support for gardening, horticulture.	2
6	Purba Bangla Unnayan Shangstha	Encourage for saving. Accumulate savings and disburse loan from the savings.	4
7	Food and Hungry International	Encourage for saving. Accumulate savings and disburse loan from the savings. Provide free study materials, medicine and clinical support, distribute relief materials	2
8	RAC	Accumulate savings and disburse loan from the savings. Involved in fishery development, training on making handicrafts with a nominal charge	2
9	IRDPA	Encourage for saving. Accumulate savings and disburse loan from the savings.	3
10	Shomaj Sheba Progoti	Encourage for saving. Accumulate savings and disburse loan from the savings.	4
11	TMSS	Encourage for saving. Accumulate savings and disburse loan from the savings. Conduct survey of fishery resources.	3
12	Polli Unnoyan Shongstha	Encourage for saving. Accumulate savings and disburse loan from the savings.	4
13	Shihoron Nari Jagoron Proshikhon Kendro	Organize training on sewing, embroidery, for women at a nominal cost	2
14	World Vision	Disburse loan at a reduced interest rate. Provide relief, sewing machines, ring slabs for making sanitary latrines	1
15	Kormo Shangsthan Bank	Provide loan to the educated well trained youths	2
16	Krishi Bank	Support farmers by providing agricultural loan (e.g.: horticulture, crop, fishery etc)	2
17	Polli Bidyut Somity	Electricity supply for villagers	1
18	Somoboy Somity	Encourage for saving. Accumulate savings and disburse loan from the savings.	3
19	Griho Bima Prokolpo	Encourage for saving. Accumulate savings and disburse loan from the savings.	4
20	BPDA	Encourage for saving. Accumulate savings and disburse loan from the savings.	3

Note: 1 = Very good, 2 = Good, 3 = Satisfactory, 4 = Not satisfactory

4. Seasonal Vulnerability and Coping Strategies

Table 4.1 Seasonal differences in village Hindukandi

Item	Apr il- Ma y	May- June	June -July	July- Aug	Aug- Sept	Sept- Oct	Oct- Nov	Nov- Dec	Dec- Jan	Jan- Feb	Feb- Mar ch	Mar ch- April
	<i>Bais hak h</i>	<i>Jaist ha</i>	<i>Asha r</i>	<i>Shra bon</i>	<i>Bhad ro</i>	<i>Ashw in</i>	<i>Karti k</i>	<i>Augr ahay an</i>	<i>Pous h</i>	<i>Mag h</i>	<i>Falg oon</i>	<i>Chait ra</i>
Temperature	12	9	6	6	5	3	1	1	4	7	8	11
Rainfall	8	9	11	12	12	6	2					
Employment opportunity	12	10	5	3	2	6	8	7	10	11	11	12
Food deficit				12	12	9	9	6				
Borrowing						12	9	6				
Lean period	10	10				12	11				5	4
Fish availability	6	6	5	4	4	11	12	9	8	5	3	2
Price of fish	12	12	6	6	3	3	3	6	6	7	9	9

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Temperature

The temperature in this region is recorded in the month of Baishakh and the lowest temperature is recorded during Kartik.

4.2 Rainfall

Highest rainfall occurs in Shrabon. Lowest rainfall is recorded in the month of Kartik.

4.3 Employment opportunities

The villagers often migrate to distant places to find work. If for obvious reasons they have to stay back home they try to survive taking loans promising to repay afterwards. The job opportunity flourish in the months of 'Baishakh', 'Jaistha', 'Poush', 'Magh', 'Falgoon' and 'Chaitra'. These are the months of harvest.

Jute and wheat harvesting starts in the months of Falgoon and Chaitra. Scarcity of work prevails during the months of Shrabon and Bhadro. During the period of limited work opportunities the victims migrate elsewhere searching for work. They take loans in the form of food-grains, cattle, plough, firewood or start pulling rickshaws. In extreme cases they do not even bother to sell their cattle, trees, chicken ornaments or any other belongings they have.

4.4 Food deficit

During the crop deficit season the villagers take loans from the rich either in cash or in the form of goods or crops. People who have savings (crop or money) utilize these as their last resort. But the most distressed has to depend on others for food.

Maximum food deficit occurs during Shrabon and Bhadro because the employment opportunities drop down the lowest level excessive rainfall. Least food deficit prevails during the month of Augrahyayan. During this harvesting season work is available to all labourers. Villagers get engaged in threshing paddy. Earth excavation for construction of roads and ponds starts during

the month of Falgoon and Chaitra. When food deficit becomes predominant in the village, villagers borrow food-grains and take loans from those who are richer.

4.5 Borrowing

The borrowing items among the villagers are food-grains, fuel wood, money etc. Most villagers take loans and borrow goods and food grains during Ashwin. This is the month of flood, which limits job opportunities. Minimum loan and borrowings occurs during the month of Augrahasan.

4.6 Lean period

During lean period the villagers seek loan from the co-operative societies. They also try to enlist themselves into the government relief programs and other services. In case of emergency they sell their cattle, chicken and food-grains. If the situation turns out to be the worst they don't even bother to sell their furniture and other household items.

Worst period of the year is during the months of Baishakh, Jaistha, Ashwin, Kartik and Chaitra. This period is characterized by excessive rainfall. Disease such as cholera and diarrhea break out. During the period of floods and droughts, NGO's and co-operative societies provide loan. The government often supports them by distributing relief materials among the villagers.

4.7 Fish availability

Fish in Ashwin and Kartik floods the market. But fish scarcity occurs during Chaitra. The price of fish goes up in Baishakh and Jaistha. Even the poorest part of the population can afford to buy fish during Ashwin.

5. Well-being Pattern of the Village

Table 5.1 Well-being pattern in village Hindukandi

Wealth category Hhs 295	Livelihood assets	Livelihood strategies	Sustainable livelihood outcomes
Rich 4%	Possess land Possess mills Regular source of income Own cattle Well educated siblings	Employ labour for cultivation Employ labour in saw mills Provide loan Sell milk Send children to schools	Financially well-off Possess sound physic Able to afford healthy diet Food and capital surplus Well educated siblings
Middle class 20%	Possess land Own shops Own VCP Poultry farms Educated children Profession-teaching	Employ labour for cultivation Employ labour for working in their shops Conduct own VCP business Supervise own poultry farms Teaching	Moderately well-off Afford healthy diet Marginal savings Sound health Well educated children Avoid to take loan
Upper poor 38%	Cultivate leased lands Carpenter Own house Fish production Handyman Conductor	Produce crops in leased lands Work as carpenters Works as handyman Works in motor garage	Financially turbulent Can afford to live without working for 4-5 days at a stretch Sound physic No savings and lack of balanced diet
Poor 17%	Own rickshaw Carpenter Meson Fish monger Involved in bakery business	Pull rickshaw Take loan from NGO's Send children to schools Frequent borrower	Often deprived from balanced diet Malnutrition Children-less educated
Destitute 21%		Often remains in starvation Depend on others Dwell in plots owned by others	Food deficit throughout the year Malnutrition Unhealthy Less interested to send children to schools

Table 5.2 Well-being data of village Hindukandi

Wealth category	Percentage (n = 295)	HH identification number
Rich	4% (11)	39, 61, 231, 239, 258, 259, 260, 275, 278, 279, 281
Middle	20% (60)	12, 15, 37, 44, 47, 50, 57, 58, 59, 87, 90, 91, 93, 96, 107, 109, 138, 140, 141, 162, 163, 164, 179, 180, 181, 182, 184, 188, 195, 196, 200, 217, 220, 230, 232, 233, 235, 236, 241, 243, 244, 245, 246, 247, 261, 263, 271, 272, 273, 274, 276, 277, 280, 287, 288, 290, 291, 296, 300, 302
Upper poor	38% (112)	02, 06, 07, 08, 09, 10, 11, 14, 16, 18, 19, 20, 23, 24, 33, 34, 38, 42, 43, 51, 60, 62, 64, 66, 67, 69, 74, 76, 77, 80, 82, 83, 84, 85, 88, 89, 92, 95, 97, 103, 104, 108, 111, 112, 113, 114, 117, 119, 121, 122, 123, 124, 125, 126, 127, 128, 130, 132, 133, 134, 135, 139, 142, 143, 144, 145, 147, 148, 152, 155, 156, 158, 160, 161, 171, 173, 183, 185, 186, 187, 189, 190, 191, 192, 193, 194, 197, 198, 199, 207, 215, 237, 240, 242, 250, 253, 256, 257, 265, 269, 282, 285, 286, 292, 293, 294, 295, 297, 298, 301, 303, 304
Poor	17% (50)	01, 04, 26, 27, 30, 31, 40, 41, 54, 65, 68, 72, 75, 78, 79, 86, 98, 102, 105, 106, 110, 118, 120, 154, 165, 168, 172, 176, 203, 204, 205, 206, 208, 209, 211, 214, 216, 223, 224, 227, 228, 229, 251, 252, 254, 255, 264, 266, 267, 299
Destitute	21% (62)	03, 05, 13, 17, 21, 22, 25, 28, 29, 32, 35, 36, 45, 46, 48, 49, 52, 53, 56, 63, 70, 71, 73, 81, 94, 99, 100, 101, 115, 116, 129, 131, 136, 137, 149, 151, 157, 159, 166, 167, 170, 174, 175, 178, 201, 202, 210, 212, 213, 218, 219, 222, 225, 226, 238, 248, 249, 262, 270, 283, 284, 289

Note: Household number 55, 146, 150, 153, 169, 177, 221, 234, and 268 have not been found.

6. Expected impact by beneficiaries of FFP

6.1 Comments of fishermen

According to the fisherman of Hindukandi the fisheries resource in this village is passing through a transitional period. The rivers used to swarm with fish schools. But the dwindling fisheries resource is forcing the fisherman to browse for other jobs. They have to struggle a lot to get a job because of lacking the necessary skills. So, they are very much eager to see the FFP implemented. They also ensure to protect and manage the open water bodies in and around the village with the technical and financial assistance from FFP.

6.2 Comments of PRA facilitators

Fishermen of Hindukandi have been engaged in fishing business for a long time. They have gained great experience in fish culture and management. That is why this is obvious that they want to remain in their profession. It is necessary to rethink of expansion fish culture, which they think would ensure sufficient protein supply on their dinner table. Simultaneously, expansion of fishery sector would allow the local fisherman to garner some profit leading them to socio-economic emancipation.

II. Profile of Village Baghber

1. Contextual Analysis

1.1 Historical Context

It is mentioned by the villagers that village Baghber was covered by dark and drizzly forest in the past. Only 10-12 Hindu families inhabited the village at that time. The place is called Baghber because at that time *bagh* (tiger) often came out in the village from the jungle for hunting prey.

Change

Cultivation was prohibited for a long period due to the presence of scattered *kashbon* (catkin) all over the village. Geometrical progression of population started soon after the victims of the river (Jamuna) erosion started to flock in to occupy this land. The standard of living in this area is moderately high.

Project

Population of this area was blessed by the presence of World Vision and the Fourth Fisheries Project. They are providing technical and financial support to the villagers for fish culture. These two organizations are maintaining a close co-operation with the villagers for their socio-economic emancipation.

Infrastructure

Recent census data reveals that the number of population in this village is 1800. Among these 70% are Muslims and the rest are Hindus. Out of the total 20% are farmers, 30% labourers, 20% fisherman and 30% earn their livelihood through other professions. There are a number of mosques, Hindu shrine, and few ponds in the village. River Bangali flows along the border of this village. The village has a total of approximately 0.5 square kilometers area, which is 0.5 kilometer in length and 0.5 kilometer in width. As the village within the boundaries of the Pouroshova the villagers are provided with all the pouroshova facilities. The nearest hospital and market is just a kilometer ahead from the village.

Service

A number of government and non-government organizations are rendering service to the villagers of Baghber. NGO's that are present in the locality provide loan for development of micro-enterprises. They also conduct training on fisheries, poultry and dairy. Awareness building about gender issues, human rights, early marriage, sanitation and use of safe drinking water are programs undertaken by the NGO's. Most of the houses in the village are connected with the REB (Rural Electrification Board) network. There are two government schools and a Madrassa, which are providing education for the children. The health complex in the pouroshova is rendering health service to the locals. The government has already built one flood protection barrier along the riversides. There are a number of roads within the village.

Environmental and Social change

A sharp environmental change took place in the village during the last couple of decades. Agricultural system has been modernized with the introduction of chemical fertilizers and pesticides. Although the use of fertilizers and pesticides have skyrocketed the production of

crops but it left behind a irreversible damage for the fishery resources in the open water systems. Construction of roads created lot of ditches along the roadsides. The air quality in and around the village has declined, although to a limited extent, due to spewing of noxious gas from the traffic, which ply over the roads.

Women of the village were superstitious and were too much bound to abide by the religious rules. They used to avoid talking and seeing man and were deprived from their legal rights. But now they have qualified them to be conscious and do not hesitate to work with man. They have also started to raise their voice in different social and family issues. Candidacy of women in the local election has become a very common phenomenon. The opinion of women used to be very much marginalised during marriage. The bridegroom used to take dowry. But the society is becoming more conscious about giving dowry.

1.2 Village infrastructure

The infrastructure development in the village Baghber is satisfactory. The transport network within the village is good, which comprise of two pitched roads and a few unpaved roads. Buses, tempos, van and rickshaws ply over these roads. Most of the houses are connected to the REB network. A number of schools, mosques, madrassa and temples are present in the village.

1.3 Political/Administrative

The government is running its 'Food for Work' program for road network development. Construction of bridge, embankment and sluice gate are also included in this program. UP Chairman, members and other local leader align themselves to strengthen and streamline development activities for the locality such as development of roads, schools, madrassa, mosque etc. The sufferings of the villagers, particularly of the poor, increase remarkably during the Hartal due to drastic price rise. The vehicles that ply on the road become standstill, the result being loss of income for those labourers who had to travel far for work.

1.4 Educational

Schools: So far two non-government primary schools, one madrassa and one BRAC schools have been established. The number of students is approximately 1200. About 80% of the total students regular go to school but the percentage of dropouts is 25%. Attendance of the female students in the schools is 25%.

1.5 Health

Gastric, viral fever, flu is among the common disease of this village. The patients get the required treatment from the nearby hospital and community health centers.

1.6 Cultural

Seventy percent of the population are Muslims and the rest of the population is Hindu. There are stray incidents of early marriage in this village. This was the result of the combined effort different NGO's and relevant government agencies to shape up community values against early marriage. Giving dowry to the bridegroom during marriage has become a distance memory for the villagers. But the lower casts Hindus are still being cursed by the existing cast system.

Women's roles

The women have come out to work shoulder to shoulder for the development of the locality. Their legal rights are being protected and they are now enjoying every right to put their voice in various development and family issues. Even they are being entitled to take part in dispute resolution processes. Participation of women in the local election has become a common practice.

2. Village Resources

2.1 Natural capital

The river Bangali and river Jamuna flows next to the boundary of the village. Most of the land is very fertile due to the proximity to the rivers. The floodplains get flushed with silt during the flood. Often the floods are the results of unscrupulous opening of sluice gates in the upstream (India). The flood victims take shelter on the embankments on both sides of the rivers. The government distributes relief materials among the distressed during this period. The common crops in this area are rice, jute, wheat and mustard.

2.2 Human capital

There are a number of skilled labourers, barbers, carpenters, mesons and fisherman in the village. Few have taken the teaching as their profession. But there are no vocational training institutes in and around the village. These workers have gained the required skills working with their skilled predecessors. A number of educated youths take training from the Jubo Unnayan Adhidafter (Directorate). The world vision have extended its agricultural extension network to train up youths for developing fishery, poultry, dairy and horticulture firms. 50% of the population in this locality are educated which includes those who can only write their names. They use tube-well water as drinking water. Those who are still living beyond the poverty level are still living sub-standard live. Lack of food supply is causing malnutrition. Women work as labours excavating soil for construction of roads and ponds. But the rate of payment is still determined by gender. Women work as less paid workers.

2.3 Social capital

The villagers maintain a good rapport among themselves by being co-operative to each other. They are very much willing to help each other and often consult others to resolve personal problems. They share their happiness and sadness with each other.

2.4 Physical capital

Most of the families possess their own house and agricultural land. The houses are made of bamboo, tin, bricks and tin while few are made of earth. Often they build their own house. A number of villagers live in the government land but have to build their own houses. There are no restrictions on luring fish from the government owned water bodies. There are a number of mosques, Hindu shrine, schools, madras and a rice mill in the village. The number of cattle is less compared to neighboring villages.

2.5 Financial capital

There are four NGOs working in Baghber village. These NGO's provide loan to the villagers for various income generating activities. The villagers borrow money from others in time of need.

Usually those who seek loan from the NGOs remain liable to repay the loan within the contract period, otherwise they have to pay penalty.

The Krishi Bank is also there to disburse loan, particularly agricultural loan, among the villagers. Some groups accumulate money to form capital. These groups try to scoop up profit either giving loan to the members of the group or to outsiders. There are lots of opportunities to set up business in the local market.

3. Institutional Processes: Importance and Roles

3.1 Government institutions

Union Parishad

The Union Parishad is responsible for distributing relief among the villagers in case of emergency. But the villagers are very much skeptical about the role of UP Chairman and Members in distribution of relief. According to the residents, nepotism is predominant among the Members and the UP Chairman in case of relief distribution. The Upazilla Parishad organizes development activities such as road construction, construction of embankment and also takes part in social and cultural activities.

Other government departments

There are only two non-government schools but no government schools or colleges in the village Baghber. Children have to go to the next neighboring village for education. These schools provide free education and study materials. The government is utilizing its 'Food for Work' program for construction of roads and other infrastructure development. The Department of Family Planning and Integrated Nutrition Project has extended its services at the doorsteps of the villagers. Apart from some stray incidents of burglary and dacoity the law and order situation in this village is fairly well. The police department is always active in its drives to track down the culprits.

Education and Health

The government has taken substantial initiatives to encourage the villagers to participate in the family planning program. It is also trying to ensure good health for the pregnant women through its 'Integrated Nutrition Project'. Necessary steps have been taken by the government to ensure sanitary latrine facility, safe drinking water, primary education.

3.2 NGOs, CBOs, Co-operatives

The NGO's existing in the village are working for socio-economic emancipation of the villagers. They are engaged in providing technical and financial support in sectors such as health, education, fisheries, livestock, social forestry and other micro-enterprise development. Often they are involved in relief distribution programs. These organizations also have awareness building programs for early marriage, environment, nutrition, sanitation, maternal health and nutrition etc. World Vision is the most influential role player among the NGO's in this locality.

Administration

Local administration is the pivotal role for keeping a congenial atmosphere in this locality. In case of any incidents the administration take necessary actions. Usually the Commissioner and the Matbar is honored for dispute resolution. Often the UP Chairman also takes part in the process.

3.3 Informal organizations

There are 4 mosque and 4 Hindu Shrines in the village. These are the place of worships for the Muslims and the Hindu. There is one club and a number of committees, which are acting as a symbol of unity, co-operation and communal harmony. The fisherman for their common interests forms a number of small co-operatives. None of the elite resides in this village

3.4 Private sectors

Baghber is inhabited by a variety of businessmen such as fishmongers, shopkeepers, rice-traders, timber traders and seasonal businessman. 'Mohazoni' was a good business for the rich in the past who used to supply loan at a very high rate to the villagers. But the Mohazoni business has been abolished.

Table 3.1 Ranking of activities of different organisations working in village Baghber

Serial no	Name of Organization	Description of Activities	Score
1	BRAC	Encourage villagers for savings; provide loan and technical support for poultry, fishery, dairy, horticulture. Vaccination and nutrition and insurance programs. There are BRAC schools for primary education, awareness building programs on family planning, early marriage, use of safe drinking water, sanitation, gender issues etc.	2
2	ASA	Accumulate savings and disburse loan from the savings. Encourage for saving.	3
3	TMSS	Encourage for saving. Accumulate savings and disburse loan from the savings. Conduct survey of fishery resources.	1
4	World Vision	Awareness building programs on family planning, early marriage, use of safe drinking water, sanitation, gender issues etc. Disbursement of loan at a reduced interest rate. Provide relief, sewing machines, ring slabs for making sanitary latrines	1
5	Krishi Bank	Support farmers by providing agricultural loan against mortgage of land. (e.g. horticulture, crop, fishery, etc).	2
6	Kormo Shangsthan Bank	Provide loan to the educated well trained youths	2
7	Somoboy Somity	Encourage for saving. Accumulate savings and disburse loan from the savings.	2

Note: 1 = Very good, 2 = Good, 3 = Satisfactory, 4 = Not satisfactory

According to the villagers the NGO's existing in this village are playing pivotal roles in the socio-economic advancement of the residents. They have come up with all the available resources they have for the development of the village. The villagers would not have managed to set up business without the financial assistance of these organizations. The awareness building programs of the NGO's have made them conscious about health, early marriage, education that is leading them to a new era.

4. Seasonal Vulnerability and Coping Strategies

Table 4.1 Seasonal differences in village Baghber

Item	Apri l- May	May - June	June -July	July- Aug	Aug- Sept	Sept- Oct	Oct- Nov	Nov- Dec	Dec- Jan	Jan- Feb	Feb- Mar ch	Marc h- April
	<i>Bats hak h</i>	<i>Jaist ha</i>	<i>Asha- r</i>	<i>Shra bon</i>	<i>Bhad ro</i>	<i>Ashw in</i>	<i>Karti k</i>	<i>Augr ahay an</i>	<i>Pous h</i>	<i>Mag h</i>	<i>Falg oon</i>	<i>Chait ra</i>
Temperature	12	12	10	6	6	3	2	1	4	5	6	8
Rainfall	9	10	11	12	8	5	5	2	1			
Employment opportunity	12	11	10	6	5	3	2	9	6	6	5	4
Food deficit			9	11	12	8	6					
Borrowing	4					12	12				9	8
Lean period	9	11				6	5					
Fish availability	6	3	5	4	9	12	12	9	6	3	2	2
Price of fish	11	12	9	8	6	3	3	2	6	5	9	8

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Temperature

The temperature in this region is recorded highest in the month of Baishakh and the lowest temperature is recorded during Kartik.

4.2 Rainfall

Highest rainfall occurs in Ashar and the lowest rainfall occurs in the month of Poush.

4.3 Employment opportunities

Often the poor villagers migrate to distant places to find job. If for obvious reasons they have to stay back home they try to survive taking loans promising to repay afterwards. Sometimes they pull rickshaw as a means of earnings. The work opportunity flourish in the months of Jaistha, and drops down to its lower margin in Kartik. The farmers start to harvest their crops in Jaistha. This is why almost all the labours spend most of their time in the fields. But in Kartik they have to look for alternative jobs for survival. During the period of limited work opportunities the victims migrate elsewhere searching for work. They take loans in the form of food-grains, cattle, plough, firewood or start pulling rickshaws. In extreme cases they don't even bother to sell their cattle, trees, chicken ornaments or any other belongings the have.

4.4 Food deficit

Villagers take loans from the rich either in cash or goods or crops from those who can afford to give loans. People who have savings (crop or money) utilize them as their last resort. But the most distressed has to depend on others for food. Maximum food deficit occurs during Bhadro. The employment opportunities drop down the lowest level excessive rainfall. Least food deficit prevails during the month of Augrahasan. During this harvesting season work is available to all labourers. Villagers get engaged in sheaving paddy. Earth excavation for construction of roads and ponds starts during the month of Falgoon and Chaitra. When food deficit becomes predominant in the village, villagers borrow food-grains and take loans from those who are richer.

4.5 Borrowing

The borrowing items among the villagers are food-grains, fuel wood, money, etc. Most villagers take loans and borrow goods and food grains during the month of Kartik. This is the recession period for the farmers. Usually there is no work in the fields. Particularly the farmers those who have limited land and the labours have to borrow money for survival. They start to look for alternative source of earning such as pulling rickshaw, works as a handy man etc.

4.6 Lean period

During this period the villagers seek loan from the co-operative societies. They also try to enlist themselves into the government relief programs and other services. In case of emergency they sell their cattle, chicken and food-grains. In extreme cases they sell their wives ornaments, furniture and other household items. Worst period of the year is during the months of Baishakh. In this period is characterized by excessive rainfall and thunderstorm which leaves back devastation in the crop fields. Disease such as cholera and diarrhea break out. Loan is provided by NGO's co-operative societies in the flood period. The government often supports them by distributing relief materials among the villagers.

4.7 Fish availability

Fish in Aswan and Kartik floods the market. But fish scarcity occurs during Chaitra. The price of fish goes up in Baishakh and Jaistha. Even the poorest part of the population can afford to buy fish during Ashwin.

5. Well-being Pattern in the Village

Table 5.1 Well-being pattern in village Baghber

Wealth category Hhs 184	Livelihood assets	Livelihood strategies	Sustainable livelihood outcomes
Rich 2%	Possess 5-6 lac taka Possess land and building in the market Own land more than 2 bigha Own houses in Dhaka.	Usually businessman Employ labour for shops. Lease shops.	Financially well-off Possess sound physic Able to afford healthy diet Food and capital surplus Well educated siblings
Middle class 1%	Possess land and house Possess 70-80 thousand taka Educated children	Employ labour for business Own houses Children goes to school	Have savings Afford healthy diet Sound health Well educated children
Upper poor 9%	Own stationary shops Possess own land and boat Some of them are timber traders	Produce crops in own land Take loan from NGO's Pull rickshaw and van	Financially turbulent Can afford to live without working for 4-5 days at a stretch Physically feeble
Poor 52%	Possess own house Able to write their names Service holders Some are sweet-shop owners	Pull rickshaw Take loan from NGO's Send children to schools Frequent borrower	Often deprived from balanced diet Malnutrition Children-less educated
Destitute 36%	Few are lime traders Dwells in others shops Row boats of others	Often remains in starvation Depend on others Dwells in plots owned by others Do not send children to school	Food deficit throughout the year Malnutrition Unhealthy Less interested to send children to schools

Table 2: Well-being data of village Bagber

Wealth category	Percentage (n = 184)	HH identification number
Rich	2% (03)	66, 80, 81
Middle	1% (01)	89
Upper poor	9% (17)	12, 13, 14, 15, 16, 30, 31, 36, 38, 39, 83, 87, 88, 90, 107, 110, 181
Poor	52% (96)	1, 3, 5, 6, 7, 8, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 33, 34, 37, 43, 46, 53, 54, 56, 57, 58, 59, 60, 61, 62, 64, 65, 67, 68, 69, 71, 72, 73, 74, 75, 76, 77, 78, 79, 82, 84, 86, 91, 92, 93, 94, 98, 99, 100, 101, 102, 103, 104, 105, 106, 108, 109, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 133, 134, 135, 136, 137, 145, 152, 160, 166, 179, 180
Destitute	36% (67)	2, 4, 9, 10, 11, 32, 35, 40, 41, 42, 44, 45, 47, 48, 49, 50, 51, 52, 55, 63, 70, 85, 95, 96, 97, 131, 132, 138, 139, 140, 141, 142, 143, 144, 146, 147, 148, 149, 150, 151, 153, 154, 155, 156, 157, 158, 159, 161, 162, 163, 164, 165, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 182, 183, 184

Villagers in Baghber are enjoying equal share in the government owned resources. There is no restriction on fishing in the open-water bodies such as the beels (floodplains). The fisherman can apply for loans to the Kormo Shongstan Bank. They use the loan to buy boats, nets and other gears according to their requirement. Anyone who have the required skills determined by the Korma Shongstan Bank can apply for loan.

6. Expected impact by beneficiaries of FFP

6.1 Comments of fishermen

The fisheries resource in the village is passing through a transitional period. The river Bangali used to swarm with fish schools. But the dwindling fisheries resource is forcing the fisherman to switch to other profession. So, they are very much eager to see the FFP implemented. They also ensure to protect and manage the open water bodies in and around the village with the technical and financial assistance from FFP.

6.2 Comments of PRA facilitators

Fishermen of village Baghber have been engaged in fishing business for a long time. They have gained great experience in fish culture and management. That is why this is obvious that they want to remain in their profession. It is necessary to rethink of expansion fish culture, which they think would ensure sufficient protein supply on their dinner table. Simultaneously, expansion of fishery sector would allow the local fisherman to garner some profit leading them to socio-economic emancipation.

III. Profile of Village Kuptala

1. Contextual Analysis

1.1. Historical background

There were many ditches in Kuptala village and it was a low-lying area. Therefore the village was named Kuptala. The area was before an island of the river, where no crop was yield. Now it becomes a productive area. People are living in the locality. There are many facilities in the area i.e. education, culture etc. In present days the population of this village is 4600. Among them 95% is Muslim, 5% is Hindu, 50% is involved with agriculture, 10% is fishermen, and 20% includes others.

1.2 Village infrastructure

There are ponds, mosque, temple; club, rice mill, electricity, unpaved road, brick road and NGOs are in the village. Banglali River runs by the village. The village is about one km long and one km broad. Hospitals, Thana, government bank are near about one km from the bazaar.

1.3 Political/ administration

The government plays a role in socio-economic development in the village. For development of roads and communication the government has taken different initiatives. The government provides services through providing development in education, health services, family planning methods and nutritional programme. To strengthening the economic structure the villagers from chairman to members and general people work here. During hartal as the transport has to be stopped, the general people suffer. The cost of the goods increase, the educational institutes remain close so that the education of the children is hindered. Therefore, there is political influence in the village. The administration status of the village is very well. If any injustice occurs, it cannot become severe. Through arbitration it is tried to be resolved. The Chairman, members and local elite of the village conduct the arbitration.

1.4 Education

The villagers were illiterate and superstitions were prevailing in the place. Now almost 60% people in the village are educated. There are five government and non-government educational institutes in the village. There are 1200 students. 80% students go to these institutions regularly and 20% drop out from education. There are 50% female students among the total students.

1.5 Health

Cold and cough, fever, small poxes are common in the village. During sickness the villagers get health services from the government hospital and government community centre.

1.6 Cultural

There is 70% Muslim and 5% Hindu in the village. Although there is less early marriage, but marriage without dowry is uncommon. Muslim's marriages are held according to the Muslim family act. Hindu's marriages are held according to traditional Hindu religion. Women have enough roles in socio-cultural development of the village. Social empowerment of the women is increased. They are participating in every social phenomenon from arbitration to national election. The women in the village were very religious before and observe *purdah*. They had to

seek permission from their husband while going out from the house. They did not have any liberty. The system of dowry did not exist.

2. Village resources

2.1 Natural capital

The soil of this village is very fertile. Paddy, mustard, chilli and onion are produced in this village. The village is famous for producing chilli. Bangali River is just by the side of the village. There is no uncultivable land. The land is fertile and the method of cultivation is modern. The land is flooded due to heavy shower of rain and flood in India. As it becomes impossible to stay in the village during the flood the villagers then go to the government embankment and other high land.

2.2 Human capital

There are skilled labours in the village. For example skilled farmers cultivate through modern methods. Skilled carpenters make nice furniture. Construction labours do their work. Still they do not have any permanent job for earning living. They work in many places on temporary basis. World Vision and other NGOs provide them training on increasing skills regarding fish culture, rearing poultry and livestock, agriculture and handicrafts. Depending on the variation of seasons the women work along with men. The rate of education is 60% in the village. To increase the skill of educated people there is no initiatives in the village. They receive training from distant places. The villagers are healthy. They drink water from the tube-well. Lack of nutrition is observed among the poor. There is lack of food among them.

2.3 Social capital

There is no conflict in the society and the parties. Even though it happens it resolves immediately. They take help from others if fail to resolve their problems. The villagers are sympathetic to each other. Due to the quarrel there are sometimes constraints among the people but it disappears soon.

2.4 Physical capital

Most of the people in the village have owned lands and houses. The houses in the village are made of bricks, tin, bamboo and jute sticks. As people from different caste have access to water body, there is no conflict among them. People have access to other physical assets of the village. The villagers have livestock.

2.5 Financial capital

There are seven NGOs working in the village. The common villagers can easily get credit from those NGOs and involved in different development activities. It helps them to earn their living. In case of crisis or during lean season the villagers take loan from the rich of the village. The NGOs do not ask for collateral whereas the government organisation asks for collateral. The villagers have positive attitudes to savings; through a co-operative they deposit savings. There is every facility in the market to run a business.

3. Institutional Processes: Importance and Roles

The villagers receive several facilities from the government and non-government organisations. Girls and boys of the village can get their education from the government primary and government approved non-government educational institute. They receive credit, legal awareness education, and facilities for fish culture, health services and different development related services from the NGOs.

3.1 Government institutions

In the Up during the distribution of government subvention, the Chairman and the members show discriminatory attitudes. The Up is also involved in developing the roads of the village and conducting arbitration and protecting injustice.

Government department: There is a government primary school and five government approved non-government schools. These educational institutions play an immense role in increasing quality of education. To conduct development activities in the village the government provides food for work programme. Apart from encouraging for family planning the government provide health care services through nutrition programme and community centre in the village. To ensure peace and security in the village the government police department plays a significant role. Every one in the village gets equal opportunity in this regard.

3.2 NGOs, CBOs, Co-operatives

There are seven NGOs in the village, which is contributing to the socio-economic structure of the village. Those NGOs provide credit, education, and training on income generating activities, health awareness, and nutrition to the poor in the village. They encourage them to cultivate vegetables and tree transplantation. They provide them relief. They encourage them to adopt family planning. Among the NGOs World Vision earns the most popularity in the village. TMSS NGO has been working here as a part of fourth fisheries. There is a nutrition project to meet the need of nutrition. There is project from World Vision for fingerling production.

3.3 Informal organisations

There are 6 mosques and one temple in the village. The Muslim can practise their religion in the mosque and the Hindu can in their temple. They have five co-operatives and eight clubs in the village through which they maintain cordial relations among them. The club and the co-operatives help the helpless by providing financial support.

3.4 Private sectors

There are many types of businessman and traders in the village. They trade on jute, rice, timber, sweets and other raw items. There is no mahajan in the village.

Table 3.1 Ranking of activities of different organizations working in village Kuptala

Serial no	Name of Organization	Description of Activities	Score
1	BRAC	Provide education to the children in school, collect savings, disburse loan, provide nutrition, help in rearing poultry and cultivating agriculture, provide legal awareness education, provide insurance facilities, Provide treatment to TB patient free of cost, Awareness build up of family planning and health, discourage child marriage.	1
2	World Vision	Collect savings, provide loan in low interest, provide ring slab free of cost, sometimes provide cost for children education, distribute blankets and umbrella, dig a pond free of cost and cultivate fish, during crisis and natural calamities distribute relief, provide adult education.	2
3	Food for hungry international	Accumulate savings among themselves, and thus disburse loan, provide adult education, increase health awareness, provide training to the group member on poultry rearing, vegetable cultivation, and agriculture and fish cultivation.	3
4	Thengamara mohila sobuj songho	Collect savings, disburse loan, and encourage for fish cultivation.	4
5	Grameen bank	Collect savings and disburse loan.	3
6	IRDP	Collect savings and disburse loan.	4
7	Polli unnoyan shongostha	Collect savings and disburse loan.	4
8	Co-operatives	Increase unity, accumulate savings among themselves, give loan without interest, and increase sympathetic attitude to one another.	3

Note: 1 = Very good, 2 = Good, 3 = Satisfactory, 4 = Not satisfactory

4. Seasonal vulnerability and coping strategies

Table 4.1 Seasonal differences in village Kuptala

Item	Apr il- Ma y	May- June	June -July	July- Aug	Aug- Sept	Sept- Oct	Oct- Nov	Nov- Dec	Dec- Jan	Jan- Feb	Feb- Mar ch	Mar ch- April
	<i>Bais hak h</i>	<i>Jaist ha</i>	<i>Asha r</i>	<i>Shra bon</i>	<i>Bhad ro</i>	<i>Ashw in</i>	<i>Karti k</i>	<i>Augr ahay an</i>	<i>Pous h</i>	<i>Mag h</i>	<i>Falg oon</i>	<i>Chait ra</i>
Temperature	9	12	9	6	6	5	3	3	2	5	8	9
Rainfall	6	9	8	10	9	6	5	5	3	2		
Employment opportunity	12	9	8	6	5	3	3	2	1		7	6
Food deficit	1	4	4			9	11					5
Borrowing	4	3	2	2		8	11		2		6	5
Lean period	10	9				8	5					
Fish availability	9	3	6	5	9	10	8	6	6	5	2	1
Price of fish	2	1	5			8	12					6

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Employment opportunity

There is more opportunity of work in the month of Baishakh and Jaistha. In Jaistha opportunities are more, as it is the season for harvesting IRRI. There are earthwork and weeding in the jute field also. There are less opportunities of work in the month Kartik. As there is no work in the field like paddy harvesting, weeding, etc.

If there is no opportunity for income earning they usually take loan. When they get work they repay the loan. They go out to the other places to seek alternative way of work, i.e. pulling rickshaw and van. Or they spend the savings they have by sitting idly at home.

4.2 Food deficit

Food deficit happens in the month of Kartik as this is not the harvesting period and lack of availability of work. In the month of Baishakh and Jaistha people do not have food deficit, as wheat and paddy are harvested in these month.

4.3 Borrowing

They borrow money, paddy, rice, livestock and fuel. In the month of Ashwin and Kartik they mostly borrow. Among these two borrowing in Ashwin is higher because there is no work in this month. The poor have hard time in earning their livelihood. They take loan and afterwards they repay the loan. They sell their poultry and livestock and do other activities. They take fewer loans in the month of Jaistha as during that period income earning works i.e. paddy harvesting and weeding, etc. are available.

4.4 Lean period

The month of Kartik is the lean period in the year, because storm happens in this month. The crops are not damaged, but diarrhoea and cholera break out. During lean season the villagers borrow money and rice from the elite of the village. During crisis the villagers sell their poultry, livestock, paddy, trees, furniture and roof tin and, even the ornaments of their wives.

During flood and famine they take credit with interest from different co-operatives, institutions and NGOs. They receive help from different governmental and non-governmental organisations.

4.5 Fish availability

In the month of Kartik the fish is mostly available. As the river, ponds and ditches do not have any water people can catch fish. There are less fish in the month of Jaistha as there is no water in the river, ponds and canals.

In the month of Jaistha the price of fish becomes high, as there is no water in the river, ponds and canals, fewer fishes are available which increase the price. It becomes less in Kartik as the supply of fish is high in the market. The river, ponds, canals and ditches get dry up which increase the availability of getting fish.

5. Well-being Pattern in the Village

Table 5.1 Well-being pattern in village Kuptala

Wealth category Hhs 153	Livelihood assets	Livelihood strategies	Sustainable livelihood outcomes
Rich 1%	20/22 bigha land, children are educated, have shallow machine, live stock, children earn money, two/three lac cash.	Employ labour in the land, Access to any kind of resources, employ labours in the mill, do business with cash.	Self sufficient, have nutritious food, children are educated, good health, have surplus in food.
Middle class 15%	10/12 bigha land, livestock, shop, involved with teaching, have cash 40 to 50 thousand, children are educated.	Employ labour in the land, do business with cash, employ labour in the shop, children go to school.	More or less self sufficient, have nutritious food, children are educated, good health, have savings.
Upper poor 24%	Have land of 5/6 bigha, shop of welding machine, grocery shop, and small service.	Vehicle driver, children go to school, take loan from the NGOs.	Some times in deficit of food, children are slightly educated.
Poor 44%	Livestock, grocery shops, fish business.	Live on hard labour, women involve in income earning, occasionally take loan.	Often in deficit of food, children are slightly educated, do not get nutritious food
Destitute 16%	Homestead land only.	Sell labour, women involve in income earning, children go to school, migration out to the cities for work.	Always deficit in food, children are slightly educated, malnourished children.

The rich, poor and the fishermen have access to the resources of the village, they get facilities out of these. As the rich have lands they get more facilities from krishi bank and kormo songosthan bank. The fishermen can take loan from kormo songosthan bank to buy net, boat, etc. The poor can take loan from kormo songosthan bank by showing their experience of any work. In general the poor have access to recourse. Particularly everybody in the village have access to the resources related to fishing.

Table 5.2 Well-being data of village Kuptala

Wealth category	Percentage (n = 153)	HH identification number
Rich	1% (2)	5, 6
Middle class	15% (23)	7, 8, 9, 10, 30, 31, 32, 33, 54, 55 60, 61, 63, 65, 66, 72, 96, 98, 99, 129, 140, 141, 152
Upper poor	24% (36)	1, 2, 11, 12, 23, 28, 42, 62, 64, 69, 76, 77, 88, 91, 92, 93, 94, 95, 97, 100, 101, 106, 109, 113, 114, 116, 118, 119, 120, 124, 142, 147, 148, 149, 150, 151
Poor	44% (68)	4, 20, 21, 22, 24, 25, 26, 29, 34, 35, 43, 44, 45, 46, 50, 51, 52, 53, 56, 57, 58, 59, 67, 68, 70, 71, 73, 75, 78, 80, 81, 82, 83, 84, 85, 86, 102, 104, 105, 107, 108, 110, 111, 112, 117, 121, 122, 125, 126, 127, 128, 130, 131, 132, 133, 134, 136, 137, 138, 139, 143, 144, 145, 146, 153, 154, 155, 156
Destitute	16% (24)	3, 13, 14, 15, 16, 17, 18, 19, 27, 36, 37, 38, 39, 40, 41, 47, 48, 49, 74, 79, 87, 103, 123, 135

Note: Household numbers 89, 90, 115, and 157 have not been found out.

6. Expected impact by beneficiaries of FFP

6.1 Opinion of the fishermen regarding FFP

Main occupation of the fishermen is fishing. Therefore always they want to live on this occupation. They do not get fisher as before, which make their living difficult. If there is fourth fisheries initiate their activity in the river, they will be fishing according to the plan. They will not have any problem. As there is less fish in the river during dry season they encounter problem in catching fish. If fish is cultivated in this time, then during dry season they will be able to catch fish from the kua in the river.

6.2 Comments of PRA team

If the fish is cultivated the fishermen will be benefited. Their source of earning will increase. The villagers will be benefited also, so everybody will be benefited. The need of protein will be filled up. Therefore cultivation of fish is necessary.

Socio-Economic Baseline Survey of Open Water Fisheries

Profile of

Kumar River, Faridpur

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Kumar River

BRAC has been implementing a fish sanctuary under the Fourth Fisheries Project in Kumar river of Faridpur district. The project covers thirteen villages, surrounding the river. Out of these, two villages - Kafura Purba and Mamudpur - have been taken up to understand the livelihood conditions of the villagers through PRA and household survey.

1. Vulnerability Context

According to the villagers, Kafura Purba (cast) village originates from a narrow canal called Kafur that got merged with the Kumar river afterward. The village is located on the east embankment of Kumar river in Geroda union. Village Mamudpur is situated in Geroda union as well. This village is located on the west bank of the river by the side of the Faridpur-Barisal Highway. The villagers of Mamudpur informed that long ago a brave and influential person named Sultan Mahmud lived there. He was owner of huge property and was famous for his personality and influence. The village was named after him.

The informant group mentioned that the two villages have 1,270 people. However, 115 households have been identified residing there by PRA exercises. Seventy-seven percent of the households are Muslims and 23% are Hindus. By profession, 50% of the household heads are agricultural workers, 30% day-labourers, 15% fishermen and 5% are involved in other economic activities.

Variety of cultural activities is conducted in the study villages. They arrange programs on folk songs every year. The religious groups also arrange meeting and gathering regularly to disseminate the techniques of religions. BRAC organizes popular theater that highlights certain unjust, illegal and exploitative practices in the society. In this forum the poor, particularly women have the opportunity to visualize institutional discriminatory and exploitative norms and practices that prevail in their society. It was mentioned that popular theater was highly effective in raising awareness and solving the problems of the local communities. They even get help from police and the court in this regard. However, it is a fact that the incidences of gender violence and terrorism have not stopped completely in the villages.

Although there is an elected Union Parishad member in the study villages, the villagers believe unanimously that there has been no development activity over last two years. *Salish* (informal village court) takes place where people get corrective or conciliatory judgement on the disputes that arise. The village *matbors* (leader), as religious leaders set in the village court. Sometimes the chairman and the female member of Union Parishad remain present in the court and give the verdict.

2. Livelihood Assets

Available and missing livelihood resources of different wealth groups in the study villages are presented here. The villagers identified four wealth categories, i.e. rich and middle class, upper poor, poor, and destitute in the study villages.

Table 2.1 Well-being pattern in Kumar river villages

Wealth category	Household # 115	Livelihood assets
Rich and middle class	30% (35)	• Own 250-500 decimals of land. • Service holder. • Own big shops, fish depot, mills, and factories at town. • Get remittances from sons and daughters working abroad. • Few own boats and fishing gears which are rented out.
Upper poor	13% (15)	• Own land up to 200 decimals. • Few own shops, cycle repairing workshop, small-scale factories, rickshaw/van. • Own boats and fishing gears. • Fish traders. • Engaged in lower level jobs in government offices.
Poor	28% (32)	• Own homestead and few owns land up to 100 decimals. • Few own small shops. • Do fish trade at small scale. • Few own fishing gears.
Destitute	29% (33)	• No land, very few own homestead land. • Sell manual labour almost everyday in other's house, on boat and pull rickshaw/van. • Suffer mostly from unemployment due to political disruption. • No fishing gears except nets.

Table 2.1 shows that the richer section of the villages is involved in fishery because they employ the fishermen in their business.

2.1 Natural capital

The natural resources present in the village are mainly river and cultivable land. The river is used for fishing and bathing. The villagers use ponds for fish cultivation, washing and cleaning. They use bamboo for making fence and fuel. They make wooden furniture and boats from the old trees and use their logs as fuel. The villagers produce paddy, jute, sugarcane, etc. in the crop fields. There is an *eidgah* where Muslims say prayers at the time of Eid. The poor are benefiting by using these resources.

2.2 Human capital

Education, labour and health are considered as major items of human capital.

Education

There are one government primary school, one government high school, three madrassas, and three NGO schools in the villages. Children get education free of cost from NGO schools and government primary school. Girl students also get scholarship from primary school. The villagers mentioned that they prefer Islamic education for their children as it regulates the lives of the Muslims. The standard of education in the village schools is gradually improving as reported.

Labour

There are people with variety of professions residing in the villages. Most of the people are engaged in agricultural work. Those who do not own land usually lease in lands or work as labourers in other's land. Day-labourers are unskilled workers and the wage rate is very low. They are engaged mainly in agricultural work and fishing. Limited numbers of villagers pull rickshaw or van. Women's involvement in cash earning is common in this area particularly the poorer and destitute households. The informant groups mentioned that working in Dhaka or in outside the country is common for the rich and middle class people of the village. Each month a certain amount of remittance comes to those households from outside but they do not take any initiatives in the development of the locality.

Health

The informant groups reported that when some are affected with common diseases like influenza, diarrhea, dysentery, etc., they buy medicine from the nearby medicine shop. There is a BRAC health clinic in one study village. Children get immunization and vaccination free from the clinic and pregnant women get monthly check-up and advice. The villagers mentioned that in the case of critical diseases they go to the medical college hospital at Faridpur, which is about three-kilometer away from their villages. There are few traditional healers in the villages who follow after treatment of common diseases with indigenous medicines, which the poor people like most. The situation of drinking water system and sanitation in study villages is good; and majority of the households own tube-wells and hygienic toilets.

2.3 Social capital

There are several NGOs in the villages, mainly for the poor. By organizing poor into different groups the NGOs are developing social network. The network is helping them to improve their livelihood conditions. This is an important social capital existing in the villages. There is a fishermen co-operative society in the study villages through which the fishermen have organized themselves for protection of their rights in the river before introducing the Fourth Fisheries Project. Co-operative also took care of the growth of fish resources in the water bodies.

2.4 Physical capital

Most of the households possess their own houses, which are mainly tin roofed. Majority of households in one study village has electricity connection. There are metal roads, brick soling and unpaved roads, bridge and culverts available for communication. Both animal driven and power driven vehicles run on these roads. A rail line has passed through one village. As a whole the transportation from the villages to nearby Faridpur town is easy and smooth.

There are six mosques and one temple in the study villages. Apart from these there are some infrastructures like NGO offices, one health center, fish hatcheries, poultry farms, brick field, biscuit factory, *Dargah Shareef* (shrine), pharmaceutical industry, mini market, a sub center of the Open University and office of the River Research Institute. There is a community centre in one village that is used as satellite clinic for providing health services to the villagers. Villagers are allowed to rent the community centre for own uses.

2.5 Financial capital

As reported, the money lending agencies are the main financial resources for the villagers. Due to lack of commercial bank within the villages, people borrow money with high rate of interests from *mohajon* (traditional moneylenders). The loan is often denied to the poor assuming that they will not be able to repay. The rich people who own cultivable lands, fishing gears, mills and factories are also financial resources for the villages as they employ the poor.

3. Structure and Process

3.1 Government institutions

Some government institutions are in operation in the study villages. Education in government primary schools is imparted to the children free of cost. The River Research Institute monitors the water in Kumar river and looks to the problems related to water transportation. The social welfare associations carry out development activities. In the community center children get polio vaccines and drops provided by government health workers. The Community Nutrition Centre provides antenatal and postnatal care of around 200 households surrounding the centre. Its activities also include conducting a health forum for the women to impart awareness on health, nutrition and family planning. Open University is providing education to children who did not start school at right age. Fish fries are supplied to the intending villagers from the government hatcheries, which is considered to be a great help to the growers. The post office in the village offers the facilities for remittance and sending of letters and documents to distant places. Postal Life Insurance exists in one village even though villagers mentioned that to withdraw life insurance premium is difficult.

3.2 Non-government Organizations, Community based Organizations and Co-operatives

The listed non-government institutions in the villages are mainly micro-finance institutions i.e. BRAC, PEP, Polli Progoti Porishad, ASA, Islamia, and Bhattihin. Such institutions are playing a crucial role to improve the economic condition of the poor people. In addition to micro-credit BRAC has skill training, enterprise development, legal awareness and legal aid programs for the poor women. Children are getting free education from BRAC schools. Other NGOs are imparting public awareness against the evils of acid throwing, human rights and related legal advice, dangers of arsenic contamination. The informant group mentioned that the non-government organizations are working hard to involve the unemployed people of the society with economic activities. Moreover, the poor people get higher access to their services. All the above facilities are making people's living better by the day.

3.3 Informal organizations

The informal organizations in the villages include mosques, temples, madrassas, club, and village court. In the mosque children get education in Arabic and Islamic religion and culture. The Muslims pray five times a day and attend *waaz mehfeel* (lectures and seminars on religious rules) in the mosques. In the temples the Hindus observe pooja, listen to and learn from their

religious holy books. The village court consists of elite who have either salaried job or large agriculture farm. The informal organizations do work towards the social development of the villages. Only informal organizations offer their services to all villagers irrespective of wealth groups.

3.4 Private sectors

There are some privately owned institutions in the villages. These are poultry farm, biscuit factory, medicine factory, and rice mill. Even though very few in number as well as very small in size, these are employing some poor people. All of these are known to be earning profits and marketing their products to the nearest district towns and the capital city. Moreover, they are meeting the local needs.

The villagers are of the opinion that the services providing institutions present in the villages are helping to improve their livelihood conditions but the terrorism of the political parties in their area is a threat to peace and prosperity.

4. Livelihood Strategies

This part focuses on the combination of resources used by wealth groups to pursue different livelihood strategies.

Table 4.1 Livelihood strategies of different wealth groups

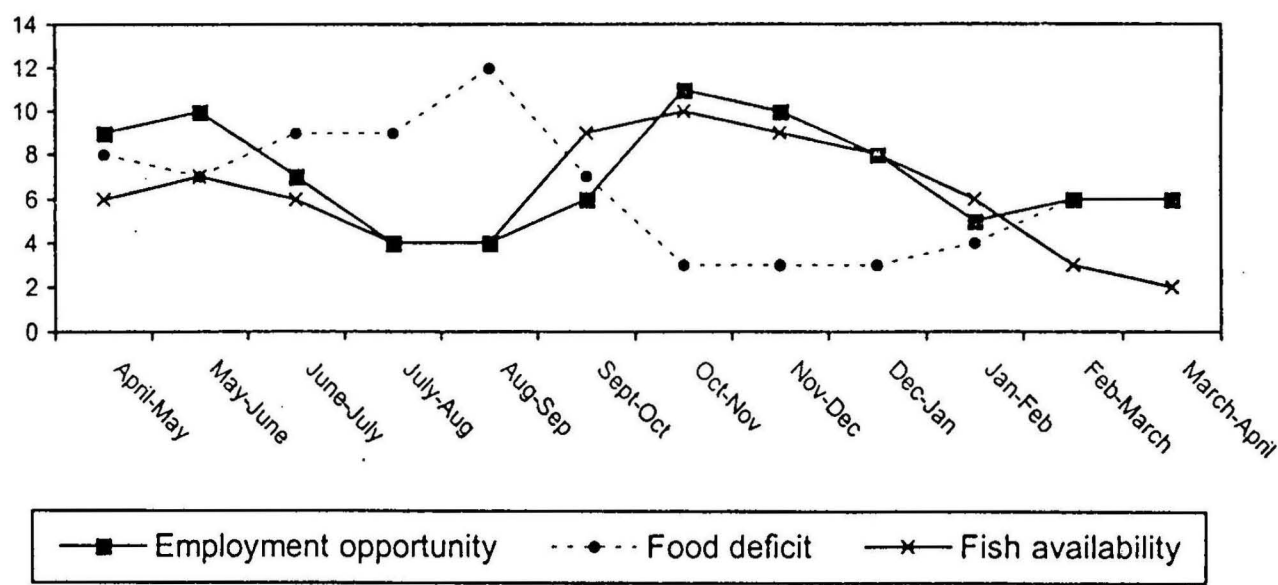
Wealth category	Livelihood strategies
Rich and middle class	• Do agricultural work on own farm. • Employ labour on own land and fishing. • Invest capital. • Work hard for economic improvement.
Upper poor	• Pull rickshaw/van, few ride auto-rickshaw. • Work hard for subsistence. • Children do work. • Borrow from NGOs for seasonal crisis.
Poor	• Associated with NGOs for capital for income earning. • Borrow from traditional moneylenders quite often. • Work hard everyday for subsistence. • Women and children do work for earning a living. • Seasonal migration to town for work.
Destitute	• Sell manual labour for subsistence. • Children and women do work. • Frequently migrate out for work.

4.1 Seasonal differences on livelihoods

The economic activities of the villagers are based mainly on the natural capital available in their area. Due to nature of the capital their economic activities are influenced by seasonal variation.

The following part of this chapter attempts to highlight the coping strategies of the villagers. Figure 1 shows the seasonal variation of the employment opportunities and availability of fishes in the Kumar river villages. It also shows food deficiency to elaborate the most vulnerable time for the villagers so that they need to adopt alternative strategies to cope with that situation.

Figure 1: Seasonal vulnerability in the villages



Employment opportunity

During the months of October-November the employment opportunity is the highest because crop harvesting of 95% farmers starts at this time. Unemployment situation is acute during July-August because crops are damaged due to severe draught and by natural calamities. Though plenty of fish are available in the month of September, due to poor purchasing power of the villagers these cannot be sold. Only way they can survive at this time is by taking loan or by selling whatever assets they still have.

Food deficit

The villagers informed that scarcity of food reaches its peak in the months of August-September. The main reason is at that time the paddy in the field though at a ripening stage is not ready to harvest and the food stored at houses is at its lowest level. Excessive rainfall compels people to remain in house, and roads remain muddy causing mobility problem. Also day-labourers do not get sufficient employment as employers also suffer from the food deficit. Due to poor purchasing power of the people fishermen do not get fair price even if fish is available. During the months of October to January food deficit is least because at that time paddy is harvested, day-labourer can get employment and the fishermen also get fair price for the fish.

During the period of scarcity people have to borrow money from moneylenders or co-operative societies or sell their assets like boats, nets and trees to purchase food. Also they meet the food

deficit by leasing out the ponds, mortgaging out the lands and by selling the crop field and homestead lands in case of emergency.

Availability of fish

In the months of September to November fish is mostly available which floods the market. In this period the water level in river, ponds and ditches goes down gradually and people can catch plenty of fish. Scarcity of fish occurs during February to April because of less water in the water bodies.

Worst time of the year

People suffer most in July-August, as this period is common for devastating floods. People hardly find any job to earn money and poverty hits majority of the families. The months of April and May, according to them, is the vulnerable period of the year. At this time the *kalbaishakhi* (monsoon storm) destroy everything. As a result their condition becomes worse. Diarrhea, chicken pox, influenza and so on break out at that time. During the month of August dysentery, jaundice, and cholera are common. The villagers have to cope up with the situation by getting help from friends and others and by selling belongings. They are of the opinion that if government and NGO support is effectively available during such crisis they can save themselves from the grasp of floods and famine and selling of their assets would be minimized.

Traditionally the months of October-November are regarded as good time for the people. They get rid of their debts by selling the surplus crops in this month.

5. Livelihood Outcomes

This part focuses on the outcomes that are achievable for different wealth group and the ones that are sustainable.

Table 5.1 Sustainable livelihood outcomes for different wealth groups

Wealth category	Sustainable livelihood outcomes
Rich and middle class	• High standard of living. • Balanced income. • Surplus food. • Nutritious food ensures good health. • Highly educated children. • Inherit properties. • Safe homestead.
Upper poor	• Turbulent income flow. • Seasonal deficit in food. • Malnutrition. • Frequent sickness. • Low level of education for children.
Poor	• Poor income. • Often food deficit. • Malnutrition and ill health. • Illiterate children.
Destitute	• Always food deficit. • Malnutrition and ill health. • Illiterate children. • Eviction from the shelter of other's land. • Lack of creditworthiness to both NGOs and traditional moneylenders.

The villagers informed that sustainable development for the people is possible if proper attention of the government and NGOs are given to the villagers and terrorism in the villages is resisted.

6. Expected Impact of Fourth Fisheries Project by Beneficiaries

The type of intervention of FFP in Kumar river is sanctuary development. The fishermen of the villages hope that production of fish will increase with the implementation of the proposed project activities. They mentioned that the fish resource in the water bodies is declining gradually due to excessive catch of fish with illegal or unauthorized fishing gear like *suti* net, *ber* net, and so on. Moreover, the sluice gate does not properly regulate water flow of the river in time. The fishermen specially mentioned about the corruption in regulating the sluice gate over Kumar river, which is creating scarcity of fish in the river adjacent their villages. The consumption of fish in poor households has reduced sharply. The fishermen are being compelled to transform their profession into agricultural labour and so on. They expect that FFP will handle these issues strictly with their newly formed VDC and FMC and only then the objective of FFP will be fulfilled. Diverged fishermen hopefully reestablish their own profession. Unlikely few of them think that they might not get benefit from FFP, as they are not the members of VDC and FMC.

7. Key Findings of Kumar River based on Household Survey

7.1 Introduction

The methodologies used in conducting this baseline survey have earlier been discussed in some details. For the purpose of the survey, household members of the sample villages were classified into four wealth categories (WC) through PRA exercises, such as, Rich/Middle, Upper Poor, Poor and Destitute. In the household survey, sample was taken from each study village proportionately according to the aforesaid wealth grouping, This part of the report contains analysis of the data collected through questionnaires from the sample households in the Kumar Nadi water body area. It is located in Sadar upzila of Faridpur district.

7.2 Findings

Total sample households of this water body were 32. Highest proportion of the HHs were categorised the poor (34.4%), followed by destitute (34%), rich/middle (12.5%) and upper poor category (9.4%) (see methodology for the criteria of categorisation).

Table 7.1 shows distribution of HH heads by their occupation (main¹, secondary², always fishing³, sometimes fishing⁴ and subsistence fishing⁵ - as defined by M & E Specialist of Fourth Fisheries Project). One fourth of the HHs had secondary occupation, this was highest amongst the destitute (43%), but it is surprising that none of the poor category had always fishing occupation. About 22 percent of the HHs had sometimes occupation, this was highest amongst the upper poor category (33.3%), followed by the destitute (28.6%). About 16 percent of the HHs had subsistence fishing occupation.

Table 7.1: Distribution of HH heads by occupation and wealth category

Wealth category	Secondary occupation	Fishing occupation		
		Always fishing	Sometimes fishing	Subsistence fishing
Rich/middle (n=4)	25.0 (1)	25.0 (1)	25.0 (1)	0
Upper poor (n=3)	33.3 (1)	33.3 (1)	33.3 (1)	33.3 (1)
Poor (n=11)	0	0	9.1 (1)	18.2 (2)
Destitute (n=14)	14.3 (2)	42.9 (6)	28.6 (4)	14.3 (2)
Total (n=32)	12.5 (4)	25.0 (8)	21.9 (7)	15.6 (5)

Note 1: Figures in the parentheses indicate the number

Note 2: All HHs had the main occupation.

Note 3: Multiple responses were considered

Table 7.2 shows socioeconomic and demographic characteristics of the HHs. Sex ratio was highest among the poor (211 per 100 female) and lowest amongst the upper poor (80 per 100 female). Average age of the HH heads was the highest amongst the rich/middle class and lowest

¹ Main occupation means primary employment of the HH from which it gains its income

² Secondary occupation means the next most important means of livelihood for the HH

³ Always fishing means professional fishers – those who engage in fishing as their main livelihood

⁴ Sometimes fishing means occasional fishing

⁵ Subsistence fishing means those HHs who fish to supplement HH diets

amongst the upper poor. The age-dependency ratio⁶ was highest amongst the upper poor (78) and lowest amongst rich/middle class (47). Average years completed in the school by HHs head was the highest amongst the upper poor (4.7 years). One fourth of the HHs was involved with NGO activities. About 19% of the HHs were involved with fishing.

Table 7.2: Household composition in the Kumar Nadi

Wealth category	Average sex ratio = (male/female) ×100	Average age of HHH	Age dependency ratio	Average years completed in school (%)		HH involved with fishing (%)	HH involved with NGO (%)
				HHH	HH Member		
Rich/middle (n=4)	129.8	50	47.0	2.3	3.8	16.7 (1)	0
Upper poor (n=3)	80.0	38	77.8	4.7	4.3	0	37.5 (3)
Poor (n=11)	210.6	45	65.3	2.4	1.8	0	37.5 (3)
Destitute (n=14)	112.9	42	74.7	0.4	1.5	83.3 (5)	25.0 (2)
Total (n=32)	145.5	43	68.3	1.7	2.2	18.8 (6)	25.0 (8)

Note: Figures in the parentheses indicate the number

Table 7.3 reveals the different land ownership of this water body. On average the HHs had nearly 10 decimals of homestead own land, this was highest amongst the rich/middle category (15.3 decimals) and lowest amongst the destitute (6.6 decimals). On average the HHs had just 45 decimals of cultivated own land, this was highest amongst the rich/middle category (254 decimals), followed by poor (21.2 decimals) and destitute (11.3 decimals). On average the rich/middle category had 13 decimals of fallow own land. On average the HHs had 28 decimals of cultivated leased-out land, this was highest among the rich/middle (208.0 decimals) category.

Table 7.3: Average amount of land (in decimal) owned by HHs by wealth and land category

Wealth category	Own				Leased-out	Leased-in
	Homestead	Cultivated	Pond/doba	Fallow	Cultivated	Cultivated
Rich/middle (n=4)	15.3	254.0	1.3	13.0	208.0	0
Upper poor (n=3)	10.7	8.7	1.7	0	0	0
Poor (n=11)	11.6	21.2	1.1	3.6	5.3	0
Destitute (n=14)	6.6	11.3	1.4	0.1	0.2	0.9
Total (n=32)	9.8	44.8	1.3	2.9	27.9	0.4

Table 7.4 shows the percentage of materials used in construction of main rooms of the houses. The floors of main rooms of almost 90% of the houses were made of mud except the rich group (brick 75%) or poor (brick 9%). More than 65 percent of the walls of houses were made of tin, this was highest amongst the upper poor (67%) and lowest among the destitute category (14.3%). One fourth of the walls of houses were made of natural item⁷, this was also highest amongst the destitute (86%), followed by the poor category (66.3%). The roofs of main rooms of almost all houses were made of tin.

⁶ The age-dependency ratio is the ratio of persons in the dependent ages (under 15 and over 64 years) to those in the “economically productive” ages (15-64 years) in a population

⁷ Natural items means bamboo, jute stick, hay, leaves of tree, straw etc.

Table 7.4: Percentage of materials used in construction of main rooms of the houses by WC

Wealth category	Floor		Wall			Roof
	Brick	Mud	Brick	Tin	Natural	Tin
Rich/middle (n=4)	75.0 (3)	25.0 (1)	50.0 (2)	25.0 (1)	25.0 (1)	100.0 (4)
Upper poor (n=3)	0	100.0 (3)	0	66.7 (2)	33.3 (1)	100.0 (3)
Poor (n=11)	9.1 (1)	90.9 (10)	9.1 (1)	27.3 (3)	66.3 (7)	100.0 (11)
Destitute (n=14)	0	100.0 (14)	0	14.3 (2)	85.7 (12)	100.0 (14)
Total (n=32)	12.5 (4)	87.5 (28)	9.4 (3)	25.0 (8)	65.6 (21)	100.0 (32)

Note: Figures in the parentheses indicate the number

Table 7.5 reveals the percentage of nature of ownership of main rooms of the houses. The inhabitants owned almost each main rooms of the houses themselves except for the destitute (partial 14.3%, rental 7.1%).

Table 7.5: Percentage of the houses by nature of ownership and WC

Wealth category	Ownership pattern		
	Full ownership	Partial ownership	Owned by other/rented
Rich/middle (n=4)	100.0 (4)	0	0
Upper poor (n=3)	100.0 (3)	0	0
Poor (n=11)	100.0 (11)	0	0
Destitute (n=14)	78.6 (11)	14.3 (2)	7.1 (1)
Total (n=32)	90.6 (29)	6.3 (2)	3.1 (1)

Note: Figures in the parentheses indicate the number

Table 7.6 shows that only one HH of the poor category took one meal in a day for around the year. Rest of the HHs took more than one meal in a day.

Table 7.6: Percentage of HHs taken one meal in a day by wealth category during 2000- 2001

Wealth category	Apr – May	May– Jun	Jun– Jul	Jul– Aug	Aug– Sep	Sep– Oct	Oct– Nov	Nov– Dec	Dec– Jan	Jan– Feb	Feb– Mar	Mar– Apr
	Baish ak	Jaist ha	Ash ar	Shra bon	Bhad ro	Ash win	Kart ik	Augr ahay	Pous h	Mag h	Falgo on	Chaitr a
Rich/middle (n=4)	0	0	0	0	0	0	0	0	0	0	0	0
Upper poor (n=3)	0	0	0	0	0	0	0	0	0	0	0	0
Poor (n=11)	9.1 (1)	9.1 (1)	9.1 (1)	9.1 (1)	9.1 (1)	9.1 (1)	9.9 (1)	9.1 (1)	0	9.1 (1)	9.1 (1)	9.1 (1)
Destitute (n=14)	0	0	0	0	0	0	0	0	0	0	0	0
Total (n=32)	3.1 (1)	3.1 (1)	3.1 (1)	3.1 (1)	3.1 (1)	3.1 (1)	3.1 (1)	3.1 (1)	0	3.1 (1)	3.1 (1)	3.1 (1)

Note: Figures in the parentheses indicate the number

Table 7.7 illustrates that the strategies adopted in the case of income or asset loss. About 57 percent of the HHs adopted borrowing as a strategy in case of income or asset loss, and almost all of the HHs belongs to the poor and destitute category. Some HHs (31.3%) also coped with the economic crisis by borrowing with interest, the highest being the upper poor (66.7%).

Table 7.7: Percentage of HHs adopted the strategies in case of income or asset loss by wealth category

Wealth category	Strategies			
	Borrowing	Borrowing by interest	Draw money from their bank savings	Lease or sell the land
Rich/middle (n=4)	0	25.0 (1)	25.0 (1)	50.0 (2)
Upper poor (n=3)	33.3 (1)	66.7 (2)	0	0
Poor (n=11)	63.6 (7)	27.3 (3)	0	9.1 (1)
Destitute (n=14)	71.4 (10)	28.6 (4)	0	0
Total (n=32)	56.3 (18)	31.3 (10)	3.1 (1)	9.4 (3)

Note 1: Figures in the parentheses indicate the number

Note 2: Multiple responses were considered

Table 7.8 describes the percentage of the HHs economic status within last 12 months. It should be interpreted from this table that the rich, middle and upper poor group had no any kind of deficit. On the other hand, the poor and destitute group had less surplus condition around the year by comparing the other wealth groups.

Table 7.8: Percentage of the HHs economic status within last 12 months by wealth category

Wealth category	Status			
	Always Deficit	Occasional deficit	Breakeven	Surplus
Rich/middle (n=4)	0	0	75.0 (3)	25.0 (1)
Upper poor (n=3)	0	0	33.0 (1)	66.7 (2)
Poor (n=11)	27.3 (3)	45.5 (5)	9.1 (1)	18.2 (2)
Destitute (n=14)	42.9 (6)	21.4 (3)	28.6 (4)	7.1 (1)
Total (n=32)	28.1 (9)	25.0 (8)	28.1 (9)	18.8 (6)

Note: Figures in the parentheses indicate the number

Table 7.9 shows the percentage of the HHs who took most of their loans in different months of 2000-2001. More than 40% of the HHs took loans during June-July, this was highest among the rich/middle. Over one third of the HHs took loans during July-August, this was highest among the poor. About one sixth of the HHs took loans during March to April.

Table 7.9: Percentage of the HHs taking loans in different months of 2000-2001

Wealth category	Apr - May	May- Jun	Jun- Jul	Jul- Aug	Aug- Sep	Sep- Oct	Oct- Nov	Nov- Dec	Dec- Jan	Jan- Feb	Feb- Mar	Mar - Apr
	Baish ak	Jaist ha	Ash ar	Shra bon	Bhad ro	Ash win	Kartik	Augr ahay	Pous h	Mag h	Falg oon	Chai tra
Rich/middle (n=4)	0	25.0 (1)	50.0 (2)	25.0 (1)	0	0	0	0	0	0	0	0
Upper poor (n=3)	0	0	33.3 (1)	33.3 (1)	33.3 (1)	33.3 (1)	0	0	0	0	0	66.7 (2)
Poor (n=11)	0	18.0 (2)	45.5 (5)	36.4 (4)	36.4 (4)	0	0	0	9.1 (1)	9.1 (1)	18.2 (2)	9.1 (1)
Destitute (n=14)	7.1 (1)	21.4 (3)	37.7 (5)	35.7 (5)	28.6 (4)	14.3 (2)	28.6 (4)	14.3 (2)	14.3 (2)	7.1 (1)	14.3 (2)	14.3 (2)
Total (n=32)	3.1 (1)	18.8 (6)	40.6 (13)	34.4 (11)	28.1 (9)	9.4 (3)	12.5 (4)	6.3 (2)	9.4 (3)	6.3 (2)	12.5 (4)	15.6 (5)

Note: Figures in the parentheses indicate the number

Table 7.10 shows the HH heads who remained unemployed in certain parts of the year (2000-2001) and things done at that time. About 88 percent remained unemployed with the highest amongst upper poor (100%) and lowest amongst destitute (44.4%). During the unemployment period most of them engaged in the indirect and direct earning.

Table 7.10: Percentage of the HH heads remain unemployed in certain parts of the year and things done at that time by WC

Wealth category	Remain unemployed	Things done when unemployed		
		Indirect earning	Direct earning	Training/no work
Rich/middle (n=4)	50.0 (2)	100.0 (2)	0	0
Upper poor (n=3)	100.0 (3)	33.3 (1)	33.3 (1)	33.3 (1)
Poor (n=11)	90.0 (10)	60.0 (6)	10.0 (1)	30.0 (3)
Destitute (n=14)	44.4 (13)	46.2 (6)	7.7 (1)	46.2 (6)
Total (n=32)	87.5 (28)	53.6 (15)	10.7 (3)	35.7 (10)

Note: Figures in the parentheses indicate the number

Table 7.11 presents the health-seeking behaviour of the HHs. Over 34 percent sought treatment from MBSS doctors during illness with the being highest for rich (75%). Nearly 66 percent sought treatment from village doctors during illness with the being highest for upper poor (100%) and lowest for rich (25%).

Table 7.11: Health-seeking behavior of the HHs by WC

Wealth category	Health-seeking Behavior	
	MBBS doctor	Village doctor
Rich/middle (n=4)	75.0 (3)	25.0 (1)
Upper poor (n=3)	0	100.0 (3)
Poor (n=11)	27.3 (3)	72.7 (8)
Destitute (n=14)	35.7 (5)	64.3 (9)
Total (n=32)	34.4 (11)	65.6 (21)

Note: Figures in the parentheses indicate the number

According to the perception of 88% of sample HHs, the fish production was almost decreased in last five years and the people inferred that the activities of fisheries department would be beneficial (Table 7.12).

Table 7.12: Percentage of the HHs perception about fish production in open water bodies in last five years

Wealth category	Fish production	
	Decreased	Non response
Rich/middle (n=4)	100.0 (4)	0
Upper poor (n=3)	66.7 (2)	33.3 (1)
Poor (n=11)	90.9 (10)	9.1 (1)
Destitute (n=14)	85.7 (12)	14.3 (2)
Total (n=32)	87.5 (28)	12.5 (4)

Note: Figures in the parentheses indicate the number

Profile of Two Villages under the Water Body Kumar River

In the water body Kumar river participatory rural appraisal (PRA) has been applied in two villages Kafura Purba and Mamudpur, under the district of Faridpur, to understand the livelihood conditions of the villagers.

I. Profile of Village Kafura Purba

1. Contextual Analysis

1.1 Historical background

According to the villagers, Kafura Purba (east) village is originated from a narrow canal called Kafur later it merged with the Kumar river. The village is located on the east embankment of Kumar river under Geroda union of Faridpur thana of district Faridpur. Kafura village is surrounded by village Beel Mamudpur in the north, village Bakunda in the south, village Geroda in the east and village Pashora in the west.

1.2 Village infrastructure

There is easy transportation in village Kafura Purba to the nearest district town, Faridpur and the village is only five kilometers away from it. Rail lines go through the village. The nearest metal road is four kilometers far from the center of the village. The distance of the nearest bus stop is only one kilometer. Inside the village there are two unpaved roads, two brick soling roads, and four bridges over the narrow canals. There are five mosques and two temples as well. The village owns 50 acres of cultivable land, four small ponds, some very old trees, 10 rural shops, one bazaar, one fish hatchery, two sanctuaries for fish, and one poultry farm. There is no electricity in the village. Apparently Kafura Purba is an economically vibrant area. Five non-government organizations (NGOs) are working in the village and creating self-employment opportunities for the people. BRAC has formed two different village organizations for the poor women in the village.

1.3 Political/ Administration

There is an elected union council member in Village Kafura Purba. There was no food for work program in the village over last two years as reported. The government provides only health and education facilities. There is one post office in the village from which the villagers get mailing opportunities. There is a *salish* village court where people get judgment if any dispute arises. The village *matbor* (leader), religious leaders are responsible to make decisions in the court. Sometimes the chairman and the female member of union council come to infer the judgment. It was reported that in spite of getting help from police and the court of the district town the incidences of gender violence and terrorism have not been stopped completely in the village Kafura Purba.

1.4 Educational

There are one government primary school, one government high school, two madrassas, and two BRAC schools in the village. The literacy rate of the village is 38% approximate. Children get education free of cost from BRAC schools and government primary school and they are also getting scholarship from primary school. There are two madrassas in Kafura Purba village and it is mentioned that the villagers prefer to get Islamic education for their children as it regulates the living of the Muslims.

1.5 Health

There is a BRAC health clinic in village Kafura Purba. Children get immunization and vaccination free from there. The pregnant women get monthly check-up and suggestion from this clinic. The villagers mentioned that in case of critical disease they go to the medical college hospital at Faridpur, which is three kilometer away from their village. The water system and sanitation in Kafura Purba village are fine and majority of the households owns tube-well and hygienic toilet.

1.6 Cultural

There are many cultural activities in village Kafura Purba. They arrange a stage program on folk songs every year. The religious bodies also arrange regular meeting/gathering to disseminate the religious regulations on their respective religious code. BRAC's social development program has popular theater program that highlights certain unjust, illegal and exploitative practices of the society. In this forum men, women and children assemble for a few hours to watch the enactment of their life stories. The poor, particularly women have the opportunity to visualize institutional discriminatory and exploitative norms and practices that govern their lives. The informant group mentioned that popular theater is highly effective in raising awareness and solving the problems of their local communities. There is a community centre in village Kafura Purba and people can rent it for their own uses.

2. Village Resources

2.1 Natural capital

The natural resources to be mentioned in the village are small orchards, river, ponds and ditches, old trees, bamboo bush, etc. The villagers grow vegetables in the small plots. They catch fishes from the rivulets. They also take their bath there. There are a number of ponds, which provide baiting and fishing facilities for the local people. The villagers make fences for their cottages and also for the protection of their vegetable and other crop fields with native bamboo. The bamboo is also used as fuel for cooking food. The bamboo is also used for making utensils for carrying and storing agricultural commodities. In fact, the natural resources are very handy for good living.

2.2 Human capital

The stated total population of village Kafura Purba is approximately 675 and the number of households is 57. Seventy five percent of total population is Muslim and the rest is Hindu. The main occupation of 50% of the household heads is agricultural work, 25% are day-labourer, 20% do fishing, and the rest 5% do other economic activities including service. The informant group mentioned that to work at Dhaka or in outside the country is common for the rich and middle

Table 7.7: Percentage of HHs adopted the strategies in case of income or asset loss by wealth category

Wealth category	Strategies			
	Borrowing	Borrowing by interest	Draw money from their bank savings	Lease or sell the land
Rich/middle (n=4)	0	25.0 (1)	25.0 (1)	50.0 (2)
Upper poor (n=3)	33.3 (1)	66.7 (2)	0	0
Poor (n=11)	63.6 (7)	27.3 (3)	0	9.1 (1)
Destitute (n=14)	71.4 (10)	28.6 (4)	0	0
Total (n=32)	56.3 (18)	31.3 (10)	3.1 (1)	9.4 (3)

Note 1: Figures in the parentheses indicate the number

Note 2: Multiple responses were considered

Table 7.8 describes the percentage of the HHs economic status within last 12 months. It should be interpreted from this table that the rich, middle and upper poor group had no any kind of deficit. On the other hand, the poor and destitute group had less surplus condition around the year by comparing the other wealth groups.

Table 7.8: Percentage of the HHs economic status within last 12 months by wealth category

Wealth category	Status			
	Always Deficit	Occasional deficit	Breakeven	Surplus
Rich/middle (n=4)	0	0	75.0 (3)	25.0 (1)
Upper poor (n=3)	0	0	33.0 (1)	66.7 (2)
Poor (n=11)	27.3 (3)	45.5 (5)	9.1 (1)	18.2 (2)
Destitute (n=14)	42.9 (6)	21.4 (3)	28.6 (4)	7.1 (1)
Total (n=32)	28.1 (9)	25.0 (8)	28.1 (9)	18.8 (6)

Note: Figures in the parentheses indicate the number

Table 7.9 shows the percentage of the HHs who took most of their loans in different months of 2000-2001. More than 40% of the HHs took loans during June-July, this was highest among the rich/middle. Over one third of the HHs took loans during July-August, this was highest among the poor. About one sixth of the HHs took loans during March to April.

Table 7.9: Percentage of the HHs taking loans in different months of 2000-2001

Wealth category	Apr - May	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar - Apr
	Baishak	Jaistha	Ashar	Shrabon	Bhadro	Ashwin	Kartik	Augraha	Poush	Magh	Falgun	Chaitra
Rich/middle (n=4)	0	25.0 (1)	50.0 (2)	25.0 (1)	0	0	0	0	0	0	0	0
Upper poor (n=3)	0	0	33.3 (1)	33.3 (1)	33.3 (1)	33.3 (1)	0	0	0	0	0	66.7 (2)
Poor (n=11)	0	18.0 (2)	45.5 (5)	36.4 (4)	36.4 (4)	0	0	0	9.1 (1)	9.1 (1)	18.2 (2)	9.1 (1)
Destitute (n=14)	7.1 (1)	21.4 (3)	37.7 (5)	35.7 (5)	28.6 (4)	14.3 (2)	28.6 (4)	14.3 (2)	14.3 (2)	7.1 (1)	14.3 (2)	14.3 (2)
Total (n=32)	3.1 (1)	18.8 (6)	40.6 (13)	34.4 (11)	28.1 (9)	9.4 (3)	12.5 (4)	6.3 (2)	9.4 (3)	6.3 (2)	12.5 (4)	15.6 (5)

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Wealth category	Remain unemployed	Things done when unemployed		
		Indirect earning	Direct earning	Training/no work
Rich/middle (n=4)	50.0 (2)	100.0 (2)	0	0
Upper poor (n=3)	100.0 (3)	33.3 (1)	33.3 (1)	33.3 (1)
Poor (n=11)	90.0 (10)	60.0 (6)	10.0 (1)	30.0 (3)
Destitute (n=14)	44.4 (13)	46.2 (6)	7.7 (1)	46.2 (6)
Total (n=32)	87.5 (28)	53.6 (15)	10.7 (3)	35.7 (10)

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Table 7.12: Percentage of the HHs perception about fish production in open water bodies in last five years

Wealth category	Fish production	
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Rich/middle (n=4)	100.0 (4)	0
Upper poor (n=3)	66.7 (2)	33.3 (1)
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2. Village Resources

2.1 Natural capital

The natural resources to be mentioned in the village are small orchards, river, ponds and ditches, old trees, bamboo bush, etc. The villagers grow vegetables in the small plots. They catch fishes from the rivulets. They also take their bath there. There are a number of ponds, which provide baiting and fishing facilities for the local people. The villagers make fences for their cottages and also for the protection of their vegetable and other crop fields with native bamboo. The bamboo is also used as fuel for cooking food. The bamboo is also used for making utensils for carrying and storing agricultural commodities. In fact, the natural resources are very handy for good living.

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The stated total population of village Kafura Purba is approximately 675 and the number of households is 57. Seventy five percent of total population is Muslim and the rest is Hindu. The main occupation of 50% of the household heads is agricultural work, 25% are day-labourer, 20% do fishing, and the rest 5% do other economic activities including service. The informant group mentioned that to work at Dhaka or in outside the country is common for the rich and middle

class people of this village. Each month a certain amount of remittance comes to those households from outside. There are few traditional healers in the village follow indigenous treatment of common diseases, which the poor people like most.

The village is fairly in human resources. It has medical practitioners, teachers, pilots who fly planes abroad, businessmen, cultivators, fishermen as well as people like Ujha (who treat people stricken by snakebites) and Fakirs. The primary doctors are responsible for treatment of common diseases like diarrhea, stomach pain, and dysentery as well as diseases related to maternity. The Fokirs are also very popular to the illiterate villagers. In fact they take advantage of the superstitions prevailing among the people by giving verse treatment of salt and oil etc. The pilot serving abroad sends foreign money, which help their families as well as the government. The businessmen, the fishermen and the cultivators carry on their respective professions to maintain their families, simultaneously helping the society.

2.3 Social capital

The available social resources of the village include ponds and tanks, old trees, canals, cultivable land, orchards, bamboo bush, marshes etc. The ponds and tanks are used mainly for baths and washing of clothes and washings of utensils. People can lure out fish from these water bodies. The old trees provide shades for the tired ones as well as, fuel, which is so essential. The timber extracted from the trees provide materials for making furniture. The canals are the resources for irrigation for producing food crops and vegetables etc. The villagers can market the access food crops and vegetables to generate cash income. Bamboos are available in the village and used for making baskets, bamboo partition, bamboo splits and other essential things for the families. They are also the kind of very popular fuels among the villagers.

2.4 Physical capital

The physical resources of the village includes the metal roads, unpaved road, semi-pacca (pitched) roads, rail lines, mosques, tamales, schools, madrassa, community center, social welfare society, PEP Somity, Polly Progoty Somity, BRAC Somity, BRAC health care center, poultry farms, fisherman co-operative society etc.

The people for transportation of both man and material use all the type of roads. Various types of vehicles, animal driven as well as power-driven ply on these roads. They use rail lines for going to Faridpur and other places. The Muslims go to mosques to say prayer five times a day. Besides, the children get Arabic and religious education in the mosque. The Hindus perform Pooja in the temples. The normal schools are there to impart general education in various subjects. The community centers and the BRAC health centers provide services like polio vaccination, medicines of various types, taking car of the weight of the children as well as medical consistency services to expecting mothers. Various societies provide loans to the poor to carry on economic activities. They also educate the people about the hazards of arsenic. The BRAC Somity is involved in various training activities such as fisheries, poultry, construction of ring slabs, awareness building among acid victims, legal support, awareness building about early marriage, poultry vaccination etc. The villagers are being benefited from these organizations in various ways.

Institutional

The institutional resources of the village consists of schools, madrassas, mosques and temple, BRAC Somity, BRAC health center, PEP, social welfare association, Polli Progati Porishad, fish hatcheries and poultry farms etc. The education institutions, the mosques and various societies provide facilities for learning, while others deliver credit, primary health care and occupational training. All these contribute to the welfare of the people.

2.5 Financial capital

The main agricultural and riverine resources are jute, sugarcane, paddy, potato and fish etc. Cow and Goat leather is another kind of important economic resource. Jute has multiple use. The growers use it for their domestic purpose in the form of rope, to make bags. Jute straws are used for making fences of the cottages as well as plots of land.

These also are used as fuel. Apart from these jute is considered as a cash crop. Sugarcane mainly provides the means of cash generation from their sale to the sugar mills. Molasses are also made from sugarcane. This again is a source of cash income in most of the cases. As is natural in Bangladesh people of this village is also grow rice for family consumption and when possible earning cash income by their sale. The fisherman community earns their livelihood through fishing from the ponds, canals and rivers.

3. Institutional Processes: Importance and Roles

3.1 Government institutions

The available government institutions are primary schools, social welfare associations, post office, community center; fish-hatchery etc. education in the primary schools is imparted to the children free of cost-fees and books. The social welfare associations provide facilities for development activities. The post office has the facility for remittance of money and sending of letters and documents. In the community center consultation service is given for public health. They also provide polio vaccines/drops. Fish fries are also distributed to the intending villagers from the government hatcheries, which is a great help to the growers and finally of the villagers in general.

3.2 NGOs, CBOs, Co-operatives

The inhabitants of East Kafura get the benefit of existing BRAC society, BRAC school, EEP, Polio Progati Porishad. These institutions-taken together provide the following services and facilities

- Cash credit for cultivation, poultry farming and pisciculture
- High yielding variety seeds of various crops, nursery plants, ring tube-wells
- Public awareness against the evils of acid throwing, human rights and related legal advice.
- Free child education, free medical service and consultation, public awareness against from the dangers of arsenic, free delivery of buckets
- Re-excavation of ponds and tanks

All the above facilities make peoples living better and better by the day.

3.3 Informal institutions

Such institutions are mosques, temples, madrassas etc. In the mosque children get education in Arabic and Islamic religion and culture. They also perform Namaz five times a day and attend Waas Mahfeel (lectures and seminars) in the mosques. In the temples the Hindus perform pooja, kirtan and learn from the Bedh Shastra which is their religious holy book.

3.4 Private sectors

These are very small in number as well as very small in size and scope. Poultry farms and fisherman co-operative societies are the only two types to be mentioned. The poultry farms satisfy the demands of eggs and meat while the fisherman association contributes to the growth of fish resource of the village. These are enhancing economic condition of the village.

The villagers argue that the government and non-government organizations are trying hard to improve their livelihoods conditions but the terrorism of the political parties in their area is a barrier of it.

4. Seasonal Vulnerability and Coping Strategies

Table 4.1 Seasonal differences in village Kafura Purba

Item	Apri l- May	May - June	June -July	July- Aug	Aug- Sept	Sept- Oct	Oct- Nov	Nov- Dec	Dec- Jan	Jan- Feb	Feb- Mar ch	Mar ch- April
	<i>Bais hak h</i>	<i>Jaist ha</i>	<i>Asha r</i>	<i>Shra bon</i>	<i>Bhad ro</i>	<i>Ashw in</i>	<i>Karti k</i>	<i>Augr ahay an</i>	<i>Pous h</i>	<i>Mag h</i>	<i>Falg oon</i>	<i>Chait ra</i>
Temperature	2	3	4	8	9	7	6	4	2	1	10	12
Rainfall	5	10	12	11	9	9	8	4	2	1		1
Employment opportunity	12	11	4	5	3	8	10	8	6	5	4	10
Food deficit	8	9	10	11	12	2	1	5	4	4	3	2
Borrowing	7	8	10	11	12	9	8	6	6	5	4	2
Lean period	7	8	9	11	12	2	1	1	3	4	5	6
Fish availability	10	12	4	3	1	9	8	6	5	4	4	2

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Employment opportunity

The villagers reported that most of them remain without any job during Baishakh and Jaistha. When standing crops are lost or damaged due to draughts and other resources are damaged by natural calamities. The only way by which they can survive is by taking loan or by selling whatever asset they can afford.

4.2 Food deficit

The villagers informed that food scarcity reaches its peak in the months of Shrabon and Bhadra while it remains at the lowest level in the months of Vadra and Ashwin. Acute scarcity is caused by the following-

- Lack/absence of employment opportunity
- Eccessive rain fall which forces the people to remain inside their homes
- Roads remain muddy causing mobility problem

- The social miscreants cause problems for vans, rickshaws, and tempos by charging money subscriptions.

During the scarcity period people have to borrow money from money lenders or co-operative societies or sell their assets like boats, nets and trees to purchase food from the sale proceeds.

4.3 Borrowing

The people said that they borrow to the maximum extent in the months of Bhadra and Shrabon to tide over financial difficulties. BRAC, PEP, Social welfare Association, Polio Progoti Porishod come to their assistance at that time. They alleged that the village Mohazons, the leaders and the rich class do not show sympathy and do not co-operate to give them relief.

4.4 Lean period

People suffer most in the months of Shrabon and Vadra, which is the common period for devastating floods. People hardly find any job opportunity to earn money and poverty hits majority of the families hard at that time. Traditionally the months of Augrahyan are regarded as good time for the people. They get rid of their debts by selling the surplus crops in this month. The people are of the opinion that the various institutions particularly the government institutions come to their assistance effectively they can save themselves from the clutches of floods and famine.

4.5 Selling assets

The people regretted that they have to sell their important assets like cows, goats, ducks and hens, trees, land properties, boats, fishing nets etc to get over poverty and hunger caused by food shortage, crop failure, lack of job opportunity, flood, draught and famine and also to repay loans.

5. Well-being Pattern in the Village

The villagers identified four wealth categories of people in village Kafura Purba that are middle class, upper poor, poor, and destitute. They mentioned, as they perceive wealth there is no rich group in their village.

Table 5.1 Well-being pattern in village Kafura Purba

Wealth category Hhs 57	Livelihood assets	Livelihood strategies	Sustainable livelihood outcomes
Rich 0%	1. Own 10-12 <i>bigha</i> of land. 2. Service holder. 3. Own mill, factory at town. 4. Get remittance from sons and daughters work abroad.	1. Employed labour on own land. 2. Invest capital. 3. Work hard for economic improvement.	1. Surplus food. 2. Nutritious food. 3. Good health. 4. Educated children.
Middle class 25%	1. Own 7-8 <i>bigha</i> of land. 2. Service holder. 3. Own shops, small-scale factories at town. 4. Sons and daughters work at the city.	1. Do agricultural on own farm. 2. Work hard.	1. Balanced income. 2. Nutritious food. 3. Good health. 4. Educated children. 5. Safe homestead. 6. Inherited property.
Upper poor 9%	1. Own 4-5 <i>bigha</i> of land. 2. Few own shops, cycle repairing workshop, small-scale factories. 3. Few own boats and fishing gears.	1. Pull rickshaw/van, few ride auto-rickshaw. 2. Work hard for subsistence. 3. Children do work. 4. Borrow from NGO.	1. Lower level of education for children. 2. Seasonal deficit in food. 3. Malnutrition. 4. Often sick.
Poor 33%	1. Few own 2-3 <i>bigha</i> of land. 2. Most have homestead land. 3. Work for everyday. 4. Few own fishing gears. Sell fish.	1. Borrow from moneylender. 2. Work hard everyday for subsistence. 3. Women do work. 4. Seasonal migration to town for work.	1. Often food deficit. 2. Malnutrition and ill health. 3. Illiterate children. 4. Poor income.
Destitute 33%	1. No land. 2. Few own homestead land. 3. Work for everyday. 4. No fishing gears. 5. Sell manual labour only.	1. Children do work. 2. Women do work. 3. Lack of credit worthiness. 4. Frequent migration for work.	1. Always food deficit. 2. Malnutrition and ill health. 3. Illiterate children.

People with more assets tend to have a greater range of options and an ability to switch between multiple strategies to secure their livelihoods. Again peoples ability to escape from poverty is critically dependent upon their access to assets. Different assets are required to achieve different livelihood outcomes. For example, some people may consider a minimum level of social capital to be essential if they to achieve a sense of well being. Again people of a remote area may feel they require a certain level of access to natural capital to provide security.

Table 5.2 Well-being data of village Kafura Purba

Wealth category	Percentage (n = 57)	HH identification number
Rich	-	-
Middle class	25% (14)	1, 2, 4, 5, 6, 7, 10, 14, 20, 29, 32, 41, 43, 49
Upper poor	9% (5)	13, 19, 23, 24, 27
Poor	33% (19)	17, 18, 21, 26, 30, 34, 36, 38, 40, 42, 45, 48 51, 53, 54, 55, 56, 58, 59
Destitute	33% (19)	3, 8, 9, 11, 12, 15, 16, 22, 25, 28, 31, 33, 35, 37, 39, 44, 46, 52, 57

Note: Household number 47, 50, 60 have not been found out.

6. Expected impact by beneficiaries of FFP

6.1 Comments of fishermen

The type of intervention of FFP in Kumar river is sanctuary. The fishermen of the village hope that the production of fish will be increased after implementing the proposed program of FFP. They mentioned that the fish resource in the water bodies is reducing gradually due to catching fish excessively with illegal or unauthorized fishing gear like *suti* net, *ber* net, and so on. Moreover, the water flow of the river has not been regulating by the sluice gate in time. The fishermen specially mentioned about the corruption of regulating sluice gate over Kumar river, which is engendering the scarcity of fish in the river adjacent, their village. The consumption of fish in poor household has been reduced sharply because they used to catch fish from the river for subsistence. The fishermen are being obliged transforming their profession into agricultural labour and so on. The fishermen are expecting that FFP will handle these problems strictly with their newly formed VDC and FMC and only then the objective of FFP will be fulfilled. Diverged fishermen hopefully reestablish to their own profession. Unlikely few of them think they might not get benefit from FFP, as they are not the members of VDC and FMC.

6.2 Comments of PRA facilitators

Under the New Fisheries Management Policy in 1986, Department of Fisheries (DOF) different fishery development projects with a varied degree of involvement of the community people. The objective of the Fourth Fisheries Project (FFP) is "to support sustainable and equitable growth in the benefits generated from increased fish... production". Newly formed village development committees (VDC) and fisheries management committees (FMC) should assure achievement of the objective.

The facilitators think that the objective of the FFP might be achieved if the program run in accordance with the set rules. It will definitely help to increase the fish production of the open water bodies. The people whose livelihoods are based on fishery should be included in the project. For both types of interventions fishing might be restricted for a certain period. On that period it is urged to initiate short-term micro-finance or other income earning opportunities for the project fishermen for their livelihoods. The implementing NGOs can play an important role for that. The fishermen who depend on the water body at subsistence level should be considered as well.

II. Profile of Village Mamudpur

1. Contextual Analysis

1.1 Historical background

The village Mamudpur is situated in the *Geroda* union in of sadar thana of Faridpur district. This village is located on the west bank of the river Kumar by the side of the Faridpur-Barisal Highway. The villagers of Mamudpur informed that, long days ago a brave and influential person named *Sultan Mahmud* lived here. He was the owner of large property. He was famous for his personality and influence. In the village what he used to say, everybody accepted that unanimously. Thus the village was named Mamudpur according to his name. In course of time, the existence of his heirs is abolished from the village. The village is surrounded by the *Char Kamlapur* in the north, *Deora* in the south, *Beel Mamudpur* in the east and the village *Goalkandi* in the west side.

1.2 Village Infrastructure

The total number of households in the village is 58, out of which 80% households are Muslim and 20% are Hindu by religion. It may be mentioned that there is no Buddhist or Christian family in the village. By profession, 50% of the villagers are agriculturist, 35% are day labour, 10% are fishermen and 5% are service holders and others. There are 2 mosques, one *madrassa*, one unpaved road, two brick built roads, one Eidgah field, one *darga*, one pharmaceutical industry, one mini market, three poultry farms, one rice mill, two biscuit factories, one BRAC School, two BRAC societies, one ASHA Society, one P.E.P society, one village development society one garden, one club, one islamia, one project of life Insurance company, two fish hatcheries, and two wells in the village. Also the River Research Institute and a center of the Open University are located in this village. Each household has tube wells and sanitary latrines. There are 27 acres of cultivable lands, old trees, one graveyard, one brickfield, one bridge, one culvert, and four shops in the village. Of the 58 households of the village 8 are rich, 12 are medium rich, 9 are medium poor and 17 are very poor families.

1.3 Political/Administration

In the perspective of the development the political context of the village is as follows- Local village leaders used to solve the trifling quarrels of the common people. The religious leaders don't issue any illegal *fatoa* or spread any superstition among the villagers. There is a minimum effect of political strikes on the villagers. It is learnt from the villagers that the public representatives, local leaders and religious leaders used to solve all kind of village problems by discussion among themselves. Although the terrorism in the village persisted continuing the previous tradition, it has now come down to a minimum, due to active consciousness of the villagers. Besides the villagers informed that under any serious circumstances they do not go to the court rather they themselves solve the problem.

Administration

The administrative base of the village is very powerful. Local leaders, teachers, U.P. chairman, member and respective persons manage themselves by doing justice and shalish and solve the problem. The villagers are very active against the occurrence of any terrorism or woman tortures in the village. There are no police actions and litigation in the village. The villagers are

unanimously agreed that they confined the solution of the village problem within themselves. The assistance of the present legal system of town is not much necessary for them.

1.4 Educational

In the village, the children start their education in the private school and BRAC School. About one and half kilometer away from the village there are primary school and one high school where the students go and study. The villagers inform that in BRAC School they give books, pencil etc. free of cost. For the higher secondary education they used to go to the town of Faridpur 3 kilometer away from the village. The villagers are very fond of religious education. In the mosques and *madrassas* every morning the children used to learn Arabic language, religious education and about *Waaz Mehfil*. The standard of education in the village is much improved.

1.5 Health

The villagers inform that, though in case of the diseases like influenza, diarrhea, dysentery etc. they used to buy medicine from the pharmacy beside the road. Besides these some people believe in herbal medicine, homeopathy, *jharphuk*, *paanipora* etc. and used to take the treatment from these. Addition to these they can get the facilities of baby weighting, taking polio vaccine, first aid etc. and the advice about birth control, after treatment of pregnancy from the health center organized by government. In case of any serious circumstances they can get the medical treatment by coming in the Faridpur Medical College and Hospital, 2.5 kilometer away from the village.

1.6 Cultural

The cultural activities of the village are praiseworthy. Occasionally the functions of song as *Kabigan*, *palagan*, *jarigan*, etc. are held in the village. *Waaz Mehfls* are arranged in the mosques and *madrassas*. In *Dargah Shareef* every year religious discussion are held in a particular day. The Hindus used to arrange *Horikirton* and observe the large *Pooja* functions occasionally. BRAC used to bring forward the problems of polygamy, woman torture, help of law, etc. and the social picture of local people by arranging mass theater.

2. Village Resources

2.1 Natural capital

The natural resources of the village Mamudpur are river, water body, ponds, old trees, bamboo bush, cultivable lands, Eidgah field, etc. The water body is used for fishing and taking bath. Fishing in the water bodies has changed radically the lifestyle of the fishermen. The villagers use the ponds for taking bath and to fulfill daily necessities. They use the bamboo for making fence and fuel. They used to make wooden furniture and boats from the old wooden trees and use the logs as fuel. The villagers fulfill their needs by producing paddy, jute, sugarcane etc. in the crop fields. The Muslims are benefited with the Eidgah fields they used to say prayer there at the time of Eid. The poor villagers are getting proper benefit with these resources.

2.2 Human capital

There are many kinds of people from different profession as teachers, lawyer, emigrants, first aid doctors, businessman, fishermen, farmers, *fakirs*, *Kabiraj*, government employee etc. The teachers used to educate the children and the lawyer help the judge in justice in court. By earning

foreign currency the emigrants increase their influence and fame in the village but in the developmental works of the village they have not much contribution. The village first aid doctor used to treat the influenza, stomach pain, dysentery, diarrhea, the pregnancy treatment; the businessmen try to develop the villagers and their condition. The fishermen used to earn their livelihood by fishing. They can develop the villagers by fishing. The farmers remain busy in producing crops and developing the villager's condition. The *Fakir* of this village is very admired. He has become very trustworthy by the superstitious works as *panipora*, *jharfuk*, *chalani jhara*, *labonpora*, *tel pora*, and *korichalano*. etc. The *kabiraj* serve the villagers by giving *tel pora*, *tabij* etc. and service holders used to earn their livelihood by their profession and try to help the poor people of the village. Thus the different kinds of human resource of the village direct the villagers of different profession towards the development of the village in various ways. The poor class of the villagers however gets most of the benefits.

2.3 Social capital

The social resources of the village are ponds, old trees, cultivable lands, garden, bamboo bush, water body, canals etc. The villagers use the ponds for bath, fishing, washing clothes and for the daily necessary works. The passersby used to sit under the old trees for shadow. People use the log as fuel and with the wood they make costly furniture. They use the water of the canal for irrigation. They fulfill their and others needs by producing different kinds of crop and vegetable in the cultivable lands. In the gardens they used to grow tree and vegetables. They use bamboo in making daily necessary things, as fuel and to make fence. They use the water bodies for fishing, swimming, taking bath etc. and the poor class of the villagers however gets the most benefits

2.4 Physical capital

The physical resources of the village Mamudpur are metal roads, unpaved roads, brick built roads, mosques, temples, *madrassas*, brickfield, biscuit factory, *Dargah Shareef*, pharmaceutical industry, mini market, societies of BRAC, ASHA, P.E.P and Village Development Society, life insurance center, bridge, culverts, poultry farms, a sub center of the Open University, health center and the River Research Institute. Different vehicles use the unpaved, metal and brick built roads of the village and people walk through those. In the mosque, the Muslims used to say their prayers five times a day and the children learn Arabic language, *waaz mehfil* and various kinds of religious education there. In the temples the Hindus observe their *Pooja* functions, *Harikirtan*, *palagan* etc. In the school the children used to learn formal education. In the *madrassas* they learn Arabic language, religious education, *waaz mehfil* etc. In the health center people can do baby weighting, take polio vaccine; take advice about birth control, about caring of the pregnant woman, about primary medical treatment, etc. Village Development Society, P.E.P, Asha, Islamia, and some other societies give loans; return savings, advice for the arsenic free water and free buckets. BRAC Society lends loan, advice for the poultry and for the cultivation of fish. They also give improved quality seeds, seedlings, ring slab, tube well, law helping to the villagers. Moreover they used to alert the villagers by spreading mass consciousness for the acid attacked persons, polygamy, woman torture, dowry and different kinds of advice on human right and law education etc. In the poultry farms caring for ducks and chickens, in the biscuit factory biscuit are made, in the life insurance center the insurance of the villagers are obtained, in the brickfields brick are built and are used to make house. In the *Dargah Shareef* people used to say thanks to Allah and held many religious discussion. In the pharmaceutical factory various

medicines are made and the villagers can buy medicine in fair price from that. These physical assets are helping the poor villagers very much.

Institutional

The institutional assets of the village are private BRAC School, *madrassa*, mosques, BRAC Society, Asha Society, P.E.P, Village Development Society, Islamia, life insurance center, poultry farms, rice mill, *Dargah Shareef*, mini market, shop, pharmaceutical factory, Eidgah field etc. In BRAC School children used to learn education, in *madrassa* and mosques people can learn about *waaz mehfil* and religious education, in the society of BRAC, Asha, P.E.P, Islamia and village development society, life insurance company, mini market, biscuit factory, pharmaceutical factory, health center people used to get the benefits of nutrition, vitamin, borrowing, advice on many matters, about business and various kinds of facilities. The poor people are getting the proper benefits from these assets.

2.5 Financial capital

The main economical resources of the village are jute, leather, sugarcane, rice, potato, fish etc. They use jute products in many works and earn money by selling jute. Selling leather is an important activity for the villagers from the perspective of earning money. People use sugarcane for chewing and making molasses. They sell it in the sugar mill. Thus they can earn a lot of money. By producing paddy they fulfill their own and villagers' needs and earn their livelihood. They use potato as their main vegetable and earn money by selling it. The fisherman used to earn their livelihood by fishing and fulfill the need of fish of the villagers. The poor people however get most of the benefits.

3. Institutional Processes: Importance and Roles

3.1 Government institutions

There are some government institutions working in village Mamudpur. The River Research Institute observes the level and depth of water in Kumar river and solves the problems related to water transportation. The Community Nutrition Centre works for both antenatal and postnatal care of around 200 households surrounding the centre situated in the village. Its activities also include conducting a health forum for the women where they get awareness on health, nutrition and family planning aspects. Under the programs of Open University children who did not go to the school before are now getting chance of education. Postal Life Insurance exists in village Mamudpur even though villagers mentioned that to withdraw money of life insurance is difficult.

The villagers of Mamudpur appraised positively the role of government institutions towards the socio-economic development of their village.

3.2 NGOs, CBOs, Co-operatives

The listed non-government institutions in village Mamudpur are mainly micro-finance institutions i.e. BRAC, PEP, Polli Progoti Council, ASA, Islamia, and Bhittihin. Such institutions are playing a crucial role to improve the economic condition of the poor people at household level. In addition to micro-credit BRAC has skill training, enterprise development, legal awareness and assistance programs for the poor women. Children are getting free education

from BRAC schools. The other NGOs have consciousness raising programs on health and sanitation. The informant group mentioned that the non-government institutions are working hard for involving the unemployed section of the society with economic activities. Again the poor people have access to their services most. Therefore, their roles are very much important for the socio-economic development of their village.

3.3 Informal institutions

The informal organizations in village Mamudpur are mosque, temple, madrassa, club, and village court. The village court consists of elite who has either salaried job or large agriculture farm. The informal organizations do work towards the social development of the village. The poor people have likely equal access only to the services of informal organizations.

3.4 Private sectors

There are some private institutions in village Mamudpur. These are poultry farm, biscuit factory, medicine factory, and rice mill. Such institutions employ the poor people and are improving the local condition of the village in terms of economic vibrancy. All of these are making profit and marketing their products to the nearest district towns and the capital city. Moreover, they are meeting the local people's needs with their products.

4. Seasonal Vulnerability and Coping Strategies

Table 4.1 Seasonal differences in village Mamudpur

Item	April-May	May-June	June-July	July-Aug	Aug-Sept	Sept-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-March	March-April
	<i>Bais hak h</i>	<i>Jaist ha</i>	<i>Ash ar</i>	<i>Shr abo n</i>	<i>Bha dro</i>	<i>Ash win</i>	<i>Kart ik</i>	<i>Augra hayan</i>	<i>Pous h</i>	<i>Mag h</i>	<i>Falgoo n</i>	<i>Chaitr a</i>
Temperature	10	10	8	7	10	6	5	4	2	1	11	12
Rainfall	7	6	12	11	10	8	9	5	2	2	1	
Employment opportunity	6	8	10	3	5	4	11	12	10	4	7	2
Food deficit	8	4	7	6	12	11	5	1	2	3	9	10
Borrowing	11	3	9	8	10	7	6	2	3	4	6	12
Lean period	11	7	6	7	10	8	2	3	1		4	12
Fish availability	2	1	7	5	7	9	12	11	10	8	1	1

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Employment opportunity

During the month of Kartik and Augrahan the employment opportunity are highest, because crop harvesting of 95% farmers starts at this time. However Rabicrops are harvested and plenty of fishes are available in the month of Falgoon. Unemployment problem is acute during Chaitra and Shrabon month because crops are damaged due to severe draught. Though plenty of fishes are available in the month of Shrabon, due to poor purchasing power of the villagers these cannot be sold. They used to face the problem by selling ornaments, boats, fishnets, and lands and by taking loans from friends and NGOs.

4.2 Food deficit

The villagers of Mamudpur told that the food deficit is acute during the month of Vadra and Ashwin. The main reason of the food deficit is that, though at that time the paddy in the field is in the ripening stage, harvesting cannot be started and the availability of stored food remains in the lowest level. Also the day labourers do not get sufficient employment because the employer also suffers from the food deficit. Due to poor purchasing power of the people fishermen don't get fare price even if fish is available. During the month of Poush and Magh food deficit is least because at that time paddy is harvested, day labourer can get employment and the fishermen also get fare price for the fish. They pass the period of food deficit by way of taking loan and borrowing from friends, by disposal of assets, by selling fishnet and boat. Also they meet the food deficit by giving lease of the ponds, mortgage of the lands and by selling the cropland and homestead lands.

4.3 Borrowing

The villagers of Mamudpur inform that the borrowing occurs mostly in the month of Chaitra and Baishakh. Because at that time crop is damaged due to sever draught. The fishermen cannot catch fish because water level decreases at the lowest limit. The day labourers also do not get employment because the employees have to depend on borrowing too. The villagers do not need to borrow during the month of Poush and Kartik because the farmers have plenty of rice in the store, fishermen can catch and sell fishes and the day labourers also get employment. The villagers told that in the month of Chaitra and Baishakh the situation is worst. They have to take loan from their friends, different NGOs and have to sell trees, boats and fishing nets, lands and assets or have to give mortgage of land and homestead. Moreover when they don't have any assets for dispose they have to migrate from village to town and seek employment.

4.4 Lean period

The villagers term flood and draught as their worst situation. The month of Chaitra and Baishakh according to them is the worst period of the year. Because at this time the "monsoon storm of Baishakh"(kalbaishakhi) destroy everything. As a result their conditions become worse. Diarrhea, pox, influenza etc. diseases outbreak at this time. During the month of Vadro dysentery, zondis, and cholera and during the month of Jaishtha pox, cholera etc. diseases are occurred. Then they have to cope the situation by way of getting loan from different society, by selling assets, boats, and lands and by giving mortgage of land. Besides they also inform that, previously the government organizations used to help in these situations but now such kinds of help are not obtained. Moreover they are of the opinion that if such kind of government and NGO support is available in these situations, the disposals of their assets will be minimized. Again it is learnt from the villagers that they are financially solvent during the month of Poush and Kartik . During this time those kinds of disasters do not appear.

4.5 Selling assets

The villagers inform that, they used to sell their assets during the worst period of borrowing, food deficit, unemployment problem, flood or draught. Their assets are dairy, poultry, trees, lands, shops, fishnets, boats, deposited ornaments etc. Besides these they used to take loans from friends and NGOs, give lease of ponds and mortgage lands to solve the problems.

5. Well-being Pattern in the Village

The informant group in village Mamudpur categorized the villagers into five wealth groups i.e. rich, middle class, upper poor, poor, and destitute.

Table 5.1 Well-being pattern in village Mamudpur

Wealth category Hhs 58	Livelihood assets	Livelihood strategies	Sustainable livelihood outcomes
Rich 14%	1. Own 10-15 bigha of land. 2. Service holder. 3. Own big shops, mills, and factories at town. 4. Get remittance from sons and daughters work abroad.	1. Employ labour on own land. 2. Invest capital. 3. Work hard for economic improvement.	1. Surplus food. 2. Nutritious food. 3. Good health. 4. Highly educated children. 5. Inherit properties. 6. High standard of living.
Middle class 22%	1. Own 7-8 bigha of land. 2. Service holder. 3. Own shops, small-scale factories at town. 4. Owner of fish depot. 5. Few own boats and fishing gears. 6. Sons and daughters work at the city.	1. Do agricultural on own farm. 2. Work hard. 3. Employ labour on fishing.	1. Balanced income. 2. Nutritious food. 3. Good health. 4. Educated children. 5. Safe homestead. 6. Few inherit land.
Upper poor 17%	1. Owned 4-5 bigha of land. 2. Few own shops cycle repairing workshop, small-scale factories, and rickshaw/van. 3. Own boats and fishing gears. 4. Fish traders. 5. Do government job at lower level.	1. Pull rickshaw/van, few ride auto-rickshaws. 2. Work hard for subsistence. 3. Children do work. 4. Borrow from NGO.	1. Lower level of education for children. 2. Seasonal deficit in food. 3. Malnutrition. 4. Often sick.
Poor 22%	1. Few own 2-3 bigha of land. 2. Most have homestead land. 3. Few own small shop. 4. Own fishing gears. 5. Do fish trade at small scale. 6. Work hard everyday.	1. Borrow from moneylender. 2. Work hard everyday for subsistence. 3. Women do work. 4. Seasonal migration to town for work.	1. Poor income. 2. Often food deficit. 3. Malnutrition and ill health. 4. Illiterate children.
Destitute 24%	1. No land, very few own homestead land. 2. Sell manual labour almost everyday in other's house, on boat and pull rickshaw/van. 3. Suffer mostly from unemployment due to political disruption (hartal).	1. Children and women do work. 2. Sell manual labour only. 3. Lack of credit worthiness. 4. Frequent migration for work.	1. Eviction from the shelter of other's land. 2. Always food deficit. 3. Malnutrition and ill health. 4. Illiterate children.

From the discussion of the socio economic condition of the Mamudpur, the villagers informed that, sustainable development of the village is possible if there would be no terrorism in the village and proper attention from GO and NGOs are given to the villagers.

Table 5.2 Well-being data of village Mamudpur

Wealth category	Percentage (n = 58)	HH identification number
Rich	14% (8)	7, 18, 20, 24, 25, 26, 51, 52
Middle class	22% (13)	1, 3, 5, 8, 10, 11, 13, 21, 22, 27, 42, 44, 50
Upper poor	17% (10)	33, 37, 38, 40 43, 48, 49, 53, 54, 55
Poor	22% (13)	6, 16, 17, 23, 28, 30, 31, 32, 35, 36, 56, 57, 58
Destitute	24% (14)	2, 4, 9, 12, 14, 15, 19, 29, 34, 39, 41, 45, 46, 47

Socio-Economic Baseline Survey of Open Water Fisheries

Profile of

Borobila Beel, Pirgonj, Rangpur

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Borobila Beel

Borobila Beel has a stocking project operated by Grameen Samaj Kendra (GSK). It is situated in Pirgonj upazila of the district Rangpur. There are 22 villages surrounding the Borobila Beel, Participatory Rural Appraisal (PRA) was applied to four of these villages; Ujirpur Majhipara, Borokarimpur Majhipara, Borokarimpur Kashba and Prajapara in order to understand the livelihood conditions of the villagers.

1. Vulnerability Context

It was stated that an ujir (responsible to take care of lands) of a landlord used to live in that village thus it was named Ujirpur. To meet the need of fish for the landlord the ujir distributed some lands to the fishermen beside the *beel*. The fishermen have settled there and the village was named Ujirpur Majhi (boatman) para. The village Borokarimpur Majhipara was also named after fishermen living in the village. Nobody could say how village Borokarimpur Kasba was named. There was a Hindu Zaminder (landlord) whose prajas (tenants) used to live in the village Prajapara and it was named after them.

Total population of the four study villages is approximately 6,100 as the informant group mentioned. However, 470 households have been identified through PRA exercises that might not cover the entire area of the four villages. It was reported that 54% of the population of the villages is Hindu whereas 46% is Muslim. The principal occupation of 41% of the household heads is agricultural work, 43% fisheries, 12% day-labour and 4% other economic activities.

The villagers opined that the elite of the villages does not play any significant role in the development of the *beel* villages. The off-farm day-labourers go out of the villages for earnings. People of one study village mentioned that they applied to the chairman of the Union Parishad to renovate the only road passing through the village but the request was regretted. Apart from this few poor villagers requested for slab latrine but they did not get. It was reported that the villagers themselves took initiatives to establish a BRAC school in their village.

The Chairman and members of union parishad usually resolve small conflicts that occasionally occur in the village. In the case of complicated problems they go to the police station and law court for justice that requires a lot of money. As the villages are situated beside the road there are some influences of *hartal* (political disruption) in the villages. Most of the villagers earn their living through selling fish. They sell fish at Sotibari bazaar. Businessmen from distant places come to this bazaar. The villagers opined that due to *hartal* they did not get good price of their fish.

As most of the inhabitants of the study villages are Hindus, no social restrictions in terms of their free movement prevail for women. Women of the villages are superstitious. Muslim women abide by the rules of their religion. In the past women were deprived of their legal rights. Nowadays, they raise their voices in different social and family issues because of their awareness gained recently through various development interventions. However, early marriage has not been stopped yet due to economic and social pressure.

2. Livelihood Assets

People of the study villages have been divided into four wealth groups according to the perception of the villagers. The groups are rich and middle, upper poor, poor and destitute.

Table 2.1 Well-being pattern in Borobila Beel villages

Wealth category	Household # 470	Livelihood assets
Rich and middle Class	31% (148)	• Own 350-800 decimals of cultivable lands. • Brick built houses, few own houses in district town. • Possess sanitary latrine, tube-well, poultry, livestock, shallow tube-well, power tiller, mills, and business including fish. • Do not need to borrow. • Never suffer from food deficit. • The number of earners in the family is high, • Have access to work throughout the year; few are service holders.
Upper poor	10% (46)	• Own 100-200 decimals of agricultural lands. • Medium standard of housing. • Own small livestock, few own tube-wells. • Fishermen, self-employer, day-labourer. • Own fishing equipment. • Borrow as needed. • Have seasonal food deficit.
Poor	16% (73)	• Possess homestead only with at most 50 decimals of land. • Fishermen, day-labourer. • More family members. • Employment opportunity affected by seasonality. • Own small fishing equipment. • Possess shared tube-well and livestock.
Destitute	43% (203)	• Own homestead only, some are using other's land for homestead. • Poor housing. • Work as employed labour. • Women headed household. • Excess of dependant members. • Do not have any fishing equipment.

2.1 Natural capital

The major natural capital of the study villages is Borobila Beel. The villagers irrespective of their socio-economic class can catch in the *beel*. According to the villagers it is the source of their living. They earn their living through selling fish in the market. In the past they had to pay a fee for fishing as it was leased to someone. Villagers are hopeful that if the Fourth Fisheries Project takes proper initiatives the fish will increase in the *beel*.

The villagers mentioned that there are too many fishermen to catch fish in one *beel*. There are some other villages encompassing the *beel* and most of these villagers also depend on this *beel* for subsistence. A portion of the *beel* runs through the villages where in monsoon the villagers

catch fish and take bath. Water from the *beel* also used for irrigation. The potters use the mud from the canal to make pottery when it dries up.

The cultivable lands in many parts of the villages are very fertile. Farmers cultivate two times in a year. The villagers use traditional method with cattle and plough for cultivation. Presently some are using power tiller. The land is flooded almost every year, which deteriorates the overall situation of the villages but increases fertility of the soil for a high yield. Villagers have planted many timber and fruit trees on the border of their lands. There are some private gardens in the villages where others do not have access.

2.2 Human capital

Education

There is a government primary school, a government high school, three other schools run by NGOs and a private primary school in the study villages. The villagers felt they were lagging behind in education. The literacy rate of Borobila Beel villages is stated to about 27%. Children have to travel a distance to attend high school, so the parents are reluctant to send their girls to high school. The poor children do not continue their education, most of them drop out from the school. In the NGO schools children from poor households are given preference for enrolment and it is reported that daily attendance is about 100%. Female attendance rate is higher at the primary level than that of male. The villagers reported that as most of the boys from poor households are involved in income earnings their attendance in school is low.

Labour

There are many skilled and unskilled labourers in the village but there is lack of opportunity for work. There is no industry in the villages so many people often remain jobless. All villagers do not have cultivable land. Those who have no land do share cropping. The income earning activities in the villages are related to agriculture, which vary seasonally. Many villagers earn their living from wage labour and fishing. They do not have any training to develop their skill. Many women from the lower economic class are also involved in income earning work. They do not get a reasonable wage. There are too many unemployed or underemployed people in the villages so it is always easy for the rich to get labourers at minimal cost.

Health

Overall health situation of the villages is not satisfactory. There is no health centre in the village. In case of common illness they go to upazila health complex that is far off and the communication is not good. As a result, during sickness they encounter problems. The health workers provide medicine and health awareness among the villagers. They also provide family planning methods to the women. The villagers are now aware of drinking safe water and cleanliness. There are some traditional healers in the village. There is a vaccination centre, all children irrespective of socio-economic class receive vaccination there. Cough and cold are common diseases for the villagers, but after flood they usually suffer from diarrhoea and dysentery. Some of the villagers suffer from diabetics and appendicitis, they get treatment in upazila health complex for that.

2.3 Social capital

It is reported that solidarity exists among the people in the Borobila Beel villages, they help each other if necessary. In one village the villagers took effort to renovate the only road across their village. Informants of another study village mentioned that all of them tried hard to establish a BRAC school in their village to provide education opportunity to the poor children.

There are a few NGOs working in the study villages, which work mainly for the poor people. The poor people united themselves in small groups to improve their socio-economic conditions. Recently fishermen organised a co-operative for them in order to develop their condition.

2.4 Physical capital

Almost all villagers have houses of their own. Most of these are tin roofed and the rest are either brick built or thatched. Some villagers stay on other people's land. Only one village is connected by rural electrification network and most of the houses of this village have electricity connection. The villages have mainly unpaved roads as well as metal roads. There is no permanent bazaar inside the villages, only a few shops exist where the villagers can buy necessities on credit. There are eight temples and two mosques in four study villages. In addition, there are some offices in the villages i.e. a branch of Rajshahi Krishi Unnayan Bank, a NGO called Heed Bangladesh, a saw mill, and rice mills. There was a textile mill in one village, which was in operation for one month after starting, then it closed. There is a crematorium in one village, the Hindus from all socio-economic categories have access to the crematorium.

2.5 Financial capital

There are several NGOs in the *beel* villages from which people can borrow money. The poor can involve themselves in any income generating activities by receiving loans. The villagers are benefited from the Rajshahi Krishi Unnayan Bank. But all people do not enjoy this facility, as it requires collateral for loan. There are moneylenders in the villages but the poor do not get loan from them, as they cannot repay properly. There are no group savings, however, the villagers have individual savings, which are used in times of need. The privately owned mills are playing role of a financial capital as these are employing labour from the villages.

3. Structure and Processes

3.1 Government institutions

The villagers are lagging behind in terms of education, health, and economic development. There are no other service oriented government institutions in the villages. Apart from a primary school and a high school, no other government institutions were observed. The villagers mentioned that no development activities had taken place in this area during the last two years. They expressed their grief for that. As a government institution Rajshahi Krishi Unnayan Bank provides loan against collateral for the purpose of agriculture where the poor people do not have any access.

3.2 Non-government Organizations, Community-based Organizations and Co-operatives

A group of NGOs and CBOs are working in this study villages with a range of development activities. Without any collateral they provide loans to the poor and they can get loan again immediately after the existing loan has been repaid. The NGOs mobilise the poor for generating savings but the return of savings is often conditional. If the members fail to repay the loan most NGOs adjust the loan from their savings. Other programs organized by NGOs include poultry, livestock, agricultural production, education for children and adults, awareness building about health, sanitation, use of safe drinking water, environment education, family planning, early marriage and so on. Grameen Samaj Kendra is operating the FFP in the Borobila Beel providing the livelihood enhancement support to the people of these *beel* villages. The villagers stated that the NGOs should be ranked highly in terms of their role towards socio-economic development of the villagers.

3.3 Informal organisations

The informant group reported eight temples and two mosques existing in the *beel* villages as informal institutions because these provide religious lessons in their respective codes that increase moral awareness of the villagers. These also play an important role in organising festivals in the villages. The committees of these institutions consist of the people from richer section, but poor people have access to receive their services.

3.4 Private sectors

During the crisis the moneylenders in the village provide loan to the villagers with high rate of interest. There are a few service holders and businessmen in the village. They help villagers by providing loans as well. The privately owned rice mills and saw mill employ the day-labourer.

Table 3.1 Villagers access to various institutions

Wealth group	Government institution	NGOs, CBOs, Co-operatives	Informal organization	Private sector
Rich and middle class	High	Low	High	Very high
Upper poor	High	High	High	High
Poor	Low	Very high	Medium	Medium
Destitute	Low	Very high	Medium	Low

4. Livelihood Strategies

Livelihood strategies of the villagers in different wealth category are presented in this following table.

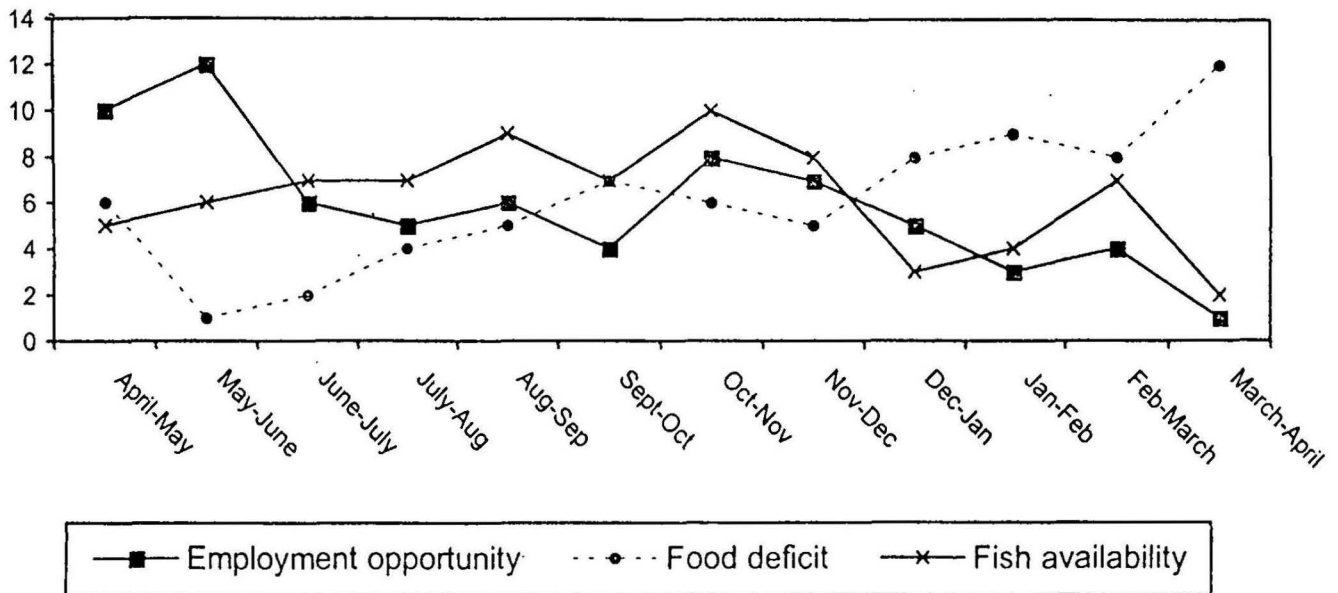
Table 4.1 Livelihood strategies of different wealth groups

Wealth category	Livelihood strategies
Rich and middle class	• Ensure maximum use of cultivable lands. • Rent out productive assets. • Repeated investment of cash capital that increases capital more. • Educate children. • Engage in income earnings for the whole year. • Employ day-labourers in crop cultivation. • Possess lending business.
Upper poor	• Use existing social network to borrow money. • Women are being used for receiving cash capitals from the NGOs. • Diversified income sources in different seasons. • Work hard, children do work. • Take the lease of land, cow and goat. • Try to own shared health facilities like tube-well, latrine.
Poor	• Work hard everyday. • Women and children have to work. • Migrate out for work. • Require frequent borrowing. • Get involved in any available job.
Destitute	• Starve whenever unemployed. • Chronic food insecure. • Women and children work for income earning. • Not considered creditworthy. • Cannot afford education for children. • Use others' fishing equipment on fish sharing basis.

4.1 Seasonal differences on livelihoods

Figure 1 shows the seasonal variation of employment opportunities, deficit of food and availability of fish in Borobila Beel villages.

Figure 1: Seasonal vulnerability in the villages



Employment opportunity

As agriculture is the main source of livelihoods of the villagers, they do not have employment opportunity all over the year. Similarly people who live on fishing do not get fish through out the year. After paddy transplantation farmers do not have work and when water dries up in the *beel* the fishermen can have little catch. In the month of May-June they have higher opportunity to work at crop field. The high yielding variety (HYV) Boro paddy harvesting starts in this month. Jute and Aush paddy are also cultivated this time. So the day labourers get enough work. Fish is also available during these months. In March-April the catch becomes scarce as the water bodies dry up. Again in September-October there is lack of employment in the village.

Food deficit

Villagers encounter food deficit in September-October, because of lack of work and availability of fish. Unlike other rural areas the villagers mentioned that October-November is better, as food deficit is less, because some paddy is harvested at that time. In the month of March-April food deficit is at the highest as canals and the *beel* get dried up. So fishermen do not get fish. There is no work in the field and there is no food stock in house. At the same time they have to spend money for irrigation of HYV paddy. So they borrow money. In the month of May-June villagers have less deficiency in food due to HYV harvest. The day-labourers get more wage employment. Villagers also encounter deficiency in food in the months of December to February.

Availability of fish

The fishermen reported that in October-November they get plenty of fish. Ditches remain full of water and the water flows to the *beel*. The fish also flow with the water. The fishermen catch fish by *jhaki jaal* (net), *veshal jaal*, etc. In the months of August to November also they get some fish. In February-March they catch some fish through removing water out from the ditches. The fishermen reported that in June-July they use different kinds of nets like *jhaki jaal*, *pat jaal* and

koi jaal. Sometimes they use *ucha* (trap) to catch fish. In March-April they get least amount of fish as most of the water bodies dry up. In December-January they get less fish as well. Due to cold weather at this time they cannot catch fish in the *beel*.

Worst time of the year

Figure 1, which portrays seasonal vulnerability, indicates that December-April is the worst time for the villagers. For scarcity of income earning opportunities as well as deficit of food the villagers consider these months as lean periods for them. In March and April due to excessive heat they suffer from various illnesses. On the other hand, in January and February due to cold the villagers cannot work, particularly the fishermen cannot catch fish.

Almost every year the villages get flooded. During flood and famine the villagers migrate out from the village. They cope in the worst time by reducing number of meals in a day, borrowing money, and selling asset. Due to poverty, flood, famine and crisis they also sell their asset. Apart from that, when they fail to repay loan taken from credit organisations, borrowers also sell their assets.

5. Livelihood Outcomes

The following table provides a brief view of sustainable livelihood outcomes for different wealth category people in the water body area.

Table 5.1 Sustainable livelihood outcomes for different wealth groups

Wealth category	Sustainable livelihood outcomes
Rich and middle class	• Self-sufficient with surplus of food. • Have nutritious food and good health. • Well educated children. • Ensured working life. • Can increase assets and invest those. • Have good amount of cash in hand. • More or less inherit property.
Upper poor	• Financially handicapped. • Household income is negligible. • Involve women in development activities. • Seasonally food insecure leading to borrowing. • Children are less educated • Condition of health not so good. • Standard of living is not so high.
Poor	• Remain indebted through out the year. • Children are mostly illiterate and sick. • Used to live from hand to mouth and face food deficit. • Cannot get nutritious food. • Ill health. • Women can supplement the family income.
Destitute	• Cannot procure food when there is no work. • Face food deficit and malnutrition through out the year. • Children are sick and illiterate. • Women do not get fair wage and spend life with miseries. • Spend a low standard life.

6. Expected Impact of Fourth Fisheries Project by Beneficiaries

The fishermen believed that they would be benefited if the government arrange cultivation of fish under Fourth Fisheries Project in Borobila Beel. They believe so because under the Third Fisheries Project in the *beel* they were benefited. The fishermen opine that production of fish has been declined in the *beel*. So FFP should try to increase it. During dry season the *beel* dries up. Therefore, to make it suitable for fish cultivation it should be excavated. A sluice gate in Boterhaat should be made to keep the fish in the *beel*. The fishermen suggested that rather than buying fingerlings if they produce eggs and give it to fisheries management committee (FMC) the cost will be less and the supply will increase. Due to the negligence of both fisheries management committee and the program implementing organisation GSK, some members of FMC take fish from the fishermen forcefully. The villagers do not desire this type of incidence. Presently the fishermen cannot catch small fish but in future they will get big fish in the *beel* if the fishes are allowed time to grow. It might be a problem for the time being but in the long run it would benefit them.

The villagers are very much enthusiastic in fish cultivation in Borobila Beel. Most of the villagers inhabited around Borobila Beel villages are involved in fishing to some extent. The *beel* is very much suitable for fish cultivation. The villagers will be benefited if FFP work to increase fish in the *beel*. They will be able to catch more fish, which will ultimately increase their earning. The protein deficit can largely be met and they will have a good health.

7. Key Findings of Borobila Beel based on Household Survey

7.1 Introduction

The methodologies used in conducting this baseline survey have earlier been discussed in some details. For the purpose of the survey, household members of the sample villages were classified into four wealth categories (WC) through PRA exercises, such as, Rich/Middle, Upper Poor, Poor and Destitute. In the household survey, sample was taken from each study village proportionately according to the aforesaid wealth grouping, This part of the report contains analysis of the data collected through questionnaires from the sample households in the Barobila beel water body area. It is located in Pirgonj upzila of Rangpur district.

7.2 Findings

Total sample households (HHs) in this water body were 64. Highest proportion of the HHs was the destitute (44%), followed by rich/middle class (28%), poor (17.2%) and upper poor (11%) (see methodology for the criteria of categorization).

Table 7.1 shows distribution of HH heads by their occupation (main¹, secondary², always fishing³, sometimes fishing⁴ and subsistence fishing⁵ - as defined by M & E Specialist of Fourth Fisheries Project). Over 28 percent of the HH heads had secondary occupation and 76.7 percent of the HH heads had fishing occupation. In secondary occupation, just 43% in the upper poor category, 41% in rich/middle category and about 37% in the poor category respectively. Over 45 percent of the HH heads had always fishing occupation, this was highest in the destitute category (64.3%), followed by the poor. More than one fourth of the HHs heads had subsistence fishing, it was highest in the poor category (90.9%).

Table 7.1: Distribution of HH heads by occupation and wealth category

Wealth category	Secondary occupation	Fishing occupation		
		Always fishing	Sometimes fishing	Subsistence fishing
Rich/middle (n=18)	41.2 (7)	17.7 (3)	11.8 (2)	17.7 (3)
Upper poor (n=7)	42.9 (3)	42.9 (3)	14.3 (1)	0
Poor (n=11)	36.4 (4)	45.5 (5)	0	90.9 (10)
Destitute (n=28)	14.3 (4)	64.3 (18)	0	14.3 (4)
Total (n=64)	28.1 (18)	45.3 (29)	4.7 (3)	26.6 (17)

Note 1: Figures in the parentheses indicate the number

Note 2: All HHs had the main occupation

Note 3: Multiple responses were considered

Table 7.2 shows socioeconomic and demographic characteristics of the households. Sex ratio was much higher among the upper poor (193 males per 100 female) and the destitute (156 males per 100 female). While the number of males was about equal of those females in the poor and the rich/middle HHs. Average age of the HHs head was the highest amongst upper poor class (48).

¹ Main occupation means primary employment of the HH from which it gains its income
² Secondary occupation means the next most important means of livelihood for the HH
³ Always fishing means professional fishers – those who engage in fishing as their main livelihood
⁴ Sometimes fishing means occasional fishing
⁵ Subsistence fishing means those HHs who fish to supplement HH diets

Age-dependency ratio⁶ was highest amongst the destitute group (88). Age-dependency ratio implies the number of persons in the dependent ages (under 15 and over 64 years) for every 100 persons in the working age group (15-64 years). On average the years completed in the school by HH heads was highest amongst the rich/middle class (5.5 years). About one third of the HHs involved with fishing with the being highest amongst the destitute (60.0%). Just 30 percent of the HHs involved with the NGO activities.

Table 7.2: Household Composition in Barobila Beel

Wealth category	Average sex ratio= (male/female) ×100	Average age of HHH	Age dependency ratio	Average years completed in school (%)		HH involved with fishing (%)	HH involved with NGO (%)
				HHH	HH Member		
Rich/middle (n=18)	99.3	43	79.4	5.5	3.1	10.0 (2)	21.1 (4)
Upper poor (n=7)	192.9	48	91.7	4.4	1.6	20.0 (4)	10.5 (2)
Poor (n=11)	103.8	40	83.0	2.8	2.0	10.0 (2)	31.6 (6)
Destitute (n=28)	155.5	41	88.1	0.5	0.9	60.0(12)	36.8 (7)
Total (n=64)	134.9	42	85.2	2.8	1.8	31.3 (20)	29.7 (19)

Note: Figures in the parentheses indicate the number

Table 7.3 reveals different land ownership of this water body. On average the HHs had 224.0 decimals of cultivable own land, this was highest amongst the rich/middle category (697 decimals) and lowest amongst the destitute (3.2 decimals). On average the HHs had 27.1 decimals of cultivable leased-out land, this was highest amongst the rich/middle class (63.9 decimals). And the HHs had the 11 decimals of cultivable leased-in land, this was also highest among rich/middle (18.8 decimals), followed by the poor (16.3 decimals).

Table 7.3: Average amount of land (in decimal) owned by HHs by wealth category and land category

Wealth category	Own				Leased-out	Leased-in
	Homestead	Cultivated	Pond/doba	Fallow	Cultivated	Cultivated
Rich/middle (n=18)	18.3	696.6	0.4	5.3	63.9	18.8
Upper poor (n=7)	10.4	159.7	5.0	0.8	31.7	0
Poor (n=11)	8.8	53.7	0	0	30.9	16.3
Destitute (n=28)	5.3	3.2	0	0	0.8	7.0
Total (n=64)	10.2	224.0	0.7	1.6	27.1	11.2

Table 7.4 shows types of materials used in construction of the main room of the houses. The floors of main rooms of over 90% of the houses were made of mud except the rich group (brick 33.3%). The walls of nearly 80 percent of the houses were made of mud with the being highest for the poor and lowest for the rich. Almost every roof of main room of the houses was made of tin except for the destitute (natural item 11%).

⁶ The age-dependency ratio is the ratio of persons in the dependent ages (under 15 and over 64 years) to those in the “economically productive” ages (15-64 years) in a population

Table 7.4: Percentage of materials used in construction of main rooms of the houses by WC

Wealth category	Floor		Wall			Roof	
	Brick	Mud	Brick	Natural	Mud	Tin	Natural
Rich/middle (n=18)	33.3 (6)	66.7 (12)	38.9 (7)	0	61.1 (11)	100.0 (18)	0
Upper poor (n=7)	0	100.0 (7)	0	14.3 (1)	85.7 (6)	100.0 (7)	0
Poor (n=11)	0	100.0 (11)	0	9.1 (1)	90.9 (10)	100.0 (11)	0
Destitute (n=28)	0	100.0 (28)	3.6 (1)	10.7 (3)	85.7 (24)	89.3 (25)	10.7 (3)
Total (n=64)	9.4 (6)	90.6 (58)	12.5 (8)	7.8 (5)	79.7 (51)	95.3 (61)	4.7 (3)

Note: Figures in the parentheses indicate the number

Data reveals that the inhabitants owned all houses' themselves. Table 7.5 presents the percentage of HHs taken one meal in a day. Results show that one HH took one meal in a day from November to March among the rich group, which is unexpected. Over 12 percent of the HHs took one meal in a day in the March-April, this was highest amongst the destitute (21.4%).

Table 7.5: Percentage of HHs took one meal in a day by wealth category and month, 2000- 2001

Wealth category	Apr – May	May- Jun	Jun- Jul	Jul- Aug	Aug- Sep	Sep- Oct	Oct- Nov	Nov- Dec	Dec- Jan	Jan- Feb	Feb- Mar	Mar- Apr
	Baishak	Jaistha	Ashar	Shrabon	Bhadro	Ashwin	Kartik	Augraha.	Poush	Magh	Falgun	Chaitra
Rich/middle (n=18)	0	0	0	0	0	0	0	5.6 (1)	5.6 (1)	50.0 (1)	0	5.6 (1)
Upper poor (n=7)	0	0	0	0	0	0	0	0	0	0	0	0
Poor (n=11)	0	0	0	0	0	0	0	0	0	0	0	9.1 (1)
Destitute (n=28)	3.6 (1)	0	0	0	3.6 (1)	14.3 (4)	14.3 (4)	0	7.1 (2)	0	10.7 (3)	21.4 (6)
Total (n=64)	1.6 (1)	0	0	0	1.6 (1)	6.3 (4)	6.3 (4)	1.6 (1)	4.7 (3)	1.6 (1)	4.7 (3)	12.5 (8)

Note: Figures in the parentheses indicate the number

Table 7.6 illustrates that the strategies adopted by the HHs in case of income loss. About 50 percent HHs adopted the borrowing with interest in case of income loss and most of them belonging to the poor the destitute category. Just over 40 percent of the HHs coped with economic crisis by borrowing as a strategy; but a few HHs (15%) coped by selling the land.

Table 7.6: Percentage of HHs adopted the strategies in case of income or asset loss by wealth category

Wealth category	Strategies				
	Borrowing	Borrowing by interest	Leased or sell the land	Sell the livestock or crops	Expenditure from their own savings
Rich/middle (n=18)	44.4 (8)	16.7 (3)	27.8 (5)	27.8 (5)	11.1 (2)
Upper poor (n=7)	71.4 (5)	14.3 (1)	28.6 (2)	57.1 (4)	0
Poor (n=11)	18.2 (2)	72.7 (8)	18.2 (2)	27.3 (3)	0
Destitute (n=28)	42.9 (12)	67.9 (19)	3.6 (1)	10.7 (3)	7.1 (2)
Total (n=64)	40.2 (27)	48.4 (31)	15.6 (10)	23.4 (15)	6.3 (4)

Note 1: Figures in the parentheses indicate the number

Note 2: Multiple responses were considered

Table 7.7 describes the percentage of economic status within last 12 months. More than 45 percent of the HHs had occasional deficit in this water body, this was highest among the poor

(81.8%), followed by the upper poor. Over one fourth of the HHs had always deficit condition, this was 53.6% in the destitute category. Just 14 percent of the HHs had surplus, this was highest in the rich category (38.9%).

Table 7.7: Percentage of HHs economic status within last 12 months by wealth category

Wealth category	Status			
	Always Deficit	Occasional deficit	Breakeven	Surplus
Rich/middle (n=18)	11.1 (2)	27.8 (5)	22.2 (4)	38.9 (7)
Upper poor (n=7)	0	57.1 (4)	42.9 (3)	0
Poor (n=11)	0	81.8 (9)	9.1 (1)	9.1 (1)
Destitute (n=28)	53.6 (15)	39.3 (11)	3.6 (1)	3.6 (1)
Total (n=64)	26.6 (17)	45.3 (29)	14.1 (9)	14.1 (9)

Note: Figures in the parentheses indicate the number

Table 7.8 shows the percentage of the HHs took loans in different months of 2000-2001. Majority of the HHs took loans during March-April, and this was 85.7% in the upper poor, 78.6% in the destitute, 63.6% in the poor respectively. About 47 percent of the HHs took loans in October-November and this was also highest in the upper poor (71.4%), followed by the destitute (46.4%). One fourth of the HHs took loans during September-October, this was highest amongst the rich/middle category.

Table 7.8: Percentage of the HHs was made most loans of the year by month, 2000-2001

Wealth category	Apr - May	May - Jun	Jun - Jul	Jul - Aug	Aug - Sep	Sep - Oct	Oct - Nov	Nov - Dec	Dec - Jan	Jan - Feb	Feb - Mar	Mar - Apr
	Baishak	Jaistha	Ashar	Shrabon	Bhadro	Ashwin	Kartik	Augrahan	Poush	Magh	Falgun	Chaitra
Rich/middle (n=18)	5.6 (1)	5.6 (1)	16.7 (3)	5.6 (1)	0	27.8 (5)	38.9 (7)	0	11.1 (2)	0	27.8 (5)	50.0 (9)
Upper poor (n=7)	0	0	0	0	0	14.3 (1)	71.4 (5)	0	0	0	42.9 (3)	85.7 (6)
Poor (n=11)	0	9.1 (1)	0	0	9.1 (1)	27.7 (3)	45.5 (5)	9.1 (1)	18.2 (2)	18.2 (2)	7.3 (3)	63.6 (7)
Destitute (n=28)	0	3.6 (1)	7.1 (2)	7.1 (2)	14.3 (4)	25.0 (7)	46.4 (13)	3.6 (1)	14.3 (4)	7.1 (2)	25.0 (7)	78.6 (22)
Total (n=64)	1.6 (1)	4.7 (3)	7.8 (5)	4.7 (3)	7.8 (5)	25.0 (16)	46.9 (30)	3.1 (2)	12.5 (8)	6.3 (4)	28.1 (18)	68.8 (44)

Note: Figures in the parentheses indicate the number

Table 7.9 shows the percentage of HHs heads remained unemployed in certain parts of the year and things done at that time. About 58 percent remained unemployed with the highest being the poor (75%) and lowest among the rich/middle (29%). During the unemployment period above half of them engaged in the earnings (net making, indirect and direct earning).

Table 7.9: Percentage of the HH heads remains unemployed in certain parts of the year and things done at that time by WC

Wealth category	Remain Unemployed	Things done when unemployed			
		Fishing/net making	Indirect earning	Direct earning	Training/no work
Rich/middle (n=18)	28.6 (8)	0	75.0 (6)	0	25.0 (2)
Upper poor (n=7)	54.5 (2)	0	50.0 (1)	50.0 (1)	0
Poor (n=11)	75.0 (6)	33.3 (2)	33.3 (2)	0	33.3 (2)
Destitute (n=28)	66.7 (21)	4.8 (1)	23.8 (5)	9.5 (2)	61.9 (13)
Total (n=64)	57.8 (37)	8.1 (3)	37.8 (14)	8.1 (3)	46.0 (17)

Note: Figures in the parentheses indicate the number

Table 7.10 presents the health-seeking behaviour of the HHs. Nearly 47 percent of the HHs went to MBSS doctors during illness with the being highest for rich (94.4%). Over 53 percent of the HHs went to village doctors during illness with the being lowest amongst rich (5.6%).

Table 7.10: Health-seeking behaviour of the HHs by WC

Wealth category	Health-seeking Behavior	
	MBBS doctor	Village doctor
Rich/middle (n=18)	94.4 (17)	5.6 (1)
Upper poor (n=7)	28.6 (2)	71.4 (5)
Poor (n=11)	27.3 (3)	72.7 (8)
Destitute (n=28)	28.6 (8)	71.4 (20)
Total (n=64)	46.8 (30)	53.2 (34)

According to the perception of the sample HHs, the fish production had decreased in last five years and all of the HH members inferred that the activities of fisheries department would be beneficial.

Profile of Four Villages under the Water Body Borobila Beel

In the water body Borobila Beel participatory rural appraisal (PRA) has been applied in four villages to understand the livelihood conditions of the villagers. The villages namely Ujirpur Majhipara, Borokarimpur Majhipara, Borokarimpur Kashba and Prajapara are situated under Pirgonj upazila of district Rangpur.

I. Profile of Village Ujirpur Majhipara

1. Contextual Analysis

Ujirpur Mazhipara is located in Pirganj Upazila of Rangpur district. It is small village situated in the south and one and half km away from the Upazila. The village covers one kilometre area. It is a long village towards east and west. In the south west of the village after some agricultural land there is a big beel which is called Borobila beel. There is a nala beside the beel. In the west of the village the main road of Bogra to Rangpur is running. There is a textile mill beside the road in the entry of the village.

Population, religion and occupation: There are 500 people in the village. All of them are Hindus. The occupation of the villagers is fishermen 78%, agriculture in own land 15%, day-labour 5%, and others 2%.

1.1 Historical Background

The villagers inform that the Ujir of the landlord used to live in that village that is why it is called Ujirpur. To fishing for the landlord the ujirs provided some land beside the beel to the fishermen to establish their dwellings. Accordingly the name of the village is Ujirpur Majhipara.

1.2 Village infrastructure

Borobila beel is in the south west of the village. In the east there is the highway. To enter into the village there is a kancha road. In the left side of the road there is closed textile mill. There are two temples, one is Hori basar and another is Kali mondir. There is facility of polli biddut (village electricity) in the village, which temporarily closed. Apart from that there are two grocery shops in the village.

1.3 Political/Administration

The political context of the village is in favour of economic development. The villagers are unified for development of the village. The local representatives do not play that role in development of the village. For example the villagers applied to renovate the only road of the village but the Chairman did not pay any heed. Apart from that some of the poor requested for slab latrine but they did not get. The villagers opined that the local representatives did not work for the development of the village.

As the village is situated beside the road there are some influences of strike on the village. Most of the villagers earn their living through selling fish. They sell their fish at Sotibari Bazaar. Businessmen from distant places come to this Bazaar. The villagers opined that due to strike they did not get reasonable price of the fish. The villagers do not have conflict among themselves. But if there is any problem from outside the administration help them.

1.4 Education

The villagers are lag behind in terms of education. They feel that they need a school to increase the rate of education. They also apply for BRAC School. In the temples some religious issues are discussed.

1.5 Health

There is no health centre in the village. The Shasthya Sheb'ka of BRAC provides medicine and health awareness among the villagers. There are some traditional healers in the village.

1.6 Cultural

In the temple the villagers sing during different festivals.

2 Village Resources

2.1 Natural capital

The villagers expressed that they would be benefited if there were river beside the village as their occupation is fishing. The beel is called Borobila beel. The villagers irrespective of socio-economic class can catch in the beel. According to the villagers it is the source of their living. In the past they had to pay toll as it was leased to someone. The villagers are hopeful that if the fourth fisheries take proper initiatives the fish will increase in the beel. There is no big canal in the village but a branch of the beel run by the village where in monsoon the villagers catch fish and take bath. The villagers have cultivable land, which they have more or less inherited. They also buy and sell the land. The land is very fertile. They produce crops there. There is no forest in the village but the villagers have planted many trees i.e. timber trees, fruit trees on the border of the land.

2.2 Human capital

In the village there are some traditional healers who provide herbal medicine and exorcise by uttering charm. BRAC's shasthya shebika creates health awareness among the villagers.

2.3 Social capital

In the village there are two temples. One is Hori basar and another is Kali mondir. In those two temples the villagers do their pooja and other religious festival. As it is a Hindu community there is no mosque in the village. In the past there was a BRAC school but there is none. The villagers are persuading BRAC to start the school.

2.4 Physical capital

The villagers use the main road of Bogra to Rangpur to go to the cities. There is one road to enter into the village but it is required to be renovated. According to the villagers they have applied to the Chairman but it has not worked. There is no rice mill in the village. There was a

textile mill in the village, which continued till one month after starting then closed. There are two shops in the village. The villagers can buy the necessities on credit from those shops.

2.5 Financial capital

There is loan providing organisation s such, but BRC, Grameen krishi foundation and Heed Bangladesh is working in the village in this regard. A few people in the villager take loan from the Bank. There is one moneylender in the village. In this village a newly organised fishermen co-operative conduct their activities.

3. Institutional Processes: Importance and Roles

Table 3.1 Role of institutions in development

Institution	Name of institution	Activities	Role in development
Government institutions	Nil	Nil	Nil
NGOs, CBOs, Co-operatives	No local institution, but programme of some NGOs.	Credit, health care, advice and provide seeds.	Through loan the poor can engaged in income-earning activities, people are aware of health, people get hybrid seeds and plant, housing loan.
Informal institutions	Temple	Provide religious lessons and organise festival	Due to religious lesson moral awareness increase. Apart from that the villagers assemble during festival and enjoy.
Private sectors	One money lender	Provide loan with high interest	In times crisis although they provide loan with high interest but some people get support from that.

Table 3.2 Ranking of institutions

No.	Name of organisation	Type of activities
1	Grameen krishi foundation	General loan; housing loan; loan for buying seed and insecticide.
2	Grameen samaj kendro	Suggestions on different issues; motivation for savings; Help to cultivate fish in the beel.
3	BRAC	General loan; selling of seed, slab, plant; Legal awareness; provide medicine; provide awareness.
4	Heed Bangladesh	General loan, provide seeds of vegetable.
5	Fishermen co-operatives	Collect savings.
6	Temple	Religious lessons and religious discussion.
7	Money lender	In time of crises he provides loan to the villagers with high interest.

In terms of contribution to development the villagers rank BRAC as first. According to them BRAC provides education, health awareness and medicine along with loan. BRAC also provides maize seeds in the village. They also rank Grameen samaj kendra as first as the organisation has been working to increase fish in beel. The villagers Ranked “Grameen krishi Kendra as second. Apart from that they have provided two housing loans. Fishermen co-operative is ranked as third. They collect savings and disburse loan. Heed Bangladesh has been ranked as four as they have a few members in the village. They also ranked the temple as second, because they provide religious lessons. The moneylender is put in the last (fourth) as though he gives loan but with high interest.

4. Seasonal Vulnerability and Coping Strategies

Table 4.1 Seasonal differences in village Ujirpur Majhipara

Item	April -May	May- June	June -July	July- Aug	Aug- Sept	Sept- Oct	Oct- Nov	Nov- Dec	Dec- Jan	Jan- Feb	Feb- Mar ch	Mar ch- April
	<i>Bais hakh</i>	<i>Jaist ha</i>	<i>Asha r</i>	<i>Shra bon</i>	<i>Bhad ro</i>	<i>Ashw in</i>	<i>Karti k</i>	<i>Augr ahay an</i>	<i>Pous h</i>	<i>Mag h</i>	<i>Falg oon</i>	<i>Chait ra</i>
Temperature	9	10	6	5	11	6	4	2	1	3	8	12
Rainfall	9	7	11	12	10	9	6	5	2	2	3	1
Employment opportunity	11	12	4	5	6	7	8	10	9	3	2	1
Food deficit	4	1	2	6	7	5	4	3	8	10	11	12
Borrowing	3	1	2	4	5	7 boat/ taka	6 net/b oat	2	11 taka	12 taka	10 taka	9 taka
Lean period	3	1	11	10	4	5	6	2	7	8	9	12
Fish availability	4	7	6	8	12	9	11	10	1	2	3	5

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Employment opportunity

In the month of Jestho there are more opportunity of work. Boro (HYV) harvesting, wedding in jute field, fishing is available in this month. In the month of Chaitra as there is no water in the beel they cannot catch fish. Apart from that other works are also less available. The villagers live on their savings. When the situation becomes severe they migrate out for work.

4.2 Food deficit

As there is no work in Chaitra the villagers encounter food deficit. During that time they borrow money, sell assets and take loan from different organisation. In the month of Jestho, the food deficit is less, as this is the harvesting period of HYV.

4.3 Borrowing

Borrowing: In the month of Poush as they have to spend a lot of money due to irrigation of HYV, they borrow money. In the month of Chaitra as the villagers cannot work due to heavy sun and catch fish due to drying up the water they borrow for living. Besides they borrow in the month of Ashwin to buy boat, net and other equipment for fishing. In the month of Jestho they do not need to take loan as in the month of Baishakh they harvest HYV crop.

4.4 Lean period

In terms of lean period the villagers mean that lack of work availability, and lack of money. According to them the month of Chaitra is the lean period of the year. They have food deficit during this period. Due to poverty, flood and famine and crisis they sell their asset. Apart from that when they fail to repay the loan of the credit organisation they also sell their asset.

4.5 Fish availability

The villagers inform that they get more fish in the month of Bhadra. The beel becomes full of water. In the month of Poush they get less fish. Due to cold they catch fish in the beel.

5. Well-being Pattern in the Village

Table 5.1 Well-being pattern of village Ujirpur Majhipara

Wealth category Hhs 77	Livelihood assets	Livelihood strategies	Sustainable livelihood outcomes
Rich 3%	1. land 10-12 Bigha. 2. Building at Pirganj and in the village. 3. Business throughout the year and have service also. 4. Do not take loan, rather provide to the other people. 5. No food deficit. 6. Tube-well and slab latrine. 7. Livestock.	1. Produce many crops in the lands 2. Get the rent money of the house in town 3. Employ day labourers in the crop fields 4. Can buy lands. 5. Can let the children to go to school. 6. Capital are increased	1. They are self-sufficient in food and surplus remains. 2. Own a good health and get nutritious food. 3. They have well-educated children and an ideal family.
Middle class 12%	1. Land. 2. Small business. 3. Do not take loan. 4. Livestock, tube-well. 5. Have cash. 6. Have access to work throughout the year.	1. Can let the children to go to school. 2. used to cultivate land and work for it they themselves. 3. Possessed the business of fish and shallow machine.	1. The unemployment problem is going to be finished. 2. Can fulfill their needs without borrowing. 3. donot possess brick built houses but they are financially solvent.
Upper poor 17%	1. Land 3-4 bigha. 2. Livestock. 3. A few have tube-wells. 4. Fishing equipment. 5. Have to borrow. 6. Have food deficit.	1. They can earn very few with their little assets. 2. Used to catch fish in beel and sell it but it is negligible. 3. Sometimes the women used to take loans.	1. Earning of family is negligible. 2. Women can earn with loan money. 3. There remain food deficit. 4. Children dropped from education.
Poor 18%	1. Land 1-2 bigha. 2. More family members. 3. Lack of opportunity of work. 4. Lack of fishing equipment. 5. Have joint tube-well. 6. Shared livestock. 7. Day-labour. 8. Ill health.	1. Used to work hard. 2. The women and children have to work and borrow.	1. They used to live hand to mouth and often face the food deficit. 2. The children can not go to the school. 3. Ill health.
Destitute 51%	1. Landless. 2. Fragile house. 3. Use others fishing equipment and give them share. 4. Work under others.	1. They have to sell labour, women and children have to work. 2. Children can not go to school. 3. Nobody give them loans. 4. They have to work under someone.	1. Have to face the food deficit and malnutrition, through the whole year. 2. The children are sick and illiterate. 3. They can work but have to spend their life with great difficulty.

Table 5.2 Well-being data of village Uzirpur Majhipara

Wealth category	Percentage (n =77)	HH identification number
Rich	3% (2)	34, 49
Middle class	12% (9)	04, 21, 26, 35, 40, 48, 50, 59, 60
Upper poor	17% (13)	09, 10, 12, 13, 14, 18, 22, 25, 30, 33, 38, 42, 61
Poor	18% (14)	15, 16, 28, 29, 32, 36, 39, 41, 43, 44, 45, 51, 65, 66
Destitute	51% (39)	01, 02, 03, 05, 06, 07, 08, 11, 17, 19, 20, 23, 24, 27, 31, 37, 46, 47, 52, 53, 54, 55, 56, 57, 58, 62, 63, 64, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77

6. Expected impact by beneficiaries of FFP

6.1 Comments of the fishermen

For the time being they are having difficulties for FFP but they think that in the long run it will be helpful for them. Presently they cannot catch small fish but in future they will get big fish in the beel. According to them before fish cultivation a sluice gate near at Boter haat has to be provided and fish stocking has to be done. They suggested that rather than buying fingerling if they but egg and give it to FMC the cost will be less and the supply will be increase. They expect that they will be benefited from fourth fisheries, as they were the same in the 3rd fisheries.

6.2 Comments of PRA team

The villagers will be benefited if the FFP work to increase fish in the beel. They will be able to catch more fish, which will ultimately increase their earning. The protein deficit will be less and will have a good health.

II. Profile of Village Borokarimpur Majhipara

1. Contextual Analysis

1.1 Historical background

The village Borokarimpur Majhipara is situated in Pirjganj Thana of Rangpur district. It is located at seven km southwest from the thana. The village is consisted of two paras. One is majhipara and another is shahpara (muslim para). A little river is running by the east side of the village, which is locally called kuchiamuri. Dariapur demarcates the village in the west, Orail village in the south and some cultivable land and Boter haat in the north. After Dhoolgari kancha road there is some agricultural land then Borobila Beel. The village is situated on one and half square kilometre. area which is north to south vertical. Nobody could tell about the background of the name of the village but they only said that, as the fishermen (majhi) live in the village the village is called Karimpur Majhipara.

1.2 Village infrastructure

There is an entry road of the village, which has four/five branches. There is a BRAC school in the village. There is a culvert on the road to drain out the water, and there is a bamboo grove, a pond and a crematorium also in the village. The villagers irrespective of socio-economic class can use the road of the village. In the BRAC school children from all class have access for education. The bamboo grove is privately owned but if anybody want to get even a branch nobody disallow. They give one or two bamboo to the poor helpless people free of cost. Everybody in the village has access to the pond of the village. They can have bath and wash their clothes in it. The crematorium is open for all. The Hindus from all socio-economic categories have access to the crematorium. Recently One person told that the crematorium would not be allowed to be used. It is informed that as a result the Hindu would have problem. The people have access to the Kuchia River, which is running by the side of the village.

1.3 Political/ administration

There are different opinion about politics in the in the village but it do not influence the development. Rather people from all categories participate in such activities. For example everybody worked for a kancha road of the village. Thus it is proved that irrespective of class and religion the villagers work for the development of the villager.

The local administration like village elite, the chairman of UP, the members plays a vital role in maintaining discipline and justice in the village. In case of complicated problems they go to the Thana and court for justice and the government administration play a significant role. It requires a lot of money.

1.4 Education

Although the village is quite old but it does not have any government or non-government primary school. Recently BRAC has established a primary school. But there is no high school and even a mosque or a temple. There is a high school in the neighbouring village but that is not that old. As a result the villagers do not get opportunities for education. In present days the children are found to go to schools in distant places.

1.5 Health

There is no health centre in Borokarimpur. In receiving health care they come to Pirganj. As a result, during sickness they encounter problems. The communication is not good enough and the village is far off. There is a health worker in the village who provide family planning methods to the women and vaccine to the children. Besides she/he also provides awareness regarding health, which is helpful to the villagers.

1.6 Cultural

Culture: There is no club, playground in the village for recreation. Even for religious discussion there is no mosque or temple. Due to superstition early marriage is common. In the marriage ceremony all the male and female sing together.

2. Village Resources

2.1 Natural capital

In the Boro Beel the villagers irrespective of socio-economic class catch fish. Besides in fourth fisheries project the fishermen have a role. In the river the villagers catch fish and wash their clothes and take bath. They also do their irrigation from that river. There is no natural forest in the village but some private gardens. The villagers do not have access to those gardens. The cultivable land in the village is fertile. The villagers use cattle and plough for cultivation. Presently some are using power tiller. The land is flooded almost every year. Although for the time being it deteriorates the situation but the land become more fertile.

2.2 Human capital

There are many skilled and unskilled labour in the village but there is lack of opportunity of work, as there is no industry in the village. Often many people remain jobless. The activities of the village are related to agriculture that is seasonal. Many women from the lower economic class are also involved in income earning work. But they do not get a reasonable wage. The rich easily get the labours. So they are benefited and the poor get the wages.

As there is only one BRAC school in the village the children are much behind in education. The rate of literacy is 25%. In increasing skill there is no vocational school. In BRAC school children from all class get access to receive education. There is no health centre in the village. People are lack of health to continue a skilled work. They are aware of drinking safe water and cleanliness due to the presence of a health worker. But they do not get nutritious food.

2.3 Social capital

The children in the village irrespective of socio-economic class have access to BRAC School. There is no social institution in the village even a co-operative as well. The elite solves the conflicts in the village. In times of crisis everyone extend co-operation. There is no violence in the village. Two households in the village are woman headed.

2.4 Physical capital

Almost all villagers have land. Someone has homestead and agricultural land and someone has homestead only. Those who have agricultural land produce crops and those who do not have any do share cropping. Everybody in the village have a house. Somebody has a building; somebody

has a tin roof house. Some villagers stay on other people's land. Many villagers have poultry and livestock; some have bamboo grove and garden. They make profit from it. There is no poultry farm or fish culture. There is no shop or bazaar in the village.

2.5 Financial capital

There is no loan providing institution has been developed in the village but some institution has been working there. These are: ASA, Thengama Mohila Sobuj Songho, Dhool Gari Polli Unnoyan Songostha, Sirotosi Trust, Mohila Sonchay Somitee. People get benefit from these institutions.

3. Institutional Processes: Importance and Roles

Table 3.1 Role of institution in development

Type of institution	Name of institution	Type of activities	Role in development
Government institutions	There is no school, college, economic institution and health care services in the village.	The villagers are lag behind in terms of economy, education, and health as there is no school, economic and service oriented institution in the village. They expressed their grief for that. Police, UP try to keep peace in the village.	The course of development is hindered, as there is no school, health centre and economic centre. They hoped that they would work for those soon.
NGOs, CBOs, Co-operatives	BRAC school only	There is a BRAC school in the village. Children have access to that school. The villagers receive loan from some organisations and they also deposit savings there.	The children get benefit of having education, which have role in development. They use the loan to upgrade their economic status.
Informal institutions	No religious institution, No club or committee.	The villagers go to the nearby villages for religious function.	They said that if they would have religious institute they could discuss several issues beside religion.
Private sectors	There is no shop or bazaar in the village. No moneylender.	As there is no shop or bazaar in the village they go to the other villages. Even though there is no moneylender they get loan from one another in times of crisis.	If they would have bazaar or shop they could save their time to buy the necessities.

While the villagers were asked to order the organisation according to the quality they ranked BRAC as best. BRAC used to provide loan to the villagers and they repaid in instalment. For that instalment they have to work. In present days even though BRAC does not provide loan but has established a school. Education is foremost in human life, therefore, BRAC is ranked as number one. After that they rank ASA because according to them the day they fully pay back the loan of ASA it gives loan again on that very day. According to them the other organisations do not give loan instantly they give one or two days later. But ASA does not do it. They also rank Thengamara Mohila Sobuj Sangha as second as they work like ASA. While they were asked to explain their benefit they replied that they could work after receiving the loan. They rank the other three NGOs i.e. Dholgari polli unnoyan songstha, Serotosi trust, and Mohila sonchay Samity as third. They put Grameen Somaj Kendra (GSK) at the last of the rank because they reported that they take decision in the meeting only but never imply the decision.

4. Seasonal Vulnerability and Coping Strategies

Table 4.1 Seasonal differences in village Borokarimpur Majhipara

Item	April -May	May- June	June -July	July- Aug	Aug- Sept	Sept- Oct	Oct- Nov	Nov- Dec	Dec- Jan	Jan- Feb	Feb- Marc h	Marc h- April
	<i>Bais hakh</i>	<i>Jaist ha</i>	<i>Asha r</i>	<i>Shra bon</i>	<i>Bhad ro</i>	<i>Ashw in</i>	<i>Karti k</i>	<i>Augr ahay an</i>	<i>Pous h</i>	<i>Mag h</i>	<i>Falg oon</i>	<i>Chait ra</i>
Temperature	9	10	6	8	11	7	5	4	1	2	6	12
Rainfall	8	9	12	11	10	7	5	2	1	3	4	3
Employment opportunity	8	12	6	5	7	3	10	6	4	2	5	1
Food deficit	9	1	2	3	4	6	4	5	8	10	6	12
Borrowing	8	1	2	3	4	5	3	4	7	9	6	12
Lean period	8	1	2	3	4	5	3	4	6	9	7	12
Fish availability	2	3	6	5	9	8	12	7	3	4	10	1

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Employment opportunity

As agriculture is the main livelihood of the villagers, they do not have work all the time of the year. Sometimes they are jobless. The other people who live on fishing do not get fish also through out the year. In the month of Chaitra they do not get fish, as there is no water in the river. Due to cold they cannot catch fish as well. During that period they borrow money or sell their assets.

4.2 Food deficit

HYV and Aman are the main crops in the village so during the month of Choitra and Mag'h they have food deficit. In that time they borrow paddy, rice and money. They also sell their assets.

4.3 Borrowing

The villagers have to borrow when have food deficit, during flood and famine, lack of work availability. The villagers reported that they mainly borrow in the month of Chaitra. They report that due to Buying staple and equipment for fishing they borrow money. According to them in the month of Chaitra the temperature increases and common illness like fever, dysentery happen in this month. So for the treatment they need to borrow money. They also have food deficit in this month. Therefore, they borrow money. In Chaitra when there are lack of work opportunity and during the month of Shrabon and Bhadra when the flood happens they borrow.

4.4 Selling asset

When the villagers are in food deficit, in debt and jobless sell their assets. They also sell it during flood and famine. As they do not have any earning during crisis, and during food deficit, flood and famine they sell their asset. Due to flood their house is damaged and due to food deficit and famine they run into debt.

4.5 Lean period

When they do not get any work and have food deficit and have illnesses are considered as lean period. The month of Chaitra is considered as the lean period in taking into account of all these issue. Apart from that they also mention Jestho and Poush as lean periods. They cope in the

lean period through have one or two meal, borrowing money, selling asset. They also migrate out to the cities for work.

4.6 Flood

Almost every year they have flood in the village. When they encounter flood they migrate out from the village. They do income earning activities in other places, borrow money from the relatives and government and non government organisations. Due to flood their agricultural land becomes fertile and the fishes come from to the beel from other area.

5. Well-being Pattern in the Village

Table 5.1 Well-being pattern in village Borokarimpur Majhipara

Wealth category Hhs 162	Livelihood assets	Livelihood strategies	Sustainable livelihood outcomes
Rich 9%	1. Owns 20-25 bigha lands 2. Brick built houses in village. 3. Possess sanitary latrine, tube well, shallow machine. Power tiller, cow for cultivation.	1. Produce many crops in the lands. 2. Employ day labourers in the crop fields 3. Extra earning from the power tiller and shallow machine.	1. They are self-sufficient and surplus of food remain. 2. Own a good health and get nutritious food. 3. They have well-educated children and an ideal family. 4. Do not need to borrow and do have the opportunity of extra earning. 5. Don't need to be unemployed.
Middle class 19%	1. Own 10-15 bigha lands. 2. Earn livelihood by small business and minor services 3. Possess sanitary latrines and tube wells. 4. Own cow, goat etc. domestic animals.	1. Get the opportunity of employment through the whole year. 2. Earn their livelihood from business, services and the cows and goats.	1. Don't have to face the food deficit. 2. Earn money from the service, dairies and the standard of lifestyle is good. 3. Possess good health and well-educated children.
Upper poor 12%	1. Possess 4-5 bighas of lands. 2. Condition of the households is so-so. 3. Possess a few cattle one or two fishing nets, boat or rickshaw.	1. Cannot get the opportunity of work in own lands through whole year. 2. Occasional food deficit. 3. Catch fish using own nets. 4. Borrow loans from NGOs and government institutions.	1. The standard of living is more or less normal. 2. Earn from fishing but they have to borrow loans, which bring the uncertainties in life. 3. Condition of health is middling and the children are less educated.
Poor 11%	1. Possess only homestead. 2. Lease in cows and goats. 3. Own the fishing equipment. 4. The number of family members is not big.	1. Used to do hard works everyday. 2. Catch fishes but have to borrow loans. 3. Women have to work.	1. Household expenses are not very high because of few family members. 2. Women earn for households. 3. Earn extra money from fishing so they can spend some days without working.
Destitute 49%	1. Possess homestead only, no cultivable land. 2. Lack fishing equipment. 3. Female headed households. 4. Excess number of dependant members.	1. They have to sell labour, can earn money while get work nor they can't earn 2. Chronic food deficit. 3. Childrens have to work. 4. Do not get the loans and have to migrate to town.	1. Do not get accurate food. 2. Have to suffer from various diseases almost the year. 3. Children suffer from the mal nutrition, sick body and illiteracy. 4. Cannot get food without work.

Table 5.2 Well-being data of village Borokarimpur Majhipara

Wealth category	Percentage (n = 162)	HH identification number -
Rich	9% (14)	47, 51, 93, 97, 98, 99, 100, 101, 102, 134, 135, 136, 139, 141
Middle	19% (31)	2, 3, 4, 6, 7, 31, 37, 39, 46, 49, 57, 58, 82, 85, 88, 89, 95, 96, 109, 110, 112, 113, 120, 127, 128, 129, 138, 140, 142, 143, 165
Upper poor	12% (20)	1, 5, 9, 50, 53, 61, 69, 70, 71, 72, 92, 106, 111, 114, 115, 126, 130, 133, 137, 152
Poor	11% (18)	13, 32, 35, 40, 48, 52, 55, 56, 73, 83, 94, 105, 108, 125, 131, 132, 150, 163
Destitute	49% (79)	8, 10, 11, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 25, 27, 28, 29, 30, 33, 34, 36, 38, 41, 42, 43, 44, 45, 54, 59, 60, 62, 63, 64, 65, 66, 67, 68, 74, 75, 76, 77, 78, 79, 80, 81, 84, 86, 87, 90, 91, 103, 104, 107, 116, 117, 118, 119, 121, 123, 124, 144, 145, 146, 147, 148, 149, 151, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 164

Note: Household number 24, 26, 122 migrated to India.

6. Expected impact by beneficiaries of FFP

6.1 Comments of the fishermen

They will be benefited if the government cultivate fish. Because the 3rd fisheries project cultivated fish in the Borobila beel and they received benefit out of that. They hope that they will be benefited from the fourth fisheries project also. But due to the negligence of FMC and responsible NGO the TFO were indifferent in fish cultivation. They said that some of the members of FMC took fish from them forcefully, that should be checked.

6.2 Comments of PRA team

The villagers are very much enthusiastic in fish cultivation in Borobila beel. That beel is 100% suitable for fish cultivation. Apart from that most of the villagers in Majhipara are involved in fishing. They inform that they do not get fish in the beel. Fish cultivation will help to increase the fish in the beel. Apart from that the beel becomes dried up during dry season. Therefore the beel has to be excavated also. A sluice gate should be provided near to Boterhaat so that the fish cannot go out.

III. Profile of Village Borokarimpur Kasba

1. Contextual Analysis

1.1 Historical background

The village Borokarimpur Kasba is situated in Pirganj Thana of Rangpur district. It is 7 km away from Thana and located in the southwest corner. The village consists of two paras. One is Hindu para and another is Muslim para. Boter haat and Dhulgari kancha road are in the north of the village. There is some cultivable land beside the road and the Borobila beel is near to that land. One of the branches of the Borobila beel is running by the east side of the village, which is locally, called kuchia muri river. There is some cultivable land in the south of the village and then Karimpur Majhipara is situated. The area of the village would be one km. Nobody could say about the background of the name of the village.

1.2 Village infrastructure

The village is not much developed in terms of infrastructure. In the Hindu para there is a Hori basar and a temple of goddess Kali. There is a BRAC primary school in the village. There is no mosque in the village. There is no rice mill and economic institution in the village. To enter into the village there are two kancha roads. One non-government high school and a bazaar are situated beside the village, which is according to the name of the village. Some agricultural land surrounds the village. In the temple the Hindu villagers from all socio-economic class can participate in the Pooja. The villagers can catch fish from the border of the village. In BRAC school children from all socio-economic class can study. From three economic institutions the villagers get benefit. People use those kancha roads.

1.3 Political/ administration

The politics do not influence the development of the village. The villagers are united with regard to the development of the village. There is no conflict among them. For example they informed that to establish BRAC school they tried hard.

In the total development process the administration plays a significant role. Village administration was reported as good. If there is conflict in the village the elite usually resolve the conflict. When they fail the villagers go to the administration. The administration is also in favour of them. They do not harass them.

1.4 Education

In the educational infrastructure there are two temples and one BRAC primary school. In Horighar Basar they do their Pooja and sing kirtan song. In Kali temple the Hindus irrespective of all socio-economic categories can do their Pooja. Even the women have access to the temple. In BRAC school all kind of children have access to study. There is a non-government high school beside the village where the children of the village go to study. Almost eighty students from the village go to that school. In BRAC school everyday the attendance is 100%. But after primary education due to poverty most of the student cannot continue. Female attendance rate is higher in the primary level than that of male. The villagers reported that as the boys helped their parents in different activities their attendance in school is low.

1.5 Health

There is no health centre in the village even a quack or traditional healer. They reported that the health workers of government family planning came to their village for providing vaccine to the women and the children. In case of common illness they go to Pirganj health centre. After the flood they usually suffer from diarrhoea and dysentery.

1.6 Cultural

In the village there is no cultural organisation or any club. In the religious festival the Muslim prays and celebrates. Apart from that they do enjoy in marriage ceremony. The Hindus celebrate during Poojas. They also sing during the marriage ceremony. The male and female jointly enjoy these ceremonies.

2. Village Resources

2.1 Natural capital

All of the villagers do not have cultivable land. Those who have land produce crop and those who do not have do share cropping. Borobila beel, which is situated beside the village, is a source of income for the villagers. Everybody has access to that beel. One of the branches of beel is called Kuchia Muri River. The villagers have access to the river. They catch fish there.

2.2 Human capital

There is only one service holder in the village. He gives loan to the other villagers in crisis that is beneficent to them. The villagers earn their living from wage labour and fishing. They do some seasonal work also. The women are also involved with income earning activities.

Although the rate of education in the village is low but in present days the villagers are becoming educated. They do not get any training for skill. The villagers work hard but they do not have physical strength. They do not get nutritious food. But they drink water from jointly installed tubewell.

2.3 Social capital

In BRAC school children irrespective of socio-economic class have access for education. Beside the village there is high school, which is known as maddhomik biddalay. All children of the village can study there. There are two temples in the village one is Hari gharbasar and another is Kali mondir. The temples are open to all Hindus.

2.4 Physical capital

The villagers use two kancha roads for communication in the village. There is a Bazaar beside the villager.

2.5 Financial capital

There is no local lending institute but there is programme of ASA and Dholgari Polli Unnayan Songstha. The villagers get benefit out of those. Sometimes the villagers give loan to one another but the poor do not get loan, as they cannot repay properly. There are no group savings but the villagers have individual savings, which is used in times of need. There is a bazaar beside the village where the villagers buy their necessities.

3. Institutional Processes: Importance and Roles

Table 3.1 Role of institution in development

No.	Name of institution	Type of institution	Activities	Role in development
1	High school	Non-government	Provide education to children of all class.	Due to education people come to work for development.
2	BRAC school	Non-government	Provide primary education to children of all class.	Educated nations grow up which affect the economic development.
3	Temple	Informal	Provide religious education so that they could be honest and trust worth.	Sympathetic to human and realise the truth.

Table 3.2 Ranking of institutions on their work

No.	Name of institution	Type of activities	Rank
1	ASA	Provide loan and collect savings.	3
2	BRAC	Provide primary education to the children of the school.	1
3	Dhoolgari Palli Unnayan Songstha	Collect savings.	4
4	Temple	Religious discussion, meeting and Prayer.	2

Note: 1 = very good, 2 = good, 3 = satisfactory, 4 = not satisfactory

The villagers explain they BRAC provide education, which is important for them, so they put it in the first of the rank. The temple is the second in this rank as they organise the religious discussion in the temple and do their Pooja. ASA provides credit, which is useful for their livelihood. Therefore, they rank it as third. The Dhoolgari Palli Unnayan Shangstha collect savings only and give hope that they will provide loan in future. So they rank it as fourth.

4. Seasonal Vulnerability and Coping Strategies

Table 4.1 Seasonal differences in village Borokarimpur Kashba

Item	April -May	May-June	June-July	July-Aug	Aug-Sept	Sept-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-March	March-April
	Bais hakh	Jaist ha	Asha r	Shra bon	Bhad ro	Ashw in	Karti k	Augr ahay an	Pous h	Mag h	Falg oon	Chait ra
Temperature	9	10	6	8	11	7	5	4	1	2	6	12
Rainfall	8	9	12	11	10	7	5	2	1	3	4	3
Employment opportunity	8	12	6	5	7	4	10	6	3	2	5	1
Food deficit	9	1	2	3	4	6	4	5	8	10	6	12
Borrowing	8	1	2	3	4	5	3	4	7	9	6	12
Lean period	8	1	2	3	4	5	3	4	6	9	6	12
Fish availability	2	3	6	5	9	8	12	7	3	4	10	1

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Employment opportunity

Works are not available through out the year. After paddy transplanted they do not have work and when the water is dried up they cannot catch fish. At that time they borrow money from relatives and sometimes if the crisis is severe they sell their assets.

In the month of Jestho there is more work availability. As the HYV harvesting starts in this month, the day labourers get more work. Jute and Aush paddy are also cultivated during this time. The villagers are involved in fishing also. In the month of Chaitra there is lack of work availability. There is no crop in the field and the fishermen cannot catch fish. In the month of Kartik the villagers catch fish and produce crops. Therefore they have work in that month. In the month of Ashar some works are available. They transplant Aman paddy in this month, engage in jute harvesting, and fishing.

4.2 Food deficit

In the month of Chaitra food deficit is high. This time in the year there is no water in the canal and beel. Therefore the fishermen do not get fish. The poor do not have any work and paddy in house. They have to spend money for the irrigation of HYV. So they borrow money. In the month of Jestho due to HYV harvesting the villagers have less food deficit. The day labours get more wages. In the month of Poush they also encounter food deficit.

4.3 Borrowing

In the month of Chaitra the villagers borrow, as they do not get fish in the beel and encounter lack of work availability and food deficit. In the month of Jestho, they do not borrow much. They have a flow of earning in that month. For the purpose of HYV transplantation they need to borrow in the month of Magh. In their daily life they usually borrow in the month of Baishak, Ashwin and Poush. Indeed, during crisis and food deficit they often borrow money. When they become heavily indebted, they sell their asset.

4.4 Lean period

Chaitra is the leanest period of the year for the villagers. Due to lack of work opportunity and availability of fish they need to borrow. Due to excessive heat they suffer from various illnesses. Jestho is the peak season for them. There is plenty of work in the village and they get fish in the beel. Magh is also considered as lean period in the year, as due to cold they cannot work. Particularly the fishermen cannot catch fish.

The villagers often encounter flood. During flood they have difficulties in living. Sometimes they migrate out of the village. Apart from that some sell their asset i.e. livestock, poultry, etc.

4.5 Fish availability

The villagers report that in the month of Kartik they get plenty of fish. Though every place covered by water but the water flows to the beel. Therefore the fish also flows with the water. The fishermen catch fish by jhaki jaal, veshal jaal, etc. In the month of Chaitra they do not get that much fish as the water dries up. In the month of Falgoon they catch fish though removing water from the ditches. Apart from that in the month of Augrahasan, Bhadra, and Ashwin they get some fishes.

5. Well-being Pattern in the Village

Table 5.1 Well-being pattern in village Borokarimpur Kashba

Wealth category Hhs 72	Livelihood assets	Livelihood strategies	Sustainable livelihood outcomes
Rich 1%	1. Owns about 20 bigha lands. 3. Possess brick built houses, sanitary latrine, tube well, and power tiller. 4. Possess livestock.	1. Employ day labourers in the crop fields 2. Can get extra money from the power tillers and the cattle.	1. They are self-sufficient and surplus of food remain. 2. Own a good health and get nutritious food. 3. They spend a superior lifestyle. 4. Have the opportunity of buying extra assets and to be employed.
Middle class 8%	1. Owns 9-10 bigha lands 2. Earn money from small business (fishing business) and minor services. 3. The number of earners in the family is a good deal. Possess a few cows and goats.	1. Used to work hard in the lands and produce crop there. 2. Earn their livelihood from cattle, business and services.	1. The food deficit does not occur and has the ability of building brick built houses. 2. Need not to be unemployed as they do work in lands and business. 3. Can educate the children more or less. 4. The number of earners is more so extra earnings can be possible.
Upper poor 4%	1. Own 2/1 bigha lands. 2. Work hard, take loans from the NGOs and the children have to work. 3. Take the lease of cows and goats. 4. Used to earn money by driving rickshaws sometimes.	1. Cannot get the opportunity of work in all times. 2. Have to do accessory hard labour. 3. Earn a few from the loans and leased cattle.	1. Children are less educated 2. The standard of living is so and so. 3. Sometimes there remain food deficit. 4. Due to the excess labour often they fell sick.
Poor 25%	1. Possess only two or three decimal lands 2. Have to work hard. 3. Woman have to work and do not own any cattle.	1. Have to work hard to earn money 2. All most all time have to borrow. 3. They have to migrate in town or other places for work.	1. They have to suffer from food deficit, and diseases most often 2. Cannot get the nutritious food. 3. The children can go to the free primary school.
Destitute 61%	1. Do not possess any lands. 2. Do not have any fishing equipment. 3. The number of earners is less.	1. Have to work hard and the earning is very poor. 2. Cannot catch fish and have to work under others. 3. The women and children have to work.	1. Have to face the food deficit and mal nutrition, through the whole year. 2. The children are sick and illiterate. 3. They spend a low standard life.

Table 5.2 Well-being data of village Borokarimpur Kashba

Wealth category	Percentage (n = 72)	HH identification number
Rich	1% (1)	66
Middle	8% (6)	9, 38, 67, 68, 69, 72
Upper poor	4% (3)	24, 59, 60
Poor	25% (18)	3, 4, 6, 11, 18, 37, 39, 40, 41, 44, 45, 46, 49, 51, 53, 62, 65, 71
Destitute	61% (44)	1, 2, 5, 7, 8, 10, 12, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 42, 43, 47, 48, 50, 52, 54, 55, 56, 57, 58, 61, 63, 64, 70

6. Expected impact by beneficiaries of FFP

6.1 Comments of the fishermen

The fishermen opine that if FFP cultivate fish in the Borobila beel they will be benefited. The fish has been reduced in the beel. They should try to increase it. In present days during dry season the beel becomes dry up. Therefore to make an adaptive environment it should be excavated. A bridge in Boter haat should be made to keep the fish in the beel. A few members of FMC forcefully take fish from the villagers. They are not honest.

6.2 Comments of the PRA team

The villagers will be benefited if FFP cultivates fish in the beel, as almost all villagers are involved with fishing. They earn their living from fishing. But they do not get fish according to their need, as there are less fish in the beel. The members of FMC take fish forcefully from the Fishermen. The Grameen Samaj Kendra does not play its role appropriately. The thana fishery officer does not extend his cooperation also. Therefore fish cultivation is possible if fishery management committee, Grameen Samaj Kendra and the thana fishery officer extended the cooperation.

IV. Profile of Village Prajapara

1. Contextual Analysis

1.1 Historical background

The village Prajapara is located near to the Pirganj Thana of Rangpur district. Usmanpur village in the east, Dhonshala village in the west and Borobila beel in the south and Khalashpur in the north demarcate the village. The village is very old. There was a Hindu Zaminder (landlord) who is called Murli Singh. His tenants used to live in this place. Therefore the place was started to call Prajapara.

1.2 Village infrastructure

The thana parishad is near to the village. There are three temples, two mosques, five schools, one saw mill, two rice mills, a branch of Krishi Unnayan Bank, one NGO called Heed Bangladesh, one sluice gate, one children's hospital, three metal roads, and some kancha roads in the village. Apart from that in the village there is facilities of rural electrification, but all households can avail it.

1.3 Political/ administration

There is no political conflict in terms of development of the village. All the villagers, irrespective of socio-economic class work for the development of the village. The elite usually resolve the conflicts in the village. If it becomes severe the villagers go to the nearby Thana Parishad. According to the villagers they do not suffer for the administration.

1.4 Education

For education of children there is a primary and a government school in the village. The poor are not found to continue their study most of them drop out from the school. There is also a Kindergarten in the village but it cost Tk. 500 per month, which is expensive for the poor students. In the school conducted by BRAC children from all class can study. Apart from that there is a Public high school. In the mosques and the temple the children get religious education. In the educational institutions there are 500 students. But continuation of education in the poor is seldom. Attendance of female students is higher than that of the male students.

1.5 Health

In the health centre of the village the women and children receive vaccines. The villagers go to the nearby Thana Health Complex for health services. In the village dysentery, diarrhoea, cough and cold are common illnesses. Some of the villagers also suffer from diabetics and appendicitis, but they get facilities in THC for that.

1.6 Cultural

In terms of cultural function the Muslim observe milaad mehfil and the Hindu observe Kirton song. In the field of school the children play different game. In the marriage ceremonies the villagers sing. Besides in different Poojas and other religious festivals the Hindus arrange jatra and operas. The women also participate in those functions. The women sing in different occasion and dance as well.

2. Village Resources

2.1 Natural capital

The Borobila beel runs by the south of the village. The villagers catch fish in the beel. They earn their living through selling those fish in the market. There is a river at the end of the village. All the villagers have access to the river. The potters use the mud to make pottery of the river when it dries up. Some villagers own timbers gardens in the village. The cultivable land in the village is very fertile. The farmers cultivate two times in a year. More or less the villagers own land for cultivation. Those who do not have any do share cropping. The land near to the beel is flooded almost in every year. It increases the fertility of the soil and thus production.

2.2 Human capital

There are some service holders and businessmen in the village. They help to the other villagers through providing loan. They also help in developing the village. The rich and slightly better off children receive the opportunity of being educated. But the poor have less opportunity. All children irrespective of socio-economic class receive vaccine but the poor do not get nutritious food and safe water.

2.3 Social capital

In the primary and high school the children of the villagers get access to study. But the meritorious students only can go to the high school. In the Kinder garden the rich can send their children, as it is expensive. Because of BRAC school the children of poor fishermen can get education. In the mosques the Muslim can pray and their children get religious education. In the temple the Hindus can do Poona and sing their Kirton song.

2.4 Physical capital

In a private saw mill the poor villagers work for their living. There is a vaccination centre, which is called Shisu (children) hospital in the village. Children from all class come to be vaccinated in this centre.

2.5 Financial capital

The villagers are benefited from the Rajshahi Krishi Unnayan Bank as they get loan. But not all the villagers get this facility, as it requires collateral. Heed Bangladesh provides loan to all villagers disregarding socio-economic class. The poor can be involved in any income generating activities by receiving loans.

3. Institutional Processes: Importance and Roles

3.1 Government institutions

Rajshahi Krishi Unnayan Bank provides loan against collateral for the purpose of agriculture. The villagers use that loan to produce crop.

3.2 NGOs, CBOs, Co-operatives

Without any collateral Heed Bangladesh provide loan to the poor. They also provide seed of vegetables. The villagers can use the loan in different income earning activities.

3.3 Informal institutions

In the mosques and temples people get suggestion for different purposes. They also do their religious festival in that place.

3.4 Private sectors

There is a private kinder garden in the villager where the rich send their children for study. The moneylenders in the village provide loan to the villagers with high interest.

The villagers rank BRAC, ASA and mosques and temple as first, because according to them they do not give any opportunity to be idle. They also establish a school for the poor children. They provide medicine and ring slab. ASA give loan immediately after the repayment. They return savings instantly when they ask for it. If they fail to repay the loan ASA adjust the loan from savings. Due to religious education they rank mosque and temple as first.

The villagers ranked Grameen krishi foundation and Serodatus as second. Grameen krishi foundation provides loan for agricultural production and housing. The loan system of Serodatus is also good.

The Heed Bangladesh and the moneylenders are placed as fourth. Because the Heed Bangladesh is wrapping up their activities gradually but they have role in the development of the village. For the time being they are benefited from this system, but it is not good for the future.

4. Seasonal Vulnerability and Coping Strategies

Table 4.1 Seasonal differences in village Prajapara

Item	Apri l- May	May - June	June -July	July- Aug	Aug- Sept	Sept- Oct	Oct- Nov	Nov- Dec	Dec- Jan	Jan- Feb	Feb- Mar ch	Mar ch- Apri l
	<i>Bais hakh</i>	<i>Jaist ha</i>	<i>Asha r</i>	<i>Shra bon</i>	<i>Bhad ro</i>	<i>Ash win</i>	<i>Karti k</i>	<i>Augr ahay an</i>	<i>Pous h</i>	<i>Mag h</i>	<i>Falg oon</i>	<i>Chai tra</i>
Temperature	11	10	8	7	9	7	6	3	1	2	7	12
Rainfall	6	7	12	11	10	9	8	4	1	2	3	4
Employment opportunity	12	10	7	5	4	1	4	6	5	4	3	2
Food deficit	2	1	3	4	5	12	11	5	6	6	8	10
Borrowing	2	1	3	4	5	12	10	5	6	8	9	11
Lean period	2	1	3	5	5	12	10	8	7	6	5	11
Fish availability	10	12	9	8	4	1	6	7	5	4	3	2

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Employment opportunity

In the month of Ashwin there is lack of employment opportunity in the village. The paddy slight grows in the field and there is less water in the beel the villagers cannot catch fishes. The villagers become overdrawn. In the month of Baishak the villagers have work availability. Because the HYV is harvested in that time and they can catch fish in new water.

4.2 Food deficit

The villagers encounter food deficit in the month of Ashwin. Because of lack of work and fish availability and flood and famine they have food deficit. In that time they borrow money or sell their assets. Kartik is better than Ashwin as in that time food deficit is less. Some of the paddy is already been harvested by that time.

4.3 Borrowing

During lack of work availability the villagers borrow, particularly the poor. In time of crisis and during flood and famine they are also found to borrow. In the month of Ashwin is the period of borrowing. Due to the poverty the villagers are found to borrow for their living. According to them Jestho is the best month of the year for them, as it is the harvesting period. The wage becomes higher in this month. The work availability is also less in the month of Chaitra. Therefore, the villagers borrow also in this month. In the month of Kartik the crops are near to harvest, so the villagers borrow for their living. Due to share cropping of HYV the villagers borrow in the month of Falgun. There is some work of paddy transplantation in Magh so people borrow less than the other time.

4.4 Lean period

As in the month of Ashwin due to lack of availability of work and food deficit the villagers have to borrow, it is the leanest period they considered. Besides in this month often the flood occurs. Illnesses like diarrhoea, dysentery happen. The Jestho is considered as peak season in the year. During this month HYV harvested and the weather is neutral. After Ashwin they speak about the Chaitra and Kartik that followed by Augrahasan, Poush, Magh, Falgun, Shrabon and Ashar.

4.5 Fish availability

In the month of Jestho due to rain the fish are available in the beel. During Baishak and Ashar they also can catch fish but it is less than the Jestho. They report that in Ashar they use different nets like jhaki jal, pat jal and koi jal. Sometimes they use ucha to catch fish. They get least fish in the month of Ashwin. Due to the full brim of water they get less fish.

5. Well-being Pattern in the Village

Table 5.1 Well-being pattern in village Prajapara

Wealth category Hhs 159	Livelihood assets	Livelihood strategies	Sustainable livelihood outcomes
Rich 27%	1. Owns 20-25 bigha lands 2. Brick built houses in Dhaka and Pirganj. 3. Possess sanitary latrine, tube-well, large-scale business. 4. Owner of ornament shop, car, mills, livestock and important services. 5. Do not need to borrow. 6. Never suffer from food deficit.	1. Produce many crops in the lands 2. Get the rent money of the house in town 3. Earn extra money from the mills, cars, and from business.	1. They are self-sufficient and surplus of food remain. 2. Own a good health and get nutritious food. 3. They have well-educated children, an ideal family and spend a superior life. 4. The unemployment problem does not occur.
Middle class 26%	1. Get the minor services and earn money from the small business. 2. Own 10-15 bigha lands. 3. Possess brick built house, and cattle, but do not have house in bazaar.	1. Do not need to be unemployed as they get the work regularly. 2. Earn money from crop lands, from cattle and from service	1. The standard of living is more or less good. 2. Food deficit does not occur. 3. Children can get the opportunity of education.
Upper poor 6%	1. Own a few agricultural lands. 2. Earn money by fishing, working as day labourer. 3. Use the cooperative tube well and don't have sanitary latrines 4. Borrow loans from NGOs and take the lease of cattle.	1. The earning get from the few lands are negligible comparing with the large family. 2. Earn a very few money from day labouring and from the leased cattle. 3. Children have to do work.	1. Due to the severe food deficit they have to take loan, as a result the financial development of the family is resisted. 2. The children dropped from the education.
Poor 14%	1. Possess nothing except the homestead. 2. Earn money by daily hard work and fishing. 3. Women have to work and borrowing occurs all most all time.	1. As they don't possess much lands, they have to buy food and work hard 2. Earn livelihood by fishing.	1. Remain indebted through the whole year and face difficult condition if cannot catch fish. 2. The children are mostly illiterate and sick.
Destitute 26%	1. Have to work under other person and don't possess even the homestead and the fishing equipment. 2. Women used to work as the number of earners is lowest.	1. Cannot get the loans from others. 2. As they cannot catch fish and earn money, have to work hard. As a result they fell sick	1. Have to face the food deficit and mal nutrition, through the whole year as a result the children are sick and illiterate. 3. The women do not get the fair price and they spend life with great difficulty

Table 5.2 Well-being data of village Prajapara

Wealth category	Percentage (n = 159)	HH identification number
Rich	27% (43)	3, 5, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 30, 31, 32, 36, 38, 39, 46, 51, 67, 89, 111, 127, 128, 129, 130, 131, 133, 136, 137, 141, 142, 143, 145, 146, 147, 148, 150, 151, 155, 158, 159
Middle	26% (42)	2, 6, 10, 11, 15, 16, 17, 40, 41, 42, 43, 44, 45, 52, 54, 56, 57, 60, 63, 68, 86, 97, 100, 101, 113, 114, 123, 124, 125, 126, 132, 134, 135, 138, 139, 140, 144, 149, 152, 153, 154, 157
Upper poor	6% (10)	1, 4, 7, 8, 9, 49, 50, 70, 99, 156
Poor	14% (23)	18, 33, 34, 35, 48, 55, 58, 61, 69, 71, 84, 88, 90, 91, 92, 93, 96, 105, 107, 108, 118, 119, 122
Destitute	26% (41)	12, 13, 14, 28, 37, 47, 53, 59, 62, 64, 65, 66, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 85, 87, 94, 95, 98, 102, 103, 104, 106, 109, 110, 112, 115, 116, 117, 120, 121

6. Expected impact by beneficiaries of FFP

6.1 Comments of the fishermen

The fishermen think that if the fish is cultivated in the beel they will get more fish. It might be a problem for the time being but in the long run it will be helpful.

6.2 Comments of PRA team

The villagers are eager to cultivate fish in the beel. They earn their living from this beel. But in the past there were more fishes in the beel but at present there is almost half. If fish stocking is done, it will be helpful for them. The fish will increase and the villagers will be able to meet their need.

Socio-Economic Baseline Survey of Open Water Fisheries

Profile of

Dasherhat Chhara, Kurigram

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Dasherhat Chhara

Dasherhat Chhara is a *beel* (floodplain) which originates from the river Dharala running through the middle of Kurigram, a northern district of Bangladesh. The Dasherhat Chhara project is being operated as *beel* stocking by BRAC. Stocking of fish fry takes place in flood plains and semi-closed water. Initiatives for flood control, drainage and irrigation (FCDI) are also undertaken in the project. The project tries to prevent the declining situation of the open water fisheries. Twelve villages encompass Dasherhat Chhara where the FFP is in operation. Out of those three villages, viz., Dasherhat, Char Harikesh and Cherenga, have been selected purposively to observe the livelihood situation of the people, particularly the fishermen.

1. Vulnerability Context

According to the people of Dasherhat different schedule caste Hindus used to live in this village during the realm of a Hindu king. They all believed in God and used to pray for Him. They recognized themselves as *Dash* (slave) of their God so the village was named accordingly. The village Char Harikesh developed gradually from the silt of the river Dharala, thus it was called a *char* (strip of sandy land) of the river. The Hindus predominantly lived in the village during the British period and was named Char Harikesh after a Hindu person. Village Cherenga is also known as a *char* of the river, but none of the villagers could tell anything about how village was named. It is guessed that the village is named after a renowned Hindu person.

The area of Dasherhat and Char Harikesh is half of a square kilometer whereas Cherenga is one and half of a square kilometer. The population of three villages together is approximately 5820 comprising 472 households. Eighty-three percent of these households is Muslim and the rest is Hindu. Eighteen percent of the household heads are working in their own agricultural field, 24% is engaged in fishing, 50% is day-labourer and the rest 8% is involved in other economic activities.

Salish (informal village court), consisting of local elite, exists in all three study villages. If any dispute arises the *salish* try to resolve the conflict. There is a Union Parishad member in the village and he also takes part in *salish*. People from other villages also join in the *salish* when major decisions need to be taken. In the case of major incidents the villagers ask for help from the administration, but such help cannot be mobilized without money. The police do not take any action against the *mastans* (terrorists) who catch fish forcefully in the *beel* that is prohibited by FFP.

BRAC schools and madrassas remain open during *hartal* (political disruption). As there is no facility for storing fishes the fishermen face difficulties to sell fish, particularly when the catch is big. The market remains closed, rickshaw pullers cannot work, and the prices of commodities go up which affect the livelihoods of the villagers.

The villagers organize cultural programs in celebration of the victory day. There are few clubs in the villages organized by the youths. The clubs arrange cultural programs on special occasions. The children play cricket and football in the school ground. As a whole the people in this area

are not much concerned with the cultural activities because 90% of the villagers as stated are uneducated.

2. Livelihood Assets

Available livelihood resources for different wealth groups and on the missing resources for their livelihoods are presented here. The informant group of Dasherhat Chhara villages has identified four types of wealth groups in the sample villages.

Table 2.1 Well-being pattern in Dasherhat Chhara villages

Wealth category	Household # 472	Livelihood assets
Rich and middle class	19% (90)	• Possess land, brick built house, truck, deep tube-well, power tiller, shop, livestock, rickshaw, motor garages, pharmacy, and restaurant in the market. • Do service, business and self-employed activities. • Cultivate catfish in own pond. • Take the lease of lands.
Upper poor	39% (186)	• Possess 20-25 decimal of land, a few cattle, and small grocery shop. • Work as day-labourer, van driver, deed writer, rickshaw-puller, artist, clerk, tailor, traders, private school teacher.
Poor	27% (129)	• Possess no land except the homestead. • Work as carpenter, canvasser, tailor, day-labourer, fishermen, motor and electrical mechanic, and barber in saloon. • Hawker of seasonal fruits.
Destitute	14% (67)	• Mostly possess no homestead, live in other's land. • Sell manual labour in other's business, houses. • Professional fishermen, possess no boat, knit fishing net. • Rickshaw puller. • Disable.

2.1 Natural capital

Dasherhaat Chara *beel* is about 4 kilometer in length and one and half kilometer in breadth. Everyone has the right to catch fish from the *beel* but had to take permission from the leaseholder. In this season five metric ton of young fish, sizing 5-7 centimeter, were released in the pond through village development committee (VDC) with the financial assistance of FFP. VDC has suspended fishing for four months. However, some *mastans* want to catch fish in the *beel* forcefully. The villagers mentioned that government has not taken any step to protect the *beel* from the *mastans*. Presently approximate weight of each fish is about 250gm each. With the assistance of FFP, the VDC has released young fishes of different varieties like rui, katal, mrigel, sharputi in the *beel*. A part of the *beel*, which was under private ownership previously, has been taken under the FFP.

All together there are about 710 acres of cultivable land in these villages and all the lands are under private ownership. The soil is sandy and loamy. People mentioned that as it is a *beel* area they could cultivate paddy only once in a year. Other than paddy lands are suitable for vegetables and jute cultivation. Productivity of soil is not very high, as it is very sandy. Along with the

cultivation in own land, people of the middle class category lease in lands from others. The poorer section of the villagers works in others' lands as day-labourer.

There is a canal linked with the *beel*, which is privately owned. A dam can be built on the mouth of the canal to protect fish in the *beel*. Though all people have access to canal and *beel* but fishermen get the priority to catch fish. They are also involved in the VDC and fisheries management committee (FMC) of FFP.

Table 2.2 presents a bird's eye view of the extent of use of the natural capital (viz. the *beel* and land) by different wealth groups of the study villages.

Table 2.2 Use of natural capital by different wealth groups

Wealth group	Beel Dasherhat Chhara	Land
Rich and middle class	Low	Very high
Upper poor	Low	Medium
Poor	High	Low
Destitute	Very high	Low

2.2 Human capital

Education

The level of education of the villagers is not encouraging. Only 10% of the villagers considered themselves 'educated'. There are one government high and one primary school, two BRAC's non-formal primary schools, and one kindergarten in the villages. Children from the poor households get better access to BRAC school. There are few madrassas where younger children learn Arabic and the holy Quraan.

Labour

As most people of the villages are educationally backward, they are involved only in small size self-employed activities and depend on selling manual labour. For that the wage rate is comparatively low in this area. Women do work as day-labourers and they are mostly engaged in making stone chips and lifting sand. Women are paid less for this work so people prefer to employ women. Some of the women are also self-employed who are supported by the NGOs working in this area. BRAC and Rangpur Dinajpur Rural Service (RDRS) provide skill training to their women group members. Women's income is considered a big help for their families, as men's income is not sufficient to maintain their families. It is mentioned that women's status within the households has improved because they are contributing to the finances of the households.

Health

There is a satellite clinic in the village, which offers vaccination services to children and women. The villages are situated within the municipal area so the villagers get government's health service through the municipality. There are some government family planning workers and nurses. In addition, there are traditional *ojhas* (who cure people from snakebite) and traditional healers who treat people in a conventional way using herbal medicine. People from different wealth category have access to the health services as provided by the government.

2.3 Social capital

The NGOs working in that area are organizing small groups of poor women. The group members develop good relation among themselves, which helps repayment of loans in time. They jointly help a borrower if anyone defaults to repay one or two installments and to deposit the saving.

Along with learning Arabic the orphans are provided food and shelter in the madrassas. People socially get help from the mosques and other religious institutions in their everyday lives.

2.4 Physical capital

Except a few destitute, people of this area possess their own houses. Non-government organizations, working with the poor people, provided loans to their members for improving the housing as well as water and sanitation.

There are unpaved roads existing in the study villages; therefore, heavy motorized vehicles cannot ply over the roads. Only one metal road, starting from Rangpur-Kurigram highway, has reached up to the *beel*. The Food for Work Program of the government was undertaken in two of the study villages over the last two years. Under this program both male and female day-labourers work in the construction of roads. The Rural Electrification Board supplies electricity in two villages. Only a few rich households could afford the electricity. However, electricity is being used for irrigation and rice mills as well.

There are 11 ponds in the villages, all of these are privately owned. The poor people do not have access to the ponds for washing and cleaning. The owners cultivate fish in some of the ponds and sell fish. The poor fishermen can only work in these ponds as day-labourer. There is a canal in one village with a bridge on it. There are five mosques and one temple in the villages. Muslim villagers go there for prayer. The Hindus of both Dasherhat and Cherenga share the temple which is located on the borderline of these two villages. There is no clash or conflict between Hindus and Muslims in the villages. There are three *Eidgahs* (prayer grounds of the Muslims' religious festival, *Eid*) as well.

There are twelve medium size stores, one rice mill, one cold storage and one saw mill in that area and all these are under private ownership. Women shop in these stores, as they are not supposed to go to town for shopping. They can buy the commodities in cash or in dues on condition to repay money as soon as possible.

2.5 Financial capital

A number of NGOs have initiated micro-credit and income generating activities for the poor, specially the women. The poor people have access to such financial capital, as they do not need to deposit any collateral for receiving loans. They have enhanced their services to deliver skill training to their members. NGOs give training to the poor women on sewing. They also provide loans the poor and health care facilities to the pregnant women.

3. Structure and Process

This part emphasizes on which institutions are important to whom in converting resources for a livelihood strategy and on how do they mediate access.

3.1 Government institutions

Except two government schools no other government institution has been reported in the study villages. The farmers cultivate crops on which they get ideas and improved methods from the agriculture extension experts of government located at the upazila headquarter.

3.2 Non-government Organizations, Community-based Organizations and Co-operatives

NGOs are providing a range of services to the villagers, especially to the poor. These organizations provide micro-credit, skill training, support for self-employment, free education, low cost healthcare, and housing loans. Awareness building about gender issues, human rights, early marriage, sanitation and use of safe drinking water are other programs undertaken by the NGOs. Few NGOs are working for antenatal and postnatal care of poor women. Moreover, NGOs are helping the poor people in adopting strategies based on their accessible capitals. Through the implementation of the FFP one NGO has ensured the access of poor fishermen to the *beel* on which they depend for their livelihoods.

No community-based organization or co-operative has been found in the study.

3.3 Informal organizations

There are two clubs consisting of young people in one study village. One of the clubs organizes the youth and helps them to earn their own livelihoods. They lease in both land and pond for cultivation from the money collected through their weekly earnings. Being organized by that club the youth try to be self-sufficient. They organize different cultural programs.

Mosques and temple are working as informal institutions in the study villages. These regulate people's everyday life and play important role in conducting religious functions.

4.4 Private sector

There are one cold storage, one rice mill and one saw mill in that *beel* villages owned by the rich and middle class people. The poor day-labourers are working in these enterprises. There are some traders who do business with the products of these enterprises.

The following table indicates who among the different wealth groups have access to the services of different institutions presently in operation in the study villages.

Table 3.1 Access to institutions

Wealth group	Government institution	NGOs, CBOs, Co-operatives	Informal organization	Private sector
Rich and middle class	High	Low	High	High
Upper poor	Medium	Very high	Medium	Low
Poor	Low	Very high	Medium	Medium
Destitute	Low	High	Low	Medium

4. Livelihood Strategies

This sub-section focuses on which combination of resources is used to pursue what livelihood strategies and by which wealth groups.

Table 4.1 Livelihood strategies of different wealth groups

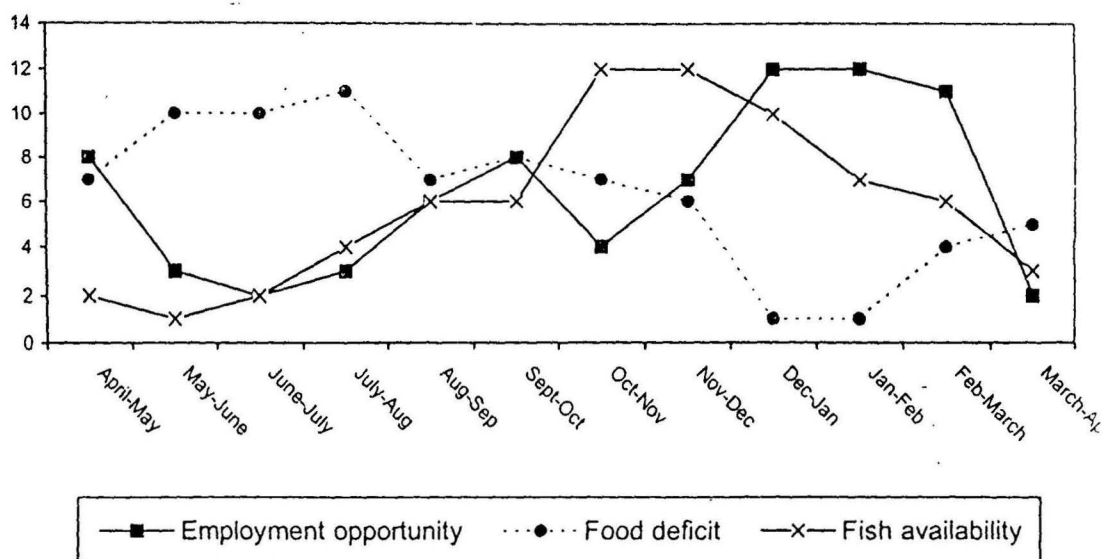
Wealth category	Livelihood strategies
Rich and middle class	• Involvement in multiple economic activities through investment. • Employ modern techniques for crop cultivation. • Maximum use of lands producing variety of crops. • Adopting strategies as-needed during seasonal crisis. • Expand access to natural resources by taking lease.
Upper poor	• Diversify economic activities while necessary. • Involved in self-employed activities with NGO loans. • Do business on stocking raw goods. • Lead low standard lifestyle. • Work hard for subsistence.
Poor	• Sell manual labour on seasonal activities. • Frequently borrow money from NGOs, moneylenders. • Work hard everyday. • Employ women and children for earnings. • Catch fish for own consumption.
Destitute	• Women and children do work in others' house. • Catch fish by borrowing others' gears. • Knit fishing net for others. • Used to borrow from traditional moneylender. • Disables do beg for livelihood.

4.1 Seasonal differences on livelihoods

Seasonal vulnerability and coping strategies have been reported differently for the fishermen and day-labourers regarding borrowing, food deficiency, working advantages, etc. The fishermen identified the worst time for them in the year when they cannot catch fish due to lack of fish in the water bodies. On the other hand, farmers mentioned that their worst time occurs when there is lack of agricultural work in the field. Considering this situation the vulnerabilities of fishermen and farmers have been shown separately.

Figure 1 shows the employment opportunities of fishing households based on availability of fish in that area. On the other hand deficit of food has been shown to elaborate the most vulnerable time for them and the alternative strategies to cope with that situation. Seasonal calendar, a PRA technique, has been employed to collect the information.

Figure 1: Seasonal vulnerability of fishing households



Employment opportunity for fishing households

Fishermen reported that they get more opportunity to work during the months of December to March. They remain jobless in May-June. They do not have cultivatable land of their own. Fishermen sell out their small assets and borrow from NGOs and traditional moneylenders to cope with this adversity. Figure 1 shows that in the months of October to December fish is available even though the informant group reported that there is less work opportunity for the fishermen in this period. Nowadays, the stock of fish in the *beel* is declining in this season. The poor villagers who depend on agricultural work face lack of employment and food during the months of October to December. So they depend on catching fishes for consumption. Therefore, fishermen do work in this time but cannot earn a sufficient income.

Food deficit for fishing households

The fishermen pointed out that food deficit occurs in May to August as in this period fish is not available and they cannot earn from fishing adequately. So food scarcity prevails in their households. They have to borrow to cope with this situation. Sometimes they pass their days without food or being forced to consume less food. Even they sell their belongings including their domestic animal to cope with food shortage. However, when fish are available the scarcity of food in the household comes down. Fishermen mentioned that in the month of Poush (December) they get enough money from fishing and try to repay their loans taken earlier.

Fish availability

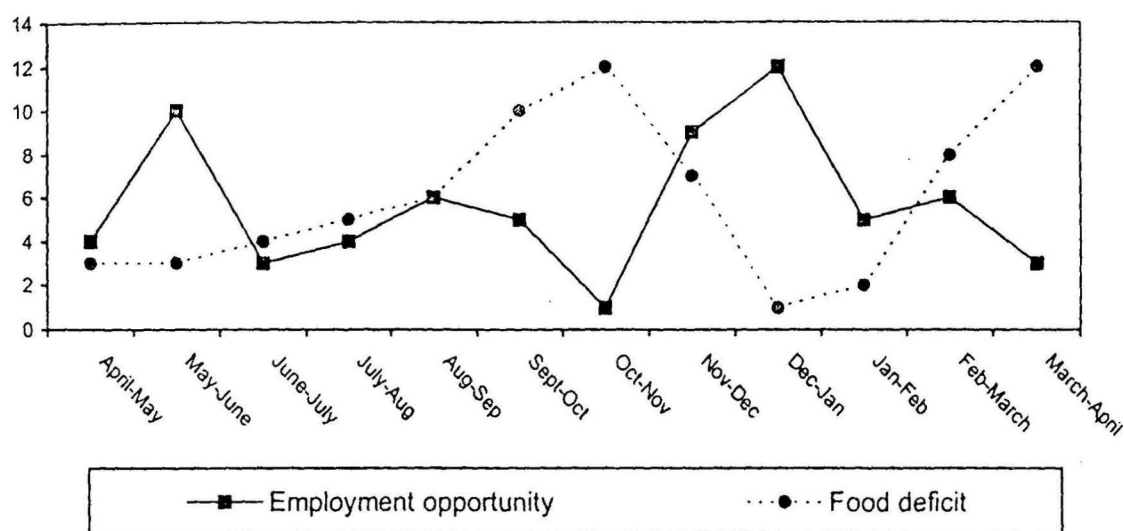
Fish is largely available from October to December when water level in the water bodies starts falling. Fish is not available during the months of March to May. At this time the level of water

risers. Fishermen seek alternative strategies to cope with the scarcity situation. They knit fishing nets for themselves and also sell these out.

Worst time of the year for fishermen

Figure 1 shows that the fishermen face the worst time in May to August. Sometimes flood occurs in this period which puts the fishermen as well as all villagers into great distress. The fishermen whose houses get inundated take shelter on the highways. They cannot borrow money due to lack of credit worthiness at this situation even if they pay high interest. They even face problems to sell out their domestic animals. For their existence, they have to rely on relief distributed by government and non-government organizations.

Figure 2: Seasonal vulnerability of farming households



Employment opportunity for farming households

During the months of May-June and November-January there are wider opportunities for farmers to work in the crop fields. In this season Amon and HYV paddy are harvested. Women of the farm households also get busy with post-harvesting work. Plenty of vegetables are grown at this time. On the other hand, the farmers face job scarcity and lack of opportunity to work mostly in October-November and comparatively less in March-April and June-July. At that time the poor farm labourers usually find alternative non-farm work. Eating less food and borrowing from *mohajon* (traditional moneylender) with high rate of interest are other strategies for them to cope with lack of employment.

Food deficit for farming households

Food deficit and lack of employment occur in poor wage earner households. To meet food crisis they borrow cash or food grains from their potential employers in the crop field. It is paid with given labour in the field afterwards.

Worst time of the year for farmers

September to November and March-April are the worst time for the farming households. At this time farmers are forced to wait for the harvest. Day-labourers get less opportunity for work in March-April. During this period the prices of the commodities rise. Flood occurs during June to August. At this time farmers face adversities because their houses and crops get inundated. The day-labourers also cannot sell labour in the farm. However, damage of crops create severe food scarcity in the locality, which affects all households more or less. As livelihood strategies people have to depend on borrowings from NGOs, relatives and richer people along with selling their chickens, ducks and other small belongings.

5. Livelihood Outcomes

This part focuses on the outcomes that are achievable for different wealth groups and the ones that are sustainable.

Table 5.1 Sustainable livelihood outcomes for different wealth groups

Wealth category	Sustainable livelihood outcomes
Rich and middle class	• Yearly renovation of the houses. • Sustainable income, financially solvent. • High standard of living. • Continuous and quality education for children. • Inherit and increase resources. • Play role in socio-economic improvement of the poor by employing them in own business. • Able to adapt alternative strategies on natural calamities and on any adverse situation.
Upper poor	• Low standard of living. • Children get minimum education. • Unstable economic condition. • Suffer utmost from malnutrition. • Seasonal indebtedness. • Restricted access to resources.
Poor	• Livelihood condition depends on seasonality. • Very low standard of living. • Uneducated children unable to improve economic condition. • Regular indebtedness. • Unbalanced diet causes malnutrition. • Little opportunity for improved livelihoods.
Destitute	• Temporary, insecure homestead. • Lack of credit worthiness. • Always deficit in food. • Uneducated and malnourished children. • Too many dependants. • Continuous hardworking causes chronic disease. • Compelled to beg for existence.

6. Expected Impact of Fourth Fisheries Project by Beneficiaries

Villagers involved in the PRA exercises feel that if FFP is implemented effectively the socio-economic status and the livelihood condition of the people residing in Dasherhat Chhara villages would be better. This is particularly true for fishermen.

It is reported that fish is gradually becoming scarce in the *beel*. In addition to the fishermen the poor people in those area are now also depending on the *beel* to cope with seasonal vulnerabilities. The fishermen hope that if it is possible to suspend fishing in the *beel* for a certain period, the fish resource would increase. They are afraid of the armed *mastans* who catch fishes in the darkness of night. The villagers who depend on fishing are poor and cannot resist the *mastans* by themselves alone. For that, they need help from the administration but they do not have access to the administration. They also cannot arrange private security guards as they charge high. The rich and middle class people in this area do not bother about it as they are not directly depending on the water body or fishing for their livelihoods.

The fishermen are facing difficulties in collecting the fingerlings this year, which delayed the stocking. They prefer to produce fingerlings of their own which will cost low. Moreover, it will create opportunity to employ some poor people. The fishermen need alternative employment opportunities during the period of stocking in the *beel* otherwise it would be difficult to resist poor people from fishing at that time. There is no embankment on two sides of the *beel* so excessive rains often flush the fish outside. Fishermen of Char Harikesh mentioned that the Third Fisheries Project in Dasherhat Chhara *beel* did not fetch any benefits for them so that they are now less concerned about FFP. Still all the villagers hope that FFP should be implemented accurately which would help improving the livelihood condition of the poor people in this area.

7. Key Findings of Dasherhat Chhara based on Household Survey

7.1 Introduction

The methodologies used in conducting this baseline survey have earlier been discussed in some details. For the purpose of the survey, household members of the sample villages were classified into four wealth categories (WC) through PRA exercises, such as, Rich/Middle, Upper Poor, Poor and Destitute. In the household survey, sample was taken from each study village proportionately according to the aforesaid wealth grouping. This part of the report contains analysis of the data collected through questionnaires from the sample households in the Dasherhat Chara water body area. It is located in Sadar upzila of Kurigram district.

7.2 Findings

Proportion was highest amongst the upper poor category (37.5%), followed by poor (29.2%), rich/middle category (19%) and destitute (15%) (see methodology for the criteria of categorization). Table 7.1 shows distribution of the HH heads by their occupation (main¹, secondary², always fishing³, sometimes fishing⁴ and subsistence fishing⁵ - as defined by M & E Specialist of Fourth Fisheries Project). About 13 percent of the HHs had the secondary occupation, this was highest amongst the rich/middle category (44.4%). Nearly 17 percent of the HHs had always fishing occupation, this was highest among the destitute (28.6%). Just 44 percent of the HHs had sometimes fishing occupation, this was also highest amongst the destitute (71.4%), followed by the poor (57.1%). About 19 percent of the HHs had subsistence fishing occupation, this was highest amongst the rich/middle (44.4%), followed by the upper poor.

Table 7.1: Distribution of HH heads by occupation and wealth category

Wealth category	Secondary occupation	Fishing occupation		
		Always fishing	Sometimes fishing	Subsistence fishing
Rich/middle (n=9)	44.4 (4)	22.2 (2)	44.4 (4)	44.4 (4)
Upper poor (n=18)	5.6 (1)	11.1 (2)	22.2 (4)	22.2 (4)
Poor (n=14)	0	14.3 (2)	57.1 (8)	7.1 (1)
Destitute (n=7)	14.3 (1)	28.6 (2)	71.4 (5)	0
Total (n=48)	12.5 (6)	16.7 (8)	43.8 (21)	18.8 (9)

Note 1: Figures in the parentheses indicate the number.

Note 2: All HHs had the main occupation. Note 3: Multiple responses were considered.

Table 7.2 shows socioeconomic and demographic characteristics of the HHS. Sex ratio was highest among the poor (163 per 100 female) and lowest amongst the destitute (90 per 100 female). Average age of the HHs head was the highest amongst the rich/middle class (53). The age-dependency ratio⁶ was the highest amongst the destitute category (70.2). Age dependency ratio implies the number of persons in the dependent ages (under 15 and over 64 years) for every

¹ Main occupation means primary employment of the HH from which it gains its income

² Secondary occupation means the next most important means of livelihood for the HH

³ Always fishing means professional fishers – those who engage in fishing as their main livelihood

⁴ Sometimes fishing means occasional fishing

⁵ Subsistence fishing means those HHs who fish to supplement HH diets

⁶ The age-dependency ratio is the ratio of persons in the dependent ages (under 15 and over 64 years) to those in the "economically productive" ages (15-64 years) in a population

100 persons in the working age group (15-64 years). Average years completed in the school by HH heads was the highest amongst the rich/middle category (3.4 years). About 44% of the HHs were involved with the NGO activities with the highest being the upper poor. Only 10% of the HHs were involved with the fishing

Table 7.2: Household composition in the Dasherhat Chara

Wealth category	Average sex ratio = (male/female) ×100	Average age of HH head	Age dependency ratio	Average years completed in school (%)		HH involved with fishing (%)	HH involved with NGO (%)
				HH head	HH Member		
Rich/middle (n=9)	127.8	53	38.4	3.4	2.7	40.0 (2)	23.8 (5)
Upper poor (n=18)	119.0	44	87.5	2.7	0.9	20.0(1)	33.3 (7)
Poor (n=14)	163.1	45	66.3	1.8	1.5	0	28.6 (6)
Destitute (n=7)	90.5	42	70.2	0.6	0.4	40.0 (2)	14.3 (3)
Total (n=48)	129.3	46	69.6	2.3	1.3	10.4 (5)	43.8 (21)

Note: Figures in the parentheses indicate the number

Table 7.3 reveals the land ownership pattern of HHs of this water body. On average the HHs had nearly 18 decimals of cultivated own land with the highest being the rich/middle (33.4 decimals), followed by poor (19.7 decimals) and upper poor (15.2 decimals). On average the HHs had about 9 decimals of homestead own land, this was highest amongst the rich/middle class (17.8 decimals) and lowest amongst the destitute (3.6 decimals). Scarcely had this water body pond/*doba* land. The rich/middle (3.7 decimals) and upper poor (3.1 decimals) had also some fallow own land. In addition, data further reveals that the destitute had no cultivated land in this water body.

Table 7.3: Average amount of land (in decimal) owned by HHs by wealth and land category

Wealth category	Own land				Leased-out	Leased-in	
	Homestead	Cultivated	Pond/ <i>Doba</i>	Fallow	Homestead	Homestead	Cultivated
Rich/middle (n=9)	17.8	33.4	0	3.7	0.3	4.4	0
Upper poor (n=18)	8.2	15.2	0.1	3.1	0	0	3.6
Poor (n=14)	5.4	19.7	0	0	0	0	0
Destitute (n=7)	3.6	0	0	0	0	0	0
Total (n=48)	8.5	17.7	0.02	1.8	0.06	0.8	1.4

Table 7.4 shows the percentage of materials used in construction of main rooms of the houses. The floors of main room of all houses were made of mud. More than 70 percent walls of houses were made of natural items⁷. In all wealth categories natural item was the highest (rich 55.5%, upper poor 67%, poor 72%, destitute 100%) being used for wall. The roofs of main rooms of almost all houses were made of tin.

⁷ Natural items means bamboo, jute stick, hay, leaves of tree, straw etc.

Table 7.4: Percentage of materials used in construction of main rooms of the houses by WC

Wealth category	Floor	Wall			Roof	
	Mud	Brick	Tin	Natural	Tin	Natural
Rich/middle (n=9)	100.0 (9)	11.1 (1)	33.3 (3)	55.5 (5)	100.0 (9)	0
Upper poor (n=18)	100.0 (18)	5.6 (1)	27.8 (5)	66.8 (12)	89.9 (16)	11.2 (2)
Poor (n=14)	100.0 (14)	7.1 (1)	21.4 (3)	71.5 (10)	92.9 (13)	7.1 (1)
Destitute (n=7)	100.0 (7)	0	0	100.0 (7)	100.0 (7)	0
Total (n=48)	100.0 (48)	6.3 (3)	22.9 (11)	70.8 (34)	93.8 (45)	6.3 (3)

Note: Figures in the parentheses indicate the number

Table 7.5 reveals the percentage of houses by ownership pattern and wealth category. The inhabitants owned almost all houses themselves, except for the destitute (rental 14.3%) and the upper poor (rental 7.1%).

Table 7.5: Percentage of the houses by nature of ownership and WC

Wealth category	Ownership pattern	
	Own	Owned by other/rented
Rich/middle (n=9)	100.0 (9)	0
Upper poor (n=18)	100.0 (18)	0
Poor (n=14)	92.9 (13)	7.1 (1)
Destitute (n=7)	85.7 (6)	14.3 (1)
Total (n=48)	95.8 (46)	4.2 (2)

Note: Figures in the parentheses indicate the number

Table 7.6 presents the percentage of HHs taken one meal in a day. It was observed that nearly all HHs' member took more than one meal in a day among all wealth categories except for the poor group (one HH took one meal in a day from the month of November to April).

Table 7.6: Percentage of HHs taken one meal in a day by wealth category and month, 2000- 2001

Wealth category	Apr - May	May- Jun	Jun- Jul	Jul- Aug	Aug- Sep	Sep- Oct	Oct- Nov	Nov- Dec	Dec- Jan	Jan- Feb	Feb- Mar	Mar- Apr
	Baish ak	Jaist ha	Ash ar	Shra bon	Bhad ro	Ash win	Kart ik	Augr ahay.	Pous h	Mag h	Falg oon	Chait ra
Rich/middle (n=9)	0	0	0	0	0	0	0	0	0	0	0	0
Upper poor (n=18)	0	0	0	0	0	0	0	0	0	0	0	0
Poor (n=14)	0	0	0	0	0	0	0	7.1 (1)	7.1 (1)	7.1 (1)	7.1 (1)	7.1 (1)
Destitute (n=7)	0	0	0	0	0	0	0	0	0	0	0	0
Total (n=48)	0	0	0	0	0	0	0	2.1 (1)	2.1 (1)	2.1 (1)	2.1 (1)	2.1 (1)

Note: Figures in the parentheses indicate the number

Table 7.7 illustrates that the strategies adopted by the HHs in case of income or asset loss. More than 50 percent HHs adopted the borrowing as a strategy and nearly 38 percent HHs adopted the borrowing with interest in case of economic crisis.

Table 7.7: Percentage of HHs adopted the strategies in case of income or asset loss by wealth category

Wealth category	Strategies				
	Borrowing	Borrowing by interest	Lease or sell the land	Sell the livestock or crops	Expenditure from their own savings
Rich/middle (n=9)	22.2 (2)	44.4 (4)	33.3 (3)	33.3 (3)	0
Upper poor (n=18)	77.8 (14)	22.2 (4)	11.1 (2)	5.6 (1)	11.1 (2)
Poor (n=14)	35.7 (5)	42.9 (6)	28.6 (4)	14.3 (2)	0
Destitute (n=7)	57.1 (4)	28.6 (2)	0	28.6 (2)	0
Total (n=48)	52.1 (25)	33.3 (16)	18.8 (9)	16.7 (8)	4.2 (2)

Note 1: Figures in the parentheses indicate the number. Note 2: Multiple responses were considered.

Table 7.8 describes the percentage of the HHs economic status within last 12 months. About 40 percent of the HHs had occasional deficit, this was highest amongst the rich/middle (56%), followed by the poor and destitute (43%). More than one third of the HHs had the breakeven, it was highest amongst the upper poor (44.4%), followed by the destitute.

Table 7.8: Percentage of HHs economic status within last 12 months by wealth category

Wealth category	Status			
	Always Deficit	Occasional deficit	Breakeven	Surplus
Rich/middle (n=9)	0	55.6 (5)	33.3 (3)	11.1 (1)
Upper poor (n=18)	5.6 (1)	27.8 (5)	44.4 (8)	22.2 (4)
Poor (n=14)	14.3 (2)	42.9 (6)	28.6 (4)	14.3 (2)
Destitute (n=7)	14.3 (1)	42.9 (3)	42.9 (3)	0
Total (n=48)	8.3 (4)	39.6 (19)	37.5 (18)	14.6 (7)

Note: Figures in the parentheses indicate the number

Table 7.9 shows the percentage of the HHs who took loans in different months of 2000-2001. Above 60 percent of the HHs took loans during March-April, this was highest among the destitute (85.7%), followed by the upper poor (77.8%). Nearly 46 percent of the HHs took loans during October-November, this was also highest among the poor and the destitute (57%). Over one fourth of the HHs took most loans in September-October, and this was highest among the rich/middle (44.4%).

Table 7.9: Percentage of the HHs was made most loans of the year by month, 2000-2001

Wealth category	Apr-May	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr
	Bais hak	Jaist ha	Ash ar	Shra bon	Bha dro	Ash win	Kart ik	Augra hayen	Pous h	Mag h	Falgo on	Chait ra
Rich/middle (n=9)	11.1 (1)	22.2 (2)	33.3 (3)	11.1 (1)	0	44.4 (4)	44.4 (4)	0	11.1 (1)	22.2 (2)	11.1 (1)	22.2 (2)
Upper poor (n=18)	11.1 (2)	16.7 (3)	11.1 (2)	5.6 (1)	5.6 (1)	22.2 (4)	33.3 (6)	16.7 (3)	0	11.1 (2)	16.7 (3)	77.8 (14)
Poor (n=14)	0	14.3 (2)	0	0	0	28.6 (4)	57.1 (8)	14.3 (2)	7.1 (1)	0	7.1 (1)	57.1 (8)
Destitute (n=7)	42.9 (3)	14.3 (1)	0	0	0	14.3 (1)	57.1 (4)	14.3 (1)	0	0	28.6 (2)	85.7 (6)
Total (n=48)	12.5 (6)	16.7 (8)	10.4 (5)	4.2 (2)	2.1 (1)	27.1 (13)	45.8 (22)	12.5 (6)	4.2 (2)	8.3 (4)	14.6 (7)	62.5 (30)

Note: Figures in the parentheses indicate the number

Table 7.10 shows the percentage of HH heads remain unemployed in certain parts of the year and things done at that time. About 65 percent remained unemployed with the highest amongst destitute (86%). During the unemployment period over 50% of them engaged in the earnings.

Table 7.10: Percentage of the HH heads remains unemployed in certain parts of the year and things done at that time by WC

Wealth category	Remain unemployed	Things done when unemployed		
		Indirect earning	Direct earning	Training/no work
Rich/middle (n=9)	61.7 (6)	83.3 (5)	0	16.7 (1)
Upper poor (n=18)	61.1 (11)	36.4 (4)	27.3 (3)	36.4 (4)
Poor (n=14)	57.1 (8)	12.7 (1)	0	85.5 (7)
Destitute (n=7)	85.7 (6)	16.7 (1)	33.3 (2)	50.0 (3)
Total (n=48)	64.6 (31)	35.5 (11)	16.1 (5)	48.4 (15)

Note: Figures in the parentheses indicate the number

Table 7.11 presents the health-seeking behaviour of the HHs. Over 90 percent went to village doctors during illness with the being highest for poor (100%).

Table 7.11: Health-seeking behaviour of the HHs by WC

Wealth category	Health-seeking Behavior		
	MBBS doctor	Village doctor	Others (Kabiraj/Homeo/BRAC Shebika)
Rich/middle (n=9)	11.1 (1)	88.9 (8)	0
Upper poor (n=18)	0	94.4 (17)	0
Poor (n=14)	0	100.0 (14)	5.6 (1)
Destitute (n=7)	14.3 (1)	71.4 (5)	14.3 (1)
Total (n=48)	4.2 (2)	91.7 (44)	4.2 (2)

Note: Figures in the parentheses indicate the number

According to the perception of more than 99% of the sample HHs, the fish production was increased in last five years, except four people of rich and upper poor group (see Table 7.12).

Table 7.12: Percentage of the HHs perception about fish production in open water bodies in last five years

Wealth category	Fish production	
	Increased	Decreased
Rich/middle (n=9)	77.1 (7)	22.2 (2)
Upper poor (n=18)	88.9 (16)	11.1 (2)
Poor (n=14)	100.0 (14)	0
Destitute (n=7)	100.0 (7)	0
Total (n=48)	91.7 (44)	8.3 (4)

Note: Figures in the parentheses indicate the number

The About 90% of the sample HHs inferred that the activities of fisheries department would be beneficial (Table 7.13).

Table 7.13: Percentage of the HHs' expectation from the activities of Fourth Fisheries Project

Wealth category	Expectation from the FFP	
	Beneficial	Nothing
Rich/middle (n=9)	100.0 (9)	0
Upper poor (n=18)	94.4 (17)	5.6 (1)
Poor (n=14)	71.4 (10)	28.6 (4)
Destitute (n=7)	100.0 (7)	0
Total (n=48)	89.6 (43)	10.4 (5)

Note: Figures in the parentheses indicate the number

Profile of Three Villages under the Water Body Dasherhat Chhara

In the water body Dasherhat Chhara participatory rural appraisal (PRA) has been applied in three villages to understand the livelihood conditions of the villagers. The villages namely Dasherhat, Char Harikesh and Cherenga are situated in the district of Kurigram in northern Bangladesh.

I. Profile of Village Dasherhat

1. Contextual Analysis

1.1 Historical context

According to the villagers Hindu people of different caste like *Namosutra*, *Baishma*, *Khaitrn* used to live there during the time of Hindu kings in this village. They all believed in their Gods and prayed to them. They used to believe themselves as *dash* (slave) of their God so the village was named accordingly.

1.2 Village infrastructure

In the north of the village, there is *Kaloateli Para*. In the south there is *Kashibari* and *Polashbari* and in the east there is *Cheranga* village. In the west there is *Taluk*, *Karuar*, *Jagripara* village. Length of the village is about one kilometer and width is about half kilometer.

Total population is about 2020; out of which male population is about 800 and that of female is about 1220. Population according to the occupation of household heads is agricultural work 20%, fishermen 25%, day-labourer 50%, and others 5%. Sixty eight percent of them are Muslim and 32% is Hindu.

On the east of this village Rangpur-Kurigram *highway* is situated. There is a metal road, which has gone through the village and ended up in front of the *beel*. There are two unpaved roads as well. There was no pond shown in the participatory map previously. After consulting with the villagers we came to know that there are seven ponds, which are now added in the participatory map. All of them are under private ownership.

There are three mosques and a temple in the village. Muslim and Hindu from all classes of the society have access in these mosques and temples respectively. It is important to mention that the temple is in the border of village Dasherhaat and Cherenga. So people from both the village can go there for their prayer. There are three *EidGah* (a ground to pray in *Eid* day) where all the Muslim people observe their *Eid* prayers, twice a year.

1.3 Political/Administrative

There is no locally elected leader in this village. But if any problem arises then respected people like Mr. Abdul Kayum, Mr. Nurul Islam, Mr. Abdul Kashem, Mr. Anil and some respected persons from other villages solve the problems and conflicts.

During *hartal* there is less supply of fishes in the market and the prices go high. Storage of fish also faces tremendous difficulties. Schools and madrassas remain open during the *hartal* but the market remains close, which disturb the livelihoods of the villagers.

During every evening children play cricket and football in the school field. The villagers organize cultural programs in celebration of the victory day. Ronester and Bondhu Milon club organize cultural programs.

2. Village Resources

2.1 Natural capital

The *beel* is situated on the east of the village. The *beel* is 4 kilometer in length and one and half kilometer in width. The total area of the *beel* is one hundred acres. Everyone had the right to catch fish but had to take permission from the lessee to catch fish. On 23rd July 5 metric tons of young fishes sizing 5 to 7 cm were released in the pond through village development committee with the financial assistance of Fourth Fisheries Project (FFP). The Village Development Committee (VDC) has suspended fishing for four months. But few terrorists want to fish in the *beel* forcefully. The villagers are feared of those terrorists as no government or non-government security agencies are involved. It would be possible to cultivate fish if this terrorism can be demolished. Presently average weight of fish is about 250gm. Fingerlings of *Ruhi*, *Katal*, *Mrigel*, *Sharputi* have been released in this *beel*.

There are five hundred acres of cultivable land in this village. Land of this village is not fertile because the land of this area is sandy. They can cultivate rice in about two hundred acres of land. There are no other crops in the other fields. The villagers are preparing themselves for vegetable cultivation.

2.2 Human capital

There is government primary and a high school in the village. In Forkania madrassa small children learn Arabic and in Haifa madrassa boys from inside and outside the village learn to recite the holy Quran. The orphans are provided food and shelter in these madrassas. The villagers are getting help socially from these.

Women do work for carrying sand, breaking stones. From this labour women can finance their families and the entrepreneurs can get labour in a cheaper rate. Few women do work in the industry as day-labourers. R.D.R.S provided training on tailoring that helps women become self-sufficient, they get more value in the society as they are earning. There is a health clinic in the village, which provides health service to children and women. There is a nurse takes care of pregnant women. All rich and the poor gets help from her. There are also family planning workers.

2.3 Social capital

There is a government primary school and a high school in the village. All class of children are studying in that school. There are two clubs in the village. Ronester club organizes the village youths together and employs them in earnings. They then save their weekly earnings and take

lands and ponds as lease for cultivation. In this way they help the youths in becoming self-sufficient. Bondhu Milon club helps the young people to be self-sufficient. They organize different cultural programs. They are playing an important role in saving the youth society from destruction.

2.4 Physical capital

There are a metal and two unpaved roads in the village. There are seven ponds in the village under private ownership. In these ponds fishes are being cultivated under private ownership. This helps many people in doing business.

2.5 Financial capital

There is a private owned cold storage where labourers sell their labour and earn money. This is used for storage of many things. There is a rice mill own privately in this village where three labourers are working. The rice traders do business with this rice mill and are benefited financially from this. There is also a cold storage and a sawmill where four labourers are working. Some people lead their life doing business with the products of sawmill.

There are five non-government organizations (NGOs), which provide loans among the villagers. Rangpur Dinajpur Rural Service (RDRS) provides sewing training to the women and provides them with loans. They help the pregnant women and sick from bronchitis and others. BRAC is maintaining important contribution in socio-economic development by providing loan to poor women. They also help women who are pregnant by providing health services. Solidarity provides the villagers with loans. PIP provides loan with the poor village women. Grameen Bank provides loan for small business and housing.

3. Institutional Processes: Importance and Roles

3.1 Government institutions

There is only a government primary school in this village where children are getting the education facility. In the development of education the school is playing a vital role.

3.2 NGOs, CBOs, Co-operatives

NGOs provide non-formal education, which play an important role in the educational development of the village. Poor people who cannot afford to send their children to the primary schools try to send them to this school. R.D.R.S gives training to the village women training in sewing, which would make them self-dependent. They also give loans to the poor women. They take care of people suffering from bronchitis and other disease. They also provide health care to the pregnant women.

By giving loans to the poor village people BRAC is establishing the financial and social rights of the villagers. Especially they are making the poor village women self-dependent. Other than those they are playing a vital role by developing the financial and social situation of the village by providing them with the fourth fishery plant. They also give health care to the pregnant women and to the poor. Grameen Bank, Solidarity and PEP are playing an important role in the development of socio-economic situation by providing loans to the villagers.

3.3 Informal organizations

There are two clubs in the village. Ronester club organizes the village youths together and employs them in earnings. They then save their weekly earnings and take lands and ponds as lease for cultivation. In this way they help the youths in becoming self-sufficient. Bondhu Milon club helps the young people to be self-sufficient. They organize different cultural programs. They are playing an important role in saving the youth society from destruction.

3.4 Private sectors

By storing raw materials cold storage helps people by employing them. Sawmill employs few people and helps them in leading their life. Few of them lead their life as they do business with the products of sawmill.

4. Seasonal Vulnerability and Coping Strategies

After having a discussion with the villagers we get to know that the fishermen and the day-labourers had different sort of problems regarding loan, food deficiency, working advantages etc. The fishermen had their bad time when they could not go for fishing as no fishes are available and can do no other works. Then they have their deficiency for food. On the other hand day-labourers face worst time when they cannot go to the field to work. So to meet their needs they go for loan. Considering all these the problems of the fishermen and the day-labourers are shown separately.

Table 4.1 Seasonal differences in village Dasherhat

Item	April- May	May- June	June- July	July- Aug	Aug- Sept	Sept- Oct	Oct- Nov	Nov- Dec	Dec- Jan	Jan- Feb	Feb- Mar- ch	Mar- ch- April
	<i>Bais hakh</i>	<i>Jaist ha</i>	<i>Asha r</i>	<i>Shra bon</i>	<i>Bha dro</i>	<i>Ash win</i>	<i>Karti k</i>	<i>Augr ahay an</i>	<i>Pous h</i>	<i>Mag h</i>	<i>Falg oon</i>	<i>Chai tra</i>
Temperature	11	12	10	9	10	8	7	4	1	3	6	8
Rainfall	4	7	10	12	11	5	4	2	1	1	2	3
Employment opportunity (fisher- men)	8	1	1	1	6	7	5	4	12	12	12	2
Employment opportunity (day- labour)	2	12	2	3	5	4	1	7	12	2	3	1
Food deficit (fishermen)	7	12	12	12	5	6	5	5	1	1	1	2
Food deficit (day- labour)	2	1	2	3	6	9	12	6	1	2	7	12
Borrowing (fishermen)	8	12	12	12	6	6	6	5	1	1	1	2
Borrowing (day- labour)	2	1	3	4	5	9	12	7	1	3	7	12
Lean period (fishermen)	8	12	12	12	6	7	5	4	1	1	1	2
Lean period (day- labour)	2	1	2	3	5	10	12	7	1	2	8	12
Fish availability	2	1	1	3	5	4	12	12	10	7	6	4

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Temperature

Tremendous heat is felt during the month of Jaistha. Temperature during the month of Poush is the lowest. The sun shines directly on the earth's surface and the days are longer than the nights. According to the villagers Poush is the coolest month, as the days are shorter than the nights so the sun shines for a lesser period and cold temperature is felt.

4.2 Rainfall

During the month of Shrabon and Bhadro rain falls heavily but during the month of Shrabon it rains the most. Rain falls the least during the month of Poush and Magh.

4.3 Employment opportunity for fishing households

Fishermen get more works in the month of Poush and Falgoon. On the contrary in the month of Jaistha and Ashar fewer fish are caught therefore fishermen get less work. Fishermen do not get work at crop field because they are not good to work as agricultural labourer. They even do not have cultivatable land. In this situation the fishermen sell out their small assets and borrow money to adapt with adverse circumstances.

4.4 Food deficit in fishing households

The fishermen pointed the month of Jaistha, Ashar and Shrabon while they face most deficit of food. As the fishermen live on catching fishes, they have food deficiency when fishes are not

available. They had to clear their previous debts in months of Kartik and Augrahasan although plenty of fishes are available in those months. In the month of Poush they get enough money from fishing and they do not need to take loan. They reported that they cannot save, as they had to clear previous loans. They take loan from moneylenders for survival during the food deficit period. Sometimes they pass their days having half meal. In this way they try to maintain their families during food deficit period.

4.5 Borrowing in fishing households

According to the fishermen they have to go for more loans during the month of Jaistha, Ashar and Shrabon. During these three months the fishes are not available in the rivers or in the ponds on which they depend for their subsistence. On the other hand during the month of Poush, Magh and Falgun fishes are more available so they do not need to borrow big amount of loans.

4.6 Lean period in fishing households

The fishermen consider Jaistha, Ashar and Shrabon as the worst time of the year as fishes are scanty in these months. During this time they take loan and try to adapt with adverse circumstances. On the months of Poush, Magh and Falgun they get more money because they remain engaged in fishing.

4.7 Fish availability

Mostly fishes are available during the month of Kartik and Augrahasan. Availability of fishes is less during the month of Baishakh, Jaistha and Ashar. Mentioning the reason of less availability of fishes they said that at that time new water comes to the beel and the fishes are not grown up that much. During the month of Kartik and Augrahasan water level starts to fall and then the fishermen catch fishes largely.

4.8 Employment opportunity for and farming households

Maximum opportunity for work is in Poush and Jaistha as cultivation is going on in the field. Opportunity is least in Chaitra and Kartik. They live in hunger or reducing the number of meals in a day during this time. So they take loans from moneylenders with very high interest rate for their survival.

4.9 Food deficit in farming households

Chaitra and Kartik are the months mentioned as the period of food deficit for day-labourer. During this period they have to sit idle due to lack of employment opportunity. To meet this food deficit they borrow cash and sometimes rice and pulse. In Poush and Jaistha food deficit is minimum. They get some rice to meet food deficit in Jaistha.

4.10 Borrowing in farming households

Day-labourers take highest loan during Chaitra and Kartik and less during Ashwin and Kartik. Chaitra and Kartik there is scarcity of work. The villagers do not have enough savings to meet this crisis so they borrow money. They take minimum loan in the harvesting months Jaistha and Poush and during these months plenty of vegetables are grown. During deficit period they take loan from relatives and richer people. They borrow money as well as rice and pulse, which they repay later.

4.11 Lean period in farming households

Chaitra and Kartik are the worst time for them as there is scarcity of work and food. Their good days are Poush and Jaistha.

5. Well-being Pattern in the Village

Table 5.1 Well-being pattern in village Dasherhat

Wealth category Hhs 202	Livelihood assets	Livelihood strategies	Sustainable livelihood outcomes
Rich 7%	1. Possess lands, brick built houses, bank balance. 2. Earn money by doing service, business and construction business.	1. Cultivate lands with the labourers and do business by storing the potato and other raw goods in the cold storage. 2. Cultivate the lands with power tiller.	1. They can educate their children in good institutions due to the excess income. 2. The bank balance is increasing and they are being benefited financially.
Middle class 22%	1. Most of the people are fisherman, minor service holders, in NGOs, shopkeeper of clothes, tea stall and variety shop, nursery businessman, owner of rickshaw, carpenter, wood businessman of the shallow machine, U.P secretary, driver, businessman of raw goods and rice. 2. Some cultivate catfish in ponds and lands.	1. Used to cultivate fish in ponds and lands with the fingerlings produced from the cultivation. and from the earning do various businesses. 2. Cultivate land by taking lease from others 3. Work as the fourth class employee in many offices.	1. Cannot be benefited due to the adverse nature. 2. They become detriment financially when the cultivated fish passes to others land or pond during the flood. 3. Due to severe draught face problem while harvesting. 4. Cannot be benefited financially and spend life with hardship.
Upper poor 59%	1. Possess homestead. 2. Have the business of rice, raw goods, and poultry. 3. Work as blacksmith, day-labourer, van driver, shopkeeper, grocer, mechanic of suitcase.	1. Possess only the homestead. 2. Work as day-labourer, van or rickshaw puller, mechanic of suitcase, and do small business. 3. Do business buying only 5-10 kg raw goods. 4. Used to live low standard life.	1. In spite of hard work they cannot be financially developed. 2. Suffer from shortage of money and can be discriminate from the rich and middle class people. 3. Cannot take proper care of the children. 4. Work in others businesses so they have to wait for salary.
Poor	-	-	-
Destitute 11%	1. Possess no homestead. 2. Take loans and used to work in peoples' house. 3. Catch fish by borrowing others' net. 4. Work as shopkeeper in small tea stalls, rickshaw puller. 5. Used to beg.	1. Earn money by working hard. 2. Used to borrow from other. 4. Establish shops with small loans. 5. Disable people used to earn livelihood by begging.	1. No way of earning except heard working. 2. The whole family has to depend on one person. 3. People have to spend life on half feeding or starving.

Table 5.2 Well-being data of village Dasherhat

Wealth category	Percentage (n=202)	HH identification number
Rich	7% (15)	12, 32, 33, 74, 82, 83, 86, 114, 117, 121, 124, 134, 151, 152, 191
Middle	22% (45)	01, 11, 13, 14, 20, 27, 39, 73, 78, 84, 85, 87, 88, 89, 91, 94, 97, 101, 103, 116, 120, 122, 125, 126, 127, 129, 130, 131, 132, 138, 141, 142, 144, 146, 147, 156, 164, 165, 168, 169, 182, 188, 192, 193, 205
Upper poor	59% (119)	02, 03, 04, 05, 06, 07, 08, 09, 10, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, 26, 28, 29, 30, 31, 34, 35, 36, 38, 40, 41, 42, 44, 45, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 60, 62, 63, 64, 65, 66, 67, 68, 70, 71, 79, 81, 90, 92, 93, 95, 96, 98, 99, 100, 102, 104, 105, 106, 108, 109, 110, 111, 112, 118, 119, 123, 128, 133, 135, 136, 137, 139, 140, 143, 145, 148, 149, 150, 153, 154, 155, 157, 158, 159, 163, 167, 170, 171, 172, 173, 174, 175, 177, 180, 181, 183, 184, 190, 194, 195, 196, 197, 198, 200, 202, 203, 204, 206, 210
Poor	-	-
Destitute	11% (23)	46, 47, 59, 76, 77, 113, 115, 160, 161, 162, 166, 176, 178, 179, 185, 186, 187, 189, 199, 201, 208, 209, 211

Note: Household number 37, 43, 61, 69, 75, 80 have not been found out, 72 is migrated, and the heads of household number 107 and 207 have been died so the PRA team could not manage to collect information on those households.

II. Profile of Village Char Harikesh

1. Contextual Analysis

1.1 Historical context

The village has been evolved gradually from the silt of river Dharala and used to call as a *char* (strip) of a river. It was predominantly a Hindu area during the British period and by the name of a Hindu person, Harikesh the village is now called as Char Harikesh.

1.2 Village infrastructure

The River Dharala flows east of the village, and on the west Dasherhat Chhara *beel* are situated. On the north Auckland Chhara and on the south there is Kurigram city. Length and breadth of the village are one kilometer and half kilometer respectively. As reported the total population is about 2000, out of that male is about 1000 and female is 1000.

1.3 Political/Administration

Hartal effects on the livelihoods of the villagers as most of the people go to nearby city for work or business. The rickshaw-puller can not pull rickshaw. However the BRAC school remains open. The elder people usually settle disputes if arise.

1.4 Educational

There is only one education institution established by BRAC. Children, mostly girls of this village study in this school.

1.5 Health

There is a satellite health clinic in the village, which provides vaccination to children and women. Government provides health services through municipality.

1.6 Cultural

As the rate of education is very low people have almost no idea about cultural activities.

2. Village Resources

2.1 Natural capital

The *beel* is situated on the west side of the village. The *beel* is about 4 kilometer in length and one and half kilometer in breadth. Everyone had the right to catch fish but had to take permission from the lessee to catch fish. They had to give fish or equivalent money. Those who have to catch little amount of fish for their own consumption do not need to pay. With the assistance of FFP young fishes have been released in the *beel* through village development committee (VDC). The committee has suspended fishing for four months. Land suitable for cultivation is ten acres only. Good harvest is not possible because of sandy char area. The lands are under private ownership.

2.2 Human capital

Due to lack of enough work in the village, people go to near by city for earning.

2.3 Social capital

There is a mosque where all Muslims can pray.

2.4 Physical capital

There is no metal road in the village. There are two unpaved roads only. Heavy vehicles other than bi-cycles or rickshaws cannot ply over this road. Only rickshaw can ply in the village. There is no river inside the village although it is reported that the river Dharala was flowing through the village long back. There are two shops in this village where people can do shopping without any obstacles. Women can also do shopping, as they are not supposed to go to town. It may be mentioned that the shops are of medium categories.

2.5 Financial capital

BRAC is maintaining important contribution in socio-economic development by providing loans to poor women. BRAC is the only organization in this village that provides loan.

3. Institutional Processes: Importance and Roles

3.1 Government institutions

There is no government institution in the village.

3.2 NGOs, CBOs, Co-operatives

BRAC also provide loans to poor women to make them self-reliant. In absence of government institution, BRAC is contributing immensely in education and socio-economic development of the village.

3.3 Informal organizations

Mosque is playing important role in observing religious practices.

3.4 Private sectors

There is no private enterprise in this village.

4. Seasonal Vulnerability and Coping Strategies

Table 4.1 Seasonal differences in village Char Harikesh

Item	April-May	May-June	June-July	July-Aug	Aug-Sept	Sept-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-March	March-April
	<i>Baisakh</i>	<i>Jaishtha</i>	<i>Ashar</i>	<i>Shrabon</i>	<i>Bhadro</i>	<i>Ashwin</i>	<i>Kartik</i>	<i>Magh</i>	<i>Poush</i>	<i>Chaitra</i>	<i>Chaitra</i>	<i>Chaitra</i>
Temperature	10	12	9	7	8	6	5	4	1	3	4	11
Rainfall	7	8	11	12	11	4	3	2	2	1	3	4
Employment opportunity	8	7	5	6	7	9	1	12	12	11	8	2
Food deficit	5	6	7	8	9	10	12	8	1	1	10	11
Borrowing	5	6	7	8	9	10	12	8	1	1	10	11
Lean period	7	6	6	7	8	10	12	2	1	2	8	11
Fish availability	1	2	3	5	7	8	12	11	10	8	7	1

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Temperature

Tremendous heat is felt during the month of Jaistha. Temperature during the month of Poush is the lowest. The sun shines directly on the earth's surface and the days are longer than the nights, which the villagers think as the reason of being so hot during the month of Jaistha. According to the villagers Poush is the coolest month, as the days are shorter than the nights so the sun shines for a lesser period.

4.2 Rainfall

During the month of Shrabon and Bhadro rain falls heavily but during the month of Shrabon it rains the most. It rains the least during the month of Magh. However, it rains once or twice during the other months of the year. Flood occurs if it rains heavily and crisis of food is felt then. To cope with this crisis the villagers sell out their chickens, ducks and other small belongings.

4.3 Employment opportunity

During the month of Augrahasan and Poush there is more opportunities of work but in the months of Kartik and Chaitra there are less opportunities. According to the fishermen, the months of Kartik and Augrahasan are better for them as more fishes are available in the rivers on that period. They could easily manage subsistence. They afraid that fish stock is reducing day by day.

4.4 Food Deficit

During the month of Kartik and Chaitra food deficit is felt the most. The villagers borrow loan and sell their belongings to cope with this situation. During the month of Poush food deficiency is felt the least as there are work available for the labourers.

4.5 Borrowing

The villagers take loans mostly during the month of Kartik, because there is no work available for them. The day-labourers have little work to do during the month of Chaitra. During that period the prices of the commodities rise up. So they borrow money for subsistence. They also sell their domestic animals. Sometimes they have to pay interest on the loan, which causes miseries. During the month of Poush they make fewer loans, as during winter vegetables are cultivated so that day-labourers have many works to do.

4.6 Lean period

When the people do not have money and they face food deficit that is the worst time for them villagers mentioned. Sometimes flood occurs in this village, and then people take shelter on the rail line and roads. They depend on relief for subsistence provided by government and non-government organizations. During this time loan is not also available.

4.7 Fish availability

Mostly fishes are available during the month of Kartik and Augrahasan. Availability of fishes is less during the month of Chaitra and Baishakh. The fishermen borrow money in case of non-availability of fishes, they even sell their net.

5. Well-being Pattern in the Village

Table 5.1 Well-being pattern in village Char Harikesh

Wealth category Hhs 122	Livelihood assets-	Livelihood strategies	Sustainable livelihood outcomes
Rich 4%	1. Possess brick built house, own shop, rickshaw and livestock. 2. Earn money by doing service	1. Earn money by renting out of rickshaw and cattle, and by doing government employment.	1. Secured house. 2. They are being benefited from every side and spending a happy life.
Middle class 7%	1. Rickshaw/van puller. 2. Own cattle. 3. Doing hard work. 4. Possess ponds and small restaurant.	1. Rent out van. 2. Take lease of lands to cultivate. 3. Fish cultivation in the pond. 4. Do restaurant business.	1. With the income they used to save money.
Upper poor 24%	1. Possess a few lands include the homestead. 2. Work as day-labourer in jute mill and biscuit factory, rickshaw puller. 3. Business of betel leaf, raw goods, slender cigarette, and food items.	1. Earn money by pulling rickshaw, doing small-scale businesses, and fishing. 2. They have to do physical labour to live.	1. The standard of living is low. 2. Cannot send children to good school. 3. Their condition is becoming worst day by day.
Poor 39%	1. Work as carpenter, canvasser, tailor, day-labourer, fisherman, mechanic and barber in saloon. 2. Do business of banana in small-scale.	1. Used to pull rickshaw by renting from others. 2. Used to catch and sell fish.	1. If they get job, can afford food otherwise they starve. 2. Low standard of living. 3. Cannot get good food and education for children. 4. Spend life with great sufferings.
Destitute 27%	1. Possess no homestead, 2. Used to beg, sell snacks, pull rickshaw, work for earth digging, knit fishing net.	1. Work as maid servant in others house. 2. Knit fishing net for fixed customers. 3. Sell manual labour in seasonally available work. 4. Compel to beg.	1. Live in others' house land. 2. Cannot do business due to the shortage of money. 3. Compel to beg. 4. Standard of life is very low.

Table 5.2 Well-being data of village Char Harikesh

Wealth category	Percentage (n =122)	HH identification number
Rich	4% (5)	12, 18, 19, 20, 80
Middle	7% (8)	11, 13, 28, 45, 58, 68, 89, 110
Upper poor	24% (29)	3, 9, 14, 24, 29, 30, 36, 44, 46, 52, 62, 64, 65, 66, 67, 75, 77, 78, 81, 82, 87, 91, 95, 101, 102, 105, 109, 111, 122
Poor	39% (47)	2, 4, 7, 8, 10, 15, 35, 37, 48, 50, 55, 56, 57, 59, 60, 69, 70, 71, 76, 79, 83, 85, 86, 88, 92, 93, 94, 96, 99, 100, 103, 104, 106, 107, 108, 112, 115, 116, 118, 120, 121, 123, 124, 125, 127, 128, 131
Destitute	27.04 (33)	5, 16, 17, 21, 25, 31, 32, 33, 34, 38, 39, 40, 41, 42, 43, 47, 49, 51, 53, 54, 61, 63, 72, 73, 74, 90, 98, 114, 119, 126, 129, 130, 132

Note: household number 1 and 6 are migrated, 97 have been died so that information has not been collected. Household 22, 23, 26, 27, 84, 113, 117 have not been found out.

6. Expected impact by beneficiaries of FFP

It is known through PRA exercises that if FFP has been implemented effectively, the socio-economic status and the living standard of the fishermen would be better. Although the present status of the project is good the fishermen are afraid of armed terrorists who catch fishes forcefully in the darkness of night. The villagers cannot resist them alone for which they need help from police, which they cannot get easily. If it goes in this way the poor people's project will not be implemented. Moreover, they cannot employ private security guards, which is costly.

The fishermen cannot catch fish in the *beel* when stocking is going on. So they are facing financial constraints to maintain their families. They urge for other income generating activities for this time. Fishermen of Char Harikesh said that the third fisheries project was failed to reach its objectives and the fishermen were looser. So they are now doubtful about the success of the fourth fisheries project.

III. Profile of Village Cherenga

1. Contextual Analysis

1.1 Historical context

Village Cherenga is known as a *char* (strip) of the river, but none of the villagers can tell the right information about naming of the village. It is guessed that the village is called by name of a renowned Hindu person.

1.2 Village infrastructure

On the north, south, west and east side of village Cherenga there are Raypur, Polashbari, Polashbari Poshchim Para and Polashbari Arojara situated respectively. The length of the village is one and half kilometer and the breadth is one kilometer. The total population of the village is about 1820 as reported. Muslim is about 80% and Hindu is 20%. There are six unpaved roads in the village. There are four ponds and all of these are under private ownership.

There is a mosque in the village. All Muslim villagers are going there for prayer. There is also a temple in the village. In this temple Hindus observe their rituals. There is no clash between Hindus and Muslims in this village. It has to be mentioned that the temple is in the border of village Dasherhat and village Cherenga. So people from both the village can go there for their prayer. There were no shops shown in the participatory map previously, but the PRA team revealed that there are ten shops, which are now added in the participatory map.

1.3 Political/Administration

During *hartal* the schools remain open. The prices of the commodities go a bit high. As there is no facility for storing fishes the fishermen suffer to sell the fishes.

The villagers dissolve any sort of wrongdoing among themselves under the *salish* (village court). People from other villages join in the *salish* when major decision has been taken. There is an UP member in this village and he takes part in the *salish*. All the members of the village sit together and discuss the problem and then give the verdict.

1.4 Cultural

Baul Bhandary Abdul Huq and singer Rafiqul Islam (Potka) are two brothers who only initiate singing folk songs as a part of cultural activities in the village. The children plays in the school ground but there is no competition. No program is held in this village to celebrate any national day of Bangladesh because of the absence of the organizing club. The people in this village are not much concerned about the cultural activity as 90% of the villagers is reported uneducated.

2. Village Resources

2.1 Natural capital

The village is in the northeastern side of the *beel*. It is about 4 kilometer in length and one and half kilometer in breadth. Everyone had the right to catch fish there but had to take permission from the leaseholder. On 23rd July 5 metric ton of young fishes of different varieties like Rui, Katal, Mrigel, Sharputi sizing 5-7 centimeter were released in the pond through village

development committee (VDC) with the financial assistance of FFP. Presently approximate weight of fishes is about 250 gm each. VDC has suspended fishing for four months. But few terrorists want to catch fish in the *beel* forcefully. The villagers mentioned that government has not taken any step to protect the *beel* from the terrorists. Some areas of the *beel* was under private ownership has been taken into the FFP.

There is a canal joined to the *beel*, which is privately owned. Any sort of dam could be built on the beginning of the canal can protect the fishes in the *beel*.

There are about two hundred acres of cultivatable land in this village. Many people take lease and then cultivate the lands. People from different wealth groups have access to take lease of lands if they can pay the lease value. The soil is sandy and loamy. As it is in the *beel* area people can cultivate only in one season of a year.

Though all stages of people are accessible in the canal and in the *beel* but fishermen gets the priority even in the committees of FFP. Before implementing the fourth fisheries project, every one could fish in this *beel*. The fishermen had to give some fishes to the lessee who got many fishes.

2.2 Human capital

Educational

There is a community primary school in the village. The school is run by CDP. Children of different wealth groups can get admission in that school. There is a mosque in the village where young children are given religious education. There were two schools run by BRAC but at present there is no BRAC school going on.

Health

Once in a month a health clinic is settled in the structure of Grameen Bank situated in the village to give the treatment to the villagers. There is a village doctor in this village who treats patients in exchange of money. There is also an *ojha* (cure people from snakebite) who as well treats patients in conventional method. Moreover, there are two nurses who take care of the pregnant women.

Labour

The labourer earn money and lead there life by selling their labour. The rich can get labour in a very cheap rate.

2.3 Social capital

In the mosque all Muslims can pray and people also get judgment of any disputation with the help of the mosque committee. The Hindu people do observe their religious festivals.

2.4 Physical capital

There are six unpaved roads and four ponds in the village. All of these are privately owned and two ponds are being operated for fish cultivation. People take bath in these ponds if the owner allows. There are ten shops in this village and villagers can buy the commodities in cash or in

credit. These shops help the owners, merchants and the consumers as well. All the shops are medium sized.

2.5 Financial capital

There are many NGOs working in the village Cherenga. Grameen Bank provides long-term loan for the households of poor female. And some often they provide a short-term loan. Grameen Agricultural Foundation gives seed, insecticide, etc. as seasonal loan to the member of Grameen Bank and they have to repay their loan at the end of the season. Rangpur-Dinajpur Rural Service (RDRS) provides a short-term loan and training of sewing to the poor women. East Para Women Society consists of twenty women and if they need, they take loan with interest and try to solve their problems. In this society, they buy seasonal crop in cheap price and sell it later with a profit.

3. Institutional Processes: Importance and Roles

3.1 Government institutions

Agriculture Extension office situated at the district town provides seeds, insecticides and fertilizers to the villagers to improve the crop production. They do not take any money from the villagers. The farmers get suggestion on agricultural activities from the agriculture extension office.

3.2 NGOs, CBOs, Co-operatives

BRAC, Grameen Bank, Community Primary School, Solidarity, Grameen Krishi Foundation, RDRS, Purba Para Mohila Shamity are working in the village. There is a community primary school in the village. The school is run by CDP and children aged six to eleven years from all wealth groups have access to the school. With the help of VDC, FFP has taken a development program for fishing in the *beel*. Villagers from all wealth groups are associated with VDC and that project.

3.3 Informal organizations

In the mosques the Muslims say their prayers and do religious works. In the temples the Hindus observe their rituals.

3.4 Private sector

There is no private organization in this village.

4. Seasonal Vulnerability and Coping Strategies

After having a discussion with the villagers it has been known that the fishermen and the day-labourers had different sort of problems regarding loan, food deficiency, working advantages, etc. The fishermen had their bad time when they could not go for fishing as no fishes are available and can do no other works. Then they face deficiency for food.

On the other hand day-labourers have their bad times when they cannot go to the field to work. So to meet their needs they go for loan. Considering all these the problems of the fishermen and the day-labourers are shown separately.

Table 4.1 Seasonal differences in village Cherenga

Item	April- May	May- June	June- July	July- Aug	Aug- Sept	Sept- Oct	Oct- Nov	Nov- Dec	Dec- Jan	Jan- Feb	Feb- Mar- ch	March- April
	<i>Bais hakh</i>	<i>Jaist ha</i>	<i>Asha r</i>	<i>Shra bon</i>	<i>Bha dro</i>	<i>Ash win</i>	<i>Karti k</i>	<i>Augr ahay an</i>	<i>Pous h</i>	<i>Mag h</i>	<i>Falg oon</i>	<i>Chaitr a</i>
Temperature	9	12	10	9	8	5	7	4	2	1	6	11
Rainfall	5	6	11	12	10	8	7	5	1	2	1	3
Employment opportunity (fisher men)	8	1	1	1	5	7	5	4	12	12	12	2
Employment opportunity (day-labour)	2	12	2	3	5	1	1	7	12	2	8	1
Food deficit (fishermen)	8	12	12	12	6	7	5	4	1	1	1	2
Food deficit (day-labour)	2	1	2	3	5	12	12	7	1	2	8	12
Borrowing (fishermen)	8	12	12	12	6	7	5	4	1	1	1	2
Borrowing (day- labour)	2	1	2	3	5	10	12	7	1	2	8	12
Lean period (fishermen)	8	12	12	12	6	7	5	4	1	1	1	2
Lean period (day-labour)	2	1	2	3	5	10	12	7	1	2	8	12
Fish availability	2	1	1	3	5	6	12	12	10	7	6	4

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Temperature

Tremendous heat is felt during the months of Jaistha and Chaitra. Temperature during the months of Poush and Magh are the lowest. The sun shines directly on the earth's surface and the days are longer than the nights, which the villagers think as the reason of being so hot during the month of Jaistha. According to the villagers Poush is the coolest month, as the days are shorter than the nights so the sun shines for lesser period and cold temperature is felt. They also mentioned that on the first fifteen days of the month Poush, the temperature is low, after that the heat starts to rise.

4.2 Rainfall

During the month of Shrabon it rains the most. It rains the least during Poush and Magh.

4.3 Employment opportunity for fishing households

Fishermen get more work opportunities in the month of Poush, Magh and Falgoon. On the contrary in the month of Jaistha, Ashar and Shrabon less fishes are caught therefore fishermen get less chance to catch. Moreover, they say that they do not get other works. They take loans from different NGOs and moneylenders in interest and lead their life at that time.

4.4 Food deficit in fishing households

The fishermen pointed the month of Jaistha, Ashar and Shrabon as time while they face deficit of food. As the fishermen live on catching fishes, they have food deficiency when fishes are not available. When fishes become available the food deviancy decreases.

4.5 Borrowing in fishing households

According to the fishermen they have to go for more loans during the month of Jaistha, Ashar and Shrabon. The reason according to them is during these three months the fishes are not available in the rivers or in the ponds on which they had to rely on. At that time the fishes lay eggs and they are then small in size. On the other hand during the month of Poush, Magh and Falgoon fisheries are more available. This availability of the fishes helps them to go for lesser amount of loans.

4.6 Lean period in fishing households

The fishermen consider Jaistha, Ashar and Shrabon as the worst time of the year as fish is scanty in these months. In Poush, Magh and Falgoon they get more works because they remain engaged in fishing.

4.7 Employment opportunity for farming households

Maximum opportunity for work is in Poush and Jaistha as cultivation is going on. Opportunity is the least in Chaitra and Kartik. They live in hunger or half feeding during this time. So they take loans from moneylenders, sometimes with higher interest rate, for their survival. The farmers have their worst times in Ashwin, Chaitra and Kartik. The months of Poush and Jaistha are good for the labourers and farmers as the harvest comes in.

4.8 Food deficit in farming households

Chaitra and Kartik are the months of food deficit. During this period they have to sit idle due to lack of work. In the deficit time they cannot harvest crop, as these are not ready to cut. To meet this food deficit they borrow cash and sometimes also rice and pulse.

4.9 Borrowing in farming households

Day-labourers take highest loan during Ashwin, Chaitra and Kartik. In Chaitra and Kartik there is no work. They take minimum loan in the harvesting months Jaistha and Poush and during these months plenty of vegetables are grown. During deficit period they take loan from NGOs, relatives and rich people.

4.10 Lean period in farming households

Ashwin, Kartik and Chaitra are the worst time for the farmer. Because in this time whatever crop is in the field, those are not suitable to cut.

4.11 Fish availability

Mostly fishes are available during the month of Kartik and Augrahan. Availability of fisheries is less during the month of Baishakh, Jaistha and Ashar. At that time new water starts to come in the *beel* and fishes do not grow that much. During the month of Kartik and Augrahan water level starts to fall and then the fishermen catch fish in huge quantity.

5. Well-being Pattern in the Village

Table 5.1 Well-being pattern in village Cherenga

Wealth category Hhs 148	Livelihood assets	Livelihood strategies	Sustainable livelihood outcomes
Rich 4%	1. Possess lands, brick built house, truck, pump, power tiller, shop etc. 2. Do services. 3. Own garages.	1. Employ labourers in land and in the garage. 2. Sell water for irrigation after lifting trough own water pump. 3. Employ assets for investment.	1. High standard of living. 2. Afford high education for children in good institute. 3. Can buy others' land. 4. They are financially solvent. 5. Can employ people.
Middle class 7%	1. Used to cultivate others land. 2. Owns water pump, pharmacy, etc. 3. Work as service holders, businessman, and deed writer.	1. Cultivate lands by taking lease from others. 2. Use water pump for irrigation. 3. Earn money from service, pharmacy, by writing deeds.	1. Livelihoods are affected by seasonality mostly while harvesting. 2. The service holders spend their life more or less good.
Upper poor 26%	1. Possess 20-25 decimal lands and a few cattle. 2. Work as day labourer, van driver, deed writer, rickshaw driver, artist, clerk, tailor, labourer, businessman or private teacher.	1. Do business with the loan money. 2. Earn money by doing hard work in other's land, tailor shop etc. and by pulling van. 3. Borrow money from NGOs.	1. The condition of the upper poor in the village is very weak. 2. They have to suffer utmost due to malnutrition, excess expenses. 3. They have to be indebted because of the borrowing.
Poor 55%	1. Possess no lands except the homestead. 2. They work as day-labourer, helper of truck, driver, carpenter, guard, fishermen, and electrical mechanic.	1. Lend from the moneylenders. 2. Involve with work seasonally available.	1. Due to unemployment they have to borrow or starve. 2. The children can not go to school. 3. No economic improvement has been seen.
Destitute 7%	1. No homestead. 2. They do not own any assets. 3. Work as rickshaw driver. 4. Work as maidservant.	1. Lend from others. 2. Compel to beg.	1. They spend a low standard life and have to starve all over the year. 2. Nobody gives loan.

Table 5.2 Well-being data of village Cherenga

Wealth category	Percentage (n = 148)	HH identification number
Rich	4% (6)	02, 04, 06, 93, 105, 131
Middle	7% (11)	03, 10, 47, 54, 85, 132, 137, 138, 139, 140, 152
Upper poor	26% (38)	05, 15, 16, 18, 19, 24, 30, 32, 35, 36, 37, 49, 55, 65, 66, 71, 73, 78, 79, 81, 84, 86, 95, 100, 102, 104, 108, 111, 113, 118, 123, 125, 128, 130, 133, 134, 135, 149
Poor	55% (82)	01, 07, 08, 09, 11, 12, 13, 14, 20, 21, 22, 23, 26, 27, 28, 29, 34, 38, 39, 40, 41, 42, 46, 48, 51, 52, 56, 57, 58, 60, 61, 63, 64, 67, 68, 69, 70, 74, 75, 76, 83, 87, 88, 89, 90, 91, 92, 94, 96, 97, 98, 99, 101, 103, 106, 107, 109, 110, 112, 114, 115, 116, 117, 119, 120, 122, 124, 126, 136, 141, 142, 143, 144, 145, 146, 148, 150, 151, 157, 158, 159, 160
Destitute	7% (11)	25, 43, 44, 45, 59, 77, 80, 121, 127, 129, 147

Note: The head of household number 50 has been died so the information has not been collected, 31, 53, 62, 72, and 82 have not been found, 17, 153, 154, 155, 156 have been migrated, and 33 is merged with another household.

Socio-Economic Baseline Survey of Open Water Fisheries

Profile of

NPBSS, Gobindagonj, Gaibandha

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Nurulia, Puntair, Burulia, Sinjani and Shatbila

NPBSS includes five small water bodies - Nurulia, Puntair, Burulia, Sinjani and Shatbila – located in Gobindagonj upazila of Gaibandha. NPBSS has *beel* stocking project operated by Grameen Motshyo Foundation (GMF). Twenty-two villages encompass NPBSS where FFP is in operation, and out of these six villages have been studied to understand the livelihood conditions of the villagers. The villages are Charpara, Ambari, Ulipur Augpara, Jagodishpur, Puntair Moddhyapara, and Kumiradanga.

1. Vulnerability Context

The villagers from Charpara reported that long ago the area was a low barren land not suitable for cultivation. The area was basically no man's land but people started gradually settling there by making houses. Since it was a char land the newly formed village was named Charpara. According to the villagers of Ambari, the village was once very popular for its *aam* (mango) production. The inhabitants of the village used to make good profit by selling mangoes in the nearby market and elsewhere. Therefore, the village was named Ambari. The villagers of Ulipur Augpara could not say about how their village was named. The village Jagodishpur was named after Jagodish Chowdhury who was a landlord during the British period. The village Puntair Moddhyapara has been named after the Puntair river flowing along the northeastern edge of the village. This village Kumiradanga was named after a *kumir* (crocodile), which was killed by the local inhabitants in the past.

Stated population of six villages is approximately 7,957 living in 1,066 households as identified through PRA. Ninety-three percent of the people is Muslim, the rest is Hindu. People of various occupations and vocations inhabit the village. Main occupation of 45% of the household heads is agricultural work, 25% engaged in fishing, 22% is day-labourer and the rest 8% is involved in other economic activities including trading. The main agricultural products are rice, jute, sugarcane, wheat and vegetables.

All sorts of development activities in the villages are facilitated from the upazila level offices of different government and non-government organizations. This includes development activities like road construction, child education, employment generation and economic development, and even settlement of disputes. People of this village are law-abiding. People mentioned that in the sphere of development activities local leaders and elders contribute more than the elected representatives of the Union Parishad do. External resources that flow into the villages usually go to some selected persons. Local leaders and elders generally settle disputes. UP members are honoured to participate in resolving local disputes. However, if any conflict goes beyond the control of the local leaders then the affected persons take resort to the court. People get services from government and non-government administrative setups. Problems of dowry and marriage disputes are generally settled by local leaders while others are often settled by local leaders with the help of government administration, particularly when parties involved are strong and powerful. However, there is no political strife. Strikes called by different political parties at times have little effect on daily life. Only bus and auto-rickshaw services come to halt are certain cases. Daily activities of the villagers continue as usual.

Hindus observe *Pooja*, their big religious festival while the Muslim celebrates during *Ramadan* and *Eid*. Although class differences and cast system exist in the villages, it is reported that the Hindus especially in the case of marriage try to overcome it.

In the past women folks remained confined within the domestic activities within the house; they would have to seek permission from the husband to go out of house. Nowadays, because of the motivations by the radio and the television as well as those made by NGOs such old values have changed. With the spread of education women have become conscious. They are involved in different activities outside their homestead relating to the development of the village. There are stray incidents of early marriage in this village. This was the result of the combined effort of NGOs and relevant government agencies to shape up community values against early marriage.

2. Livelihood Assets

The people of NPBSS have been categorized into four wealth groups according to the type and nature of livelihood assets as perceived by the informant groups. The wealth groups are rich and middle class, upper poor, poor and destitute. Table 2.1 provides the details.

Table 2.1 Well-being pattern in NPBSS villages

Wealth category	Household # 1066	Livelihood assets
Rich and middle class	27% (293)	• Possess 3 to 16 acres of lands, brick built house, tube-well, sanitary latrine, television and a good bank balance. • Few own house in town. • Own 10-12 cattle, ponds, bamboo bush, shallow machine, rice mill, saw mill, power tiller, van, rickshaw, buffalo cart, threshing ground and fishing nets. • Earn money from service, pisciculture and business. • Capability to send children to foreign countries
Upper poor	18% (191)	• Possess 100 decimals of land at most, tin roofed and thatched house, 3-4 cows, grocery. • Leases in land and do business of fish and fishnet. • Earn money by working as day-labourer, tradér, carpenter, rickshaw puller, and fisherman. • Do hard work.
Poor	19% (200)	• Possess homestead only and very few own cultivable lands. • Professional fishermen. • Earn livelihood by cultivating leased lands, keeping leased cows, and pulling rickshaw/van. • Day-labourer, hawker of seasonal crops. • Work hard for livelihoods.
Destitute	36% (382)	• Very few people possess homestead of their own, thatched roof only. • Professional fishermen. • Sell manual labour. • Do work in other's houses. • Households headed by widow, divorced women. • Women and children have to work for existence. • Beggar.

2.1 Natural capital

The major natural resources identified in this study area are five *beels* and a large amount of cultivable land. Water remains in the *beels* at different levels throughout the year. During August and September the water level rises while in March and April the level goes down to the lowest level. During the dry season paddy is cultivated in the bed of land. There are a number of ditches inside the *beels* made by some villagers who also own the ditches. Fish take shelter in these ditches during dry season and only the owners can catch them. Rui, catla, mrigel, boal, puti, shol, tengra, shrimp, koi, gulsha, aaeer, magur, gucci and few other species of fishes are available in this *beel*. Everybody is entitled to catch fish without paying any fee because these *beels* belong to the government. The fishermen catch fish with the help of current net, *darak* and *berijal*. They maintain their lives by catching and trading of fish in the nearby market. Few catch fish from the *beels* for their own consumption. People use the water of the *beels* for everyday necessities. Water is pumped out of the *beels* for irrigating the crop fields.

There are few ponds individually owned. The owners rear fishes like rui, catla, magur, silver carp, grass carp, pangas, etc. in these ponds and earn profit by selling them in the nearby market. They also consume fish from their ponds. People from all wealth groups use these ponds for their household work.

There is a narrow canal passing through the villages, which connects the *beels* with the Bangali river located in nearby district of Bogra. Water enters the *beels* through this canal during rainy season.

The area around the *beel* is a little elevated and suitable for cultivation. The agricultural land is fertile; and the farmers grow paddy, wheat, sugarcane and vegetables as main crops. There is no forest or orchard inside the village. However, beside and along both the edges of the unpaved roads number of trees have been planted. Bamboo is a common product in the backyard of some households, which are used for building houses. There are also a few fruit and vegetable gardens. The owner sells the surplus from these gardens in the market.

2.2 Human capital

The major human capitals taken into consideration are education, labour and health situation of the villages.

Education

Around 57% of the villagers are educated including those who can write only their names. In real terms, the percentage is much lower. There are three government primary schools where children of all social classes and creeds receive elementary education. There is one non-government high school in the *beel* villages where children can go for education after graduating from the primary school but poor children often cannot afford that. NGOs are operating nine schools in the *beel* villages. The villagers particularly those who are the poorest and cannot afford education for children are benefiting from these schools. There are three non-government madrasahs giving religious education to the children and one non-government adult literacy centre where poor villagers who never enrolled in formal schools are given elementary education. There is a co-

education college situated outside the villages, a few families can enroll their children in the college.

Labour

Varieties of professionals live in the villages. Most of the villagers are engaged in agriculture. People, who do not possess land of their own, work as labourers in others' land. Day-labourers are not skilled and the wage is very low. The women have just begun to work outside. Women sell labour by excavating ponds and constructing roads for CARE. Women are paid less. Some people pull van or rickshaw and some carry on small trade and business. The poorer section catches fish from the *beel* to maintain their families. There is no vocational training institute situated in the villages. -

Health

There is a community health centre in one village where the children can receive medical treatment and the expecting mothers can receive health service and consultations. The health center organizes vaccination programs and provides medical services for the pregnant women. As no government health center exists in the village, the villagers have to travel to Mohimagonj for attaining medical facilities and for medical consultations. The villagers are referred to either the upazila health complex or to the district hospital for better treatment. However, *shasthya shebika* (health worker) of BRAC provide some services i.e. vaccinate children, provide medical check-ups of the pregnant women and maternity services to the concerned villagers. Often the poor villagers consult traditional healers for treatment at a nominal fee. There are few dispensaries, which sell medicines. All the villagers drink water from tube-wells. As a result epidemic does not break out in the villages. There are small numbers of sanitary latrines in the villages. People try to live hygienically but the absence of good health center stands as a barrier. However, NGO workers impart knowledge on nutrition.

2.3 Social capital

The villagers are so far maintaining an appreciable communal harmony. There are few clubs in the study villages, which occasionally arrange various cultural functions as well as observe national days. Few of these clubs also render assistance to the poor during marriage of their sons and daughters. Besides these they extend primary medical facility to those who are most distressed among all the villagers.

There are a few NGOs working for building social capital in the village. Being organized in a group under one NGO poor people are developing social network within themselves that helps improving their livelihood conditions.

2.4 Physical capital

Majority of rich, middle class and upper poor own tin roofed houses. Very few houses are connected with the rural electrification network. Absence of electricity put out the people of four study villages in trouble. It makes irrigation work difficult to accomplish. Even the shops, small factories find it difficult to run their business at night due to the lack of electricity. Even the villagers are deprived from using electronics such as radio, television and VCR. There are few

shops inside the villages from where people can buy daily necessities. Only one village has a permanent bazaar.

The road network in the villages comprise of few metal and a number of unpaved roads. People who remain at the bottom of the socio-economic groups generally paddle rickshaws or vans in these roads.

2.5 Financial capital

People have opportunities to take loan from some NGOs like BRAC, Grameen Bank, Swanirbhor Bangladesh, and from the public sector financial institutions like Rajshahi Krishi Unnoyan Bank and Sonali Bank. They borrow money to invest in small business, poultry rearing, cultivating crops and sugarcane, which give them financial benefits.

People go to *mohajons* (traditional moneylender) for borrowing and there are only a few of them. In times of crisis people borrow from them although at a very high rate of interest. The poor people get some financial and social assistance from the clubs as well.

There are private owned rice mills in the villages where a number of people including women work as wage labour. There is a sugar mill neighbouring the villages where the local farmers sell sugarcane. The mill is a good employer for the inhabitants of the study villages even though a small number of people are employed there during sugarcane growing season.

3. Structure and Process

3.1 Government institutions

Both boys and girls of the study villages receive free education from the government primary schools. All the villagers benefit equally from the schools.

The *beel* is a central place of economic activities as because all people in general benefit from it. No restrictions have been imposed on fishing in the government owned open water bodies. The local Assistant Fisheries Officer of the government extends co-operation to the people in development of fish cultivation in the *beel*.

3.2 Non-government Organizations, Community-based Organizations and Co-operatives

Eight NGOs and CBOs are working in the villages providing a good quality social service. Their programs include education for children and adults, awareness building on health, sanitation, use of safe drinking water, environment education, family planning, early marriage, etc. Recently one NGO, Grameen Motshyo Foundation (GMF), has started a program to encourage and motivate the poor people for development of fish culture. It also extends technical support to the fishermen. All the villagers get facilities from these organizations even though they give more attention to the poorer section.

A co-operative society is operating in the village, which mobilizes savings from the members to keep it in their accounts. It also gives loans to its members as needed.

3.3 Informal organizations

There are 11 mosques and two temples in the villages, which serve Muslims and Hindus of the villages respectively. The other informal organizations include one Islamic *Pathsala* (library) and clubs. People get opportunity to study religious books in the library. The clubs arrange various cultural functions and organize games for the boys. The clubs also try to settle disputes among the villagers and help the poor people at the time of marriage of their daughters. Generally the poorer part of the population derives benefit from these institutions.

3.4 Private sectors

There are a number of rice mills in the villages, which are serving the villagers by processing their rice and wheat. The rickshaw garage owners lease rickshaws on contract basis to the rickshaw pullers. Few villagers produce fish in their own pond to meet their need and sell the surplus in the market. Those who own horticulture gardens sell vegetables and fruits after meeting their needs. There is a factory that manufactures socks, which are marketed in the nearby village and townships.

Table 3.1 Access to institutions

Wealth group	Government institution	NGOs, CBOs, Co-operatives	Informal organization	Private sector
Rich and middle class	High	Low	Medium	Very high
Upper poor	Medium	High	High	High
Poor	Low	Very high	High	Medium
Destitute	Low	Very high	Medium	Medium

Lowest level of development initiatives from government has been reported in the *beel* villages. Although government is providing education facilities, the poor and destitute have less access to that. On the contrary the poor have the highest access to NGO and CBO programs, as they are the main beneficiaries of their programs. Both poor and non-poor have access to the services of private sectors in terms of to be employed and to be owner respectively. Data showed that informal organizations also extend their services to the whole community.

4. Livelihood Strategies

The livelihood strategies adopted by different wealth groups are presented in table 4.1.

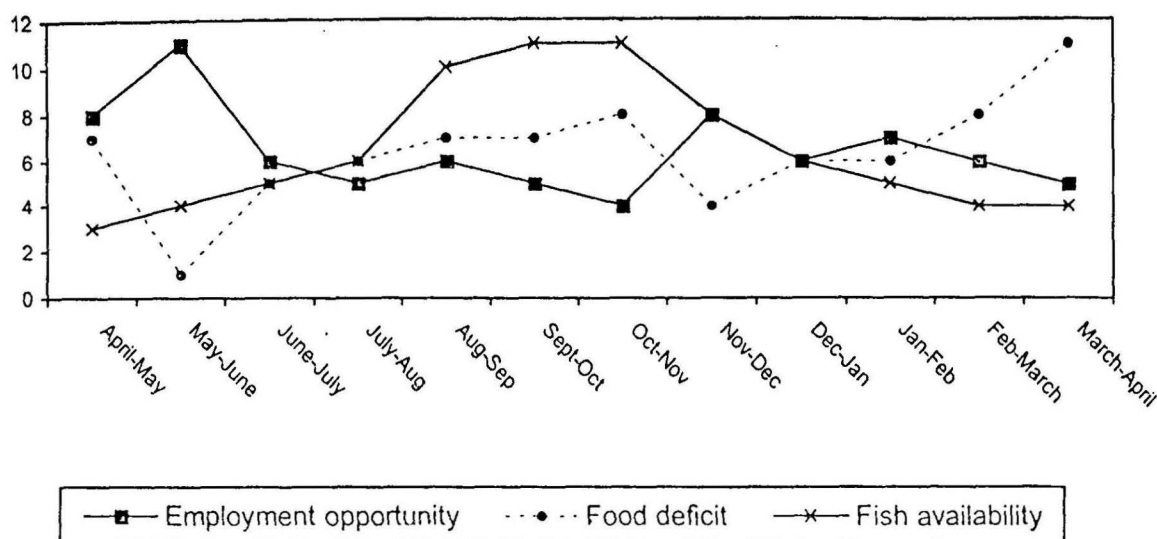
Table 4.1 Livelihood strategies of different wealth groups

Wealth category	Livelihood strategies
Rich and middle class	• Maximize use of lands. • Diversified income sources. • Investment of savings and assets. • Employ day-labourers in the crop fields. • Increasing capital such as lands. • Ensuring good education for children. • Ensure good hygiene for the family members.
Upper poor	• Produce crops in own and leased lands. • Carry on multiple economic activities. • Maximum use of assets. • Work hard.
Poor	• Work hard. • Borrow frequently. • Cultivate leased lands, rear leased cows. • Employ children for earning. • Seasonally migrate out to work.
Destitute	• Sell manual labour everyday. • Women and children do work. • Borrow often. • Migrate out for work. • Sell assets in crisis. • Always seek helps from rich people. Do begging.

4.1 Seasonal differences on livelihoods

Figure 1 shows the seasonal variation of employment opportunities, deficit of food and availability of fish in NPBSS *beel* villages.

Figure 1: Seasonal vulnerability in the villages



Employment opportunity

Although employment opportunity prevails throughout the year the month of May-June offers best scope of work. At that time harvesting of HYV paddy takes place. The months of September and October are the lean period for work opportunity. The poor section of the people, however, tries to find employment in fishing activities. Others have to take loans from various sources in times of need or sell their belongings to feed themselves. There is a sugar mill near the study villages which is an incentive for the local people to cultivate sugarcane in their lands. It is reported that sugarcane cultivation is less labour intensive. Moreover, in that area Aman is not cultivated at all. During the month of March-April people hardly find any work. The reasons are drought and drying up of the *beel*. To cope with this situation the poor people go out to the town and work there as rickshaw or van pullers, day-labours, which enable them to earn money.

During the month of July-August rural roads remain wet and muddy due to excessive rains. So movement of the people becomes restricted. Frequent and prolonged rain forces them to stay home. The day-labourers like rickshaw/van pullers find shortage of work at this time. At that time villagers often migrate to distant places to find work. Those who have to stay back home they try to survive by taking loans promising to repay afterwards.

Food deficit

As reported by the villagers food shortage reaches the highest level in the months of March-April when the cultivators do not have any crops to harvest. Moreover, by that time they run out of paddy (HYV) they had harvested a few months ago. In this time people remain out of pocket. They have very little saving in hand that is why they suffer from shortage of food even though there are few employment opportunities. To meet up the difficulty they sell cows, goats, ducks,

and poultry birds. If these are not enough they take loans from *mohajons* with a higher rate of interest.

The people become financially better off to do in the months of May-June because at that time another HYV harvesting takes place. People also get employment opportunity, so deficiency of food in the family is lowest in this period.

Availability of fish

Discussion with the villagers reveals that villagers can catch fish both at day and night almost throughout the year. However, fishing becomes highest during the months of September, October and November because the *beels* remain full of water. However, in the months of April-May availability of fish decreases because water level in the *beels* goes down. In some cases the *beels* even get dried. There are few low-lying pockets in the dried *beels* where the fish take shelter during the dry season. These fishing spots remain under private ownership. So other people should pay to catch in this area.

Worst time of the year

The economic condition of the villagers fluctuates in different months of the year. The villagers had termed the period of floods, droughts and cyclones as the worst period of the year. The effect of flood is very little in this village. The months of June-July come with heavy rainfall. The months of April-May are considered as a bad part of the year because during this time weather remains turbulent, *kalbaishakhi* (storm accompanied by gusty rain) disrupts life and activities. It creates damages to the crop due to hailstorm. The months of March and April have been specifically mentioned as worst time due to very low rainfall. It causes draught that makes life miserable. No job opportunity and hardly any cash income are available in the areas at that time. Prices of daily essentials shoot up.

The villagers informed that most of them have to borrow, to whatever extent, during the whole year. However, most of the people take loans in March-April when food scarcity and unemployment situation becomes very acute. If and when they fail to borrow they have to sell their belongings to keep themselves alive. Cows, goats, poultry birds, roof tin are common items for sale during acute scarcity of food. Sometimes they lease their land to cash out some money. In extreme cases the poorer section even sell out their land just to maintain their families. People can somehow survive famine by selling their belongings. At times the government and the NGOs support them with relief goods.

5. Livelihood Outcomes

The livelihood outcomes of different wealth category in the study villages are briefly presented in table 5.1.

Table 5.1 Sustainable livelihood outcomes for different wealth groups

Wealth category	Sustainable livelihood outcomes
Rich and middle class	• Financially well off. • Self-sufficient. • Surplus in food and capital. • Accumulate savings. • Balanced life.
Upper poor	• Earning of the family depends on hard work. • Produce inadequate crops. • Insecure livelihoods. • Poor savings. • Borrow seasonally and sell out small assets.
Poor	• Low level of income. • Depending fully on physical labour. • Used to borrow and sell assets. • Often deficit in food. • Malnutrition.
Destitute	• Can get no food without working. • Always food deficit. • Lack of credit worthiness, available only at a high rate of interest. • Malnutrition and chronic disease.

6. Expected Impact of Fourth Fisheries Project by Beneficiaries

The Fourth Fisheries Project has not been implemented fully in the *beels* of NPBSS. The FFP is in the initial stage of its operation. So the fishermen still are not sure whether fish cultivation will take place or not in the *beel*. They mentioned that BRAC has done a survey on the livelihood conditions of the villagers surrounding the *beels* in recent past. The program staff of implementing NGO, Grameen Motshyo Foundation, has discussed with the fishermen about proposed fish cultivation. From that meeting the fishermen learned that there would be fixed areas within the *beels* where fishing would not be allowed in certain time in the year. So they are worried about the rules and regulations of FFP those are going to be implemented through this project because they are fully dependent on the *beels* at subsistence level. They hope that the rest part of the *beel* would be open for catching fish for all people. The fishermen mentioned that they welcomed FFP in the *beels* NPBSS hoping they would be benefited from it in both social and economic terms. Their livelihood conditions will be improved through this project.

7. Key Findings of NPBS based on Household Survey

7.1 Introduction

The methodologies used in conducting this baseline survey have earlier been discussed in some details. For the purpose of the survey, household members of the sample villages were classified into four wealth categories (WC) through PRA exercises, such as, Rich/Middle, Upper Poor, Poor and Destitute. In the household survey, sample was taken from each study village proportionately according to the aforesaid wealth grouping. This part of the report contains analysis of the data collected through questionnaires from the sample households in the NPBS (Nurulia-Puntair-Burulia-Sinjani-Shathbila) water body area. It is located in Gobindhagonj of Gaibandha district.

7.2 Findings

Total sample households in this water body were 96. Highest proportion of the households (HHs) was categorised as the destitute (33.3%), followed by rich/middle category (30.2%), upper poor category (19%) and poor category (18%) (see methodology for the criteria of categorization).

Table 7.1 shows distribution of HH heads by different occupation (main¹, secondary², always fishing³, sometimes fishing⁴ and subsistence fishing⁵ - as defined by M & E Specialist of Fourth Fisheries Project). One third of the HH heads had always fishing occupation, this was highest among the upper poor (44.4%), followed by the destitute (43.3%). About 19 percent had subsistence fishing occupation, this was highest amongst the destitute category (30%), followed by the rich/middle (28%). The findings further indicate that the poor and destitute had no secondary occupation.

Table 7.1: Distribution of HH heads by occupation and wealth category

Wealth category	Secondary occupation	Fishing occupation		
		Always fishing	Sometimes fishing	Subsistence fishing
Rich/middle (n=29)	6.9 (2)	17.2 (5)	0	27.6 (8)
Upper poor (n=18)	5.6 (1)	44.4 (8)	0	16.7 (3)
Poor (n=17)	0	35.3 (6)	5.9 (1)	23.5 (4)
Destitute (n=32)	0	43.3 (13)	0	30.0 (3)
Total (n=94)*	3.1 (3)	33.3 (32)	1.0 (1)	18.8 (18)

Note: Figures in the parentheses indicate the number.

Note: All HHs had the main occupation. * Two cases of NPBS were not available in the data set that was provided by the Department of Fisheries.

Note: Multiple responses were considered.

Table 7.2 shows socioeconomic and demographic characteristics of the HHs. Sex ratio was highest amongst the rich/middle (170 per 100 female), followed by upper poor (158 per 100 female), destitute (155 per 100 female) and poor (149 per 100 female). Average age of the HHs

¹ Main occupation means primary employment of the HH from which it gains its income

² Secondary occupation means the next most important means of livelihood for the HH

³ Always fishing means professional fishers – those who engage in fishing as their main livelihood

⁴ Sometimes fishing means occasional fishing

⁵ Subsistence fishing means those HHs who fish to supplement HH diets

head was highest amongst the rich/middle class (48). The age-dependency ratio was the lowest amongst the rich/middle group (77). Average years completed in the school by HH heads was highest amongst the rich/middle category (4.3 years). About 15 percent of the HHs were involved with fishing, this was highest amongst the destitute (50%). Over 29 percent of the HHs were involved with NGO activities, this was also highest among the destitute and the poor.

Table 7.2: Household composition in the NPBSS

Wealth category	Average sex ratio= (male/female) ×100	Average age of HHH	Age dependency ratio	Average years completed in school (%)		HH involved with fishing (%)	HH involved with NGO (%)
				HHH	HH Member		
Rich/middle (n=29)	170.1	48	77.3	4.3	3.5	7.1 (1)	28.6 (8)
Upper poor (n=18)	158.4	38	110.8	2.4	1.8	28.6 (4)	7.1 (2)
Poor (n=17)	148.5	44	78.4	2.6	1.6	14.3 (2)	32.1 (9)
Destitute (n=32)	154.6	45	87.1	0.5	1.0	50.0 (7)	32.1 (9)
Total (n=96)	158.9	44	87.1	2.4	2.0	14.6 (14)	29.2 (28)

Note: Figures in the parentheses indicate the number

Table 7.3 reveals the average land ownership patterns of the HHs of this water body. On average the HHs had about 12 decimals of homestead own land, this was highest amongst the rich/middle class (15.7 decimals), followed by destitute (11.3 decimals) and the poor (9.0 decimals). On average the HHs had 75 cultivated own land, this was highest amongst the rich/middle (202.0 decimals) and lowest amongst destitute (6.6 decimals). On average the HHs had nearly 10 decimals of cultivated leased-out land, this was highest amongst the rich/middle (23.4 decimals) and lowest amongst the destitute (0.8 decimals). On average the HHs had about 15 decimals of cultivated leased-in land, this was highest amongst upper poor (28.7 decimals), followed by rich/middle (15.6 decimals), poor (12.2 decimals) and destitute (7.5 decimals).

Table 7.3: Average amount of land (in decimal) owned by HHs by wealth and land category

Wealth category	Owned				Leased-out			Leased-in		
	Homes tead	Culti vated	Pond/ doba	Fallow	Homes tead	Cultiv ated	Pond/ Doba	Homes tead	Culti vated	Pond/ doba
Rich/middle (n=29)	15.7	202.1	3.4	3.3	1.1	23.4	0.3	2.8	15.6	0
Upper poor (n=18)	7.4	32.1	0.6	0.1	0	6.7	0	0	28.7	0
Poor (n=17)	8.9	32.1	0.2	1.7	0.6	7.5	0	0	12.2	0.9
Destitute (n=32)	11.3	6.6	0.3	0.5	0	0.8	0	0	7.5	0
Total (n=96)	11.5	74.9	1.3	1.5	0.4	9.9	0.1	0.9	14.7	0.2

Table 7.4 shows the percentage of materials used in construction of the main rooms of the houses. The floors of main rooms of almost all houses were made of mud except for two rich/middle HHs (brick made 2 HHs). More than half of all walls of the houses was made of natural item⁶ with the highest being the destitute category (72%). About 22 percent walls of the houses were made of tin with the highest being for the rich/middle category. Only 10 percent walls of the houses were made of mud. Almost 90 percent roofs of main rooms of the houses were made of tin.

⁶ Natural items means bamboo, jute stick, hay, leaves of tree, straw etc.

Table 7.4: Percentage of materials used in construction of main rooms of the houses by WC

Wealth category	Floor		Wall				Roof	
	Brick	Mud	Brick	Tin	Natural	Mud	Tin	Natural
Rich/middle (n=29)	6.9 (2)	89.7 (26)	23.1 (6)	31.0 (9)	27.6 (8)	6.9 (2)	93.1 (27)	6.9 (2)
Upper poor (n=18)	0	100.0 (18)	0	33.3 (6)	61.1 (11)	5.6 (1)	94.4 (17)	5.6 (1)
Poor (n=17)	0	100.0 (17)	13.0 (2)	17.6 (3)	70.6 (12)	5.9 (1)	82.4 (14)	17.6 (3)
Destitute (n=32)	0	100.0 (32)	0	9.4 (3)	71.9 (23)	18.8 (6)	84.4 (27)	12.5 (4)
Total (n=96)	2.1 (2)	96.9 (93)	8.3 (8)	21.9 (21)	56.3 (54)	10.4 (10)	88.5 (85)	10.4 (10)

Note: Figures in the parentheses indicate the number

Table 7.5 reveals the percentage of the houses by nature of ownership and wealth category. The inhabitants owned almost all houses themselves, except one upper poor HH.

Table 7.5: Percentage of the houses by nature of ownership and WC

Wealth category	Ownership pattern	
	Owned	Owned by other/rented
Rich/middle (n=29)	100.0 (29)	0
Upper poor (n=18)	94.4 (17)	5.6 (1)
Poor (n=17)	100.0 (17)	0
Destitute (n=32)	100.0 (32)	0
Total (n=96)	99.0 (95)	1.0 (1)

Note: Figures in the parentheses indicate the number

Table 7.6 presents the percentage of HHs taken one meal in a day. Nearly 21 percent of the sample HHs took one meal in a day during March-April, the highest being the destitute (37.5%) and lowest were the rich/middle category (3.4%). Some (12.5%) of the HHs took one meal in a day from February to April, which is very unusual.

Table 7.6: Percentage of HHs taken one meal in a day by wealth category during 2000- 2001

Wealth category	Apr – May	May – Jun	Jun – Jul	Jul – Aug	Aug – Sep	Sep – Oct	Oct – Nov	Nov – Dec	Dec – Jan	Jan – Feb	Feb – Mar	Mar – Apr
	Baishak	Jaistha	Ashar	Shrabon	Bhadro	Ashwin	Kartik	Augrahasan	Poush	Magh	Falgun	Chaitra
Rich/middle (n=29)	0	0	0	0	0	0	0	0	0	0	3.4 (1)	3.4 (1)
Upper poor (n=18)	5.6 (1)	0	0	0	0	5.6 (1)	5.6 (1)	0	0	0	11.2 (2)	11.1 (2)
Poor (n=17)	0	0	0	0	0	11.8 (2)	5.9 (1)	0	5.9 (1)	11.8 (1)	29.4 (5)	29.4 (5)
Destitute (n=32)	12.5 (4)	0	0	3.1 (1)	0	6.3 (2)	12.5 (4)	0	0	0	12.5 (4)	37.5 (12)
Total (n=96)	5.2 (5)	0	0	1.0 (1)	0	5.2 (5)	6.3 (6)	0	1.0 (1)	1.0 (1)	12.5 (12)	20.8 (20)

Note: Figures in the parentheses indicate the number

Table 7.7 illustrates that the strategies adopted in the case of income or asset loss. About 45 percent of the HHs adopted the borrowing as a strategy and 43 percent of the HHs adopted the borrowing with interest in case of economic crisis. But in the rich group, about one third of the HHs also adopted lease or sell the land strategy in case of economic crisis.

Table 7.7: Percentage of HHs adopted the strategies in case of income or asset loss by wealth category

Wealth category	Strategies				
	Borrowing	Borrowing by interest	Lease or sell the land	Sell the livestock or crops	Expenditure from their own savings
Rich/middle (n=29)	75.9 (22)	20.7 (6)	31.0 (9)	17.2 (5)	6.9 (2)
Upper poor (n=18)	55.6 (10)	50.0 (9)	11.1 (2)	11.1 (2)	0
Poor (n=17)	35.3 (6)	52.9 (9)	11.8 (2)	5.9 (1)	0
Destitute (n=32)	46.9 (15)	53.1 (17)	0	0	0
Total (n=96)	44.8 (43)	42.7 (41)	13.5 (13)	8.3 (8)	2.1 (2)

Note: Figures in the parentheses indicate the number.

Note: Multiple responses were considered.

Table 7.8 describes the percentage of the HHs economic solvency situation within last 12 months. Virtually 45% of the HHs had occasional deficit, this was the highest among the destitute, followed by the poor. One fourth of the HHs had breakeven. About seventeen percent of the HHs had always deficit, this was the highest among the destitute.

Table 7.8: Percentage of the HHs economic status within last 12 months by wealth category

Wealth category	Status			
	Always Deficit	Occasional deficit	Breakeven	Surplus
Rich/middle (n=29)	6.9 (2)	34.5 (10)	34.5 (10)	24.1 (7)
Upper poor (n=18)	0	38.9 (7)	38.9 (7)	22.2 (4)
Poor (n=17)	23.5 (4)	52.9 (9)	17.6 (3)	5.9 (1)
Destitute (n=32)	31.3 (10)	53.1 (17)	12.5 (4)	3.1 (1)
Total (n=96)	16.7 (16)	44.8 (43)	25.0 (24)	13.5 (13)

Note: Figures in the parentheses indicate the number

Table 7.9 shows the percentage of the HHs who took loans in different months of 2000-2001. Three quarter of the sample HHs took loans in March-April, the highest being the destitute (88%), followed by the rich/middle (69%). More than 40 percent of the HHs took loans in February-March, the highest being the upper poor, followed by the destitute. Over 10 percent of the HHs took loans in January-February, the highest being the destitute.

Table 7.9: Percentage of the HHs taking loans in different months of 2000-2001

Wealth category	Apr - May	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr
	Baishak	Jaistha	Ashar	Shrabon	Bhadro	Ashwin	Kartik	Augrahan	Poush	Magh	Falgun	Chaitra
Rich/middle (n=29)	10.3 (3)	3.4 (1)	3.4 (1)	0	0	3.4 (1)	31.0 (9)	3.4 (1)	6.9 (2)	3.4 (1)	27.6 (8)	69.0 (20)
Upper poor (n=18)	22.2 (4)	0	0	0	0	5.6 (1)	11.1 (2)	0	0	5.6 (1)	55.6 (10)	72.2 (13)
Poor (n=17)	29.4 (5)	5.9 (1)	5.9 (1)	0	5.9 (1)	17.6 (3)	23.5 (4)	5.9 (1)	5.9 (1)	11.8 (2)	41.2 (7)	58.8 (10)
Destitute (n=32)	28.1 (9)	3.1 (1)	6.3 (2)	3.1 (1)	6.3 (2)	18.8 (6)	37.5 (12)	9.4 (3)	9.4 (3)	18.8 (6)	43.8 (14)	87.5 (28)
Total (n=96)	2.2 (21)	3.1 (3)	4.2 (4)	1.0 (1)	3.1 (3)	11.5 (11)	28.1 (27)	5.2 (5)	6.3 (6)	10.4 (10)	40.6 (39)	74.0 (71)

Note: Figures in the parentheses indicate the number

Table 7.10 shows the percentage of HH heads remained unemployed in certain parts of the year and things done at that time. Just over 77 percent remained unemployed with the highest amongst poor (94%) and lowest amongst rich (59%). During the unemployment period most of them engaged in the indirect earning.

Table 7.10: Percentage of the HH heads remains unemployed in certain parts of the year and things done at that time by WC

Wealth category	Remain unemployed	Things done when unemployed		
		Indirect earning	Direct earning	Training/no work
Rich/middle (n=29)	58.7 (17)	88.2 (15)	11.8 (2)	0
Upper poor (n=18)	61.1 (11)	72.7 (8)	9.1 (1)	18.2 (2)
Poor (n=17)	94.1 (16)	56.3 (9)	25.0 (4)	18.2 (3)
Destitute (n=32)	93.8 (30)	70.0 (21)	13.3 (4)	16.7 (5)
Total (n=96)	77.1 (74)	71.6 (53)	14.9 (11)	13.5 (10)

Note: Figures in the parentheses indicate the number

Table 7.11 presents the health-seeking behaviour of the sample HHs. About 20 percent went to MBSS doctors during illness with the being highest for rich (28%) and lowest for poor (6%). Seventy-five percent of the HHs went to village doctors during illness with the highest being the upper poor. Just over 5 percent of the HHs went to *Kabiraj* or *Homeo* or BRAC Shebika.

Table 7.11: Health-seeking behaviour of the sample HHs by WC

Wealth category	Health-seeking behaviour		
	MBBS doctor	Village doctor	Others (Kabiraj/Homeo/BRAC Shebika)
Rich/middle (n=29)	27.6 (8)	69.0 (20)	3.4(1)
Upper poor (n=18)	16.7 (3)	83.3 (15)	0
Poor (n=17)	5.9 (1)	82.2 (15)	5.9(1)
Destitute (n=32)	21.9 (7)	68.8 (22)	9.3(3)
Total (n=96)	19.8 (19)	75.0 (72)	5.2 (5)

Note: Figures in the parentheses indicate the number

According to the perception of almost all HHs the fish production has decreased in last five years (Table 7.12). But some people reported that it was the same. Data indicate that all sample HHs expected the activities of fisheries department would be beneficial.

Table 7.12: Percentage of the HHs perception about fish production in open water bodies in last five years

Wealth category	Fish production		
	Decreased	Same	Non response
Rich/middle (n=29)	93.1 (27)	6.9 (2)	0
Upper poor (n=18)	94.4 (17)	5.6 (1)	0
Poor (n=17)	88.2 (15)	11.8 (2)	0
Destitute (n=32)	90.6 (29)	6.3 (2)	3.1 (1)

Note: Figures in the parentheses indicate the number

Profile of Six Villages under the Water Body NPBSS

Under the water body NPBSS six villages have been taken up to understand the livelihood conditions of the villagers through participatory rural appraisal (PRA). The villages are Charpara, Ambari, Ulipur Augpara, Jagodishpur, Puntair Moddhyapara, and Kumiradanga are situated under Gobindagonj upazila of district Gaibandha.

I. Profile of Village Charpara

1. Contextual Analysis

1.1 Historical background

The villagers informed that long ago the area was barren low char land and no crop would be produced there. There was no human habitation either. The area was dark but in course of time people gradually started developing the soil and group by group making settlement there by constructing houses. Since it was a char land the newly formed village was named Charpara. It is situated in Puntair union parishad area under Gobindagonj upazila of Gaibandha district. Located from four kilometres to the northeast of Mohimaganj the village has a *beel* named Nurulia located to the south of the village. People of various occupations and vocations inhabit the village and their standard of living is fairly high. There are many ponds, plenty of cultivable land in the area. Besides it has mosque, madrassa, club, BRAC school and NGO offices. The natural scenery of the village is very beautiful and pleasant.

1.2 Physical infrastructure

Ambari marks the borders of the village to the north, Khoribari to the south, Puntair to the east and village Shibpur to the west. The area of the village is fairly big which has a length of 1kilometer and a quarter of a kilometre in width. There are 112 homesteads with a population of 980 all of who are Muslims. However occupation wise they belong to many classes. Agriculturist constitute 30%, fishermen constitute 60%, day labourers 5% and others 5% only. Literacy rate of the village is fairly good at 25%. The village has madrassa, mosques, club, NGO schools, rice processing plants, ponds and tanks and roads.

1.3 Political backdrop

Since there is no member of Union Parishad from this village local leaders alone are there to take care of development activities of the village. However, if problems of high magnitude arise assistance is sought from the government administration for solution. *Hartals* or strikes called by political parties do not affect this village.

1.4 Administrative arrangements

The villagers get some assistance from the government and private institutions such as when big disputes arise between groups or individuals or when system of dowry gives rise to family

problems to time to time. However, if any problem does become extremely complex administrative assistance is sought for.

1.5 Education

There are no government primary schools. The children of the poor families however get good scope of education from the local BRAC schools. Moreover, there are mosques and madrassas where boys and girls of all classes receive religious education. Once a year Islamic *Jalsha* (arrangement of religious songs) is held in the madrassa.

1.6 Health facilities

There is no government or private health center in the village. People, however, take advantage of medical facilities from health clinic, charitable dispensaries, and BRAC health centers situated at Mohimagonj.

1.7 Culture

Institutions like local clubs, mosques, madrassa generally observe national days and hold various cultural, religious and other functions. These are educative and give chances for recreation at the same time.

2. Village Resources

Table 2.1 Description of resources in the village

Types of resources	Description of resources	Beneficiaries/ stakeholders
Natural capital	Cultivable land and <i>beels</i>	The <i>beel</i> is a source of fish resource and therefore the people are much benefited. Around the <i>beel</i> there are also cultivable lands on which paddy and sugarcane are produced to the benefit of the villagers.
Human capital	BRAC schools, mosque, madras, <i>beels</i> , roads and clubs	All the people of the village enjoy facilities provided by mosques and madrassas. People particularly the poorer class derive benefit from road facilities, <i>beels</i> and clubs. This facility also includes financial credit facility. The poor boys and girls receive education in the schools established by BRAC
Social capital	Two clubs, mosques, madrassas and BRAC schools	The two clubs provide recreational and cultural facilities and observe various national days by arranging functions. The mosques impart religious education and madrassa while the BRAC school imparts modern education to the poor boys and girls.
Physical capital	Culverts, bridge, deep tube-wells, roads, rice mills, sanitary latrines, grocery shops, ponds and <i>Eidgah</i> .	People of all classes enjoy the service and benefits provided by these. Existence of deep tube-wells ensures adequate irrigation facilities for production of crops. Bridges facilitate transportation as well as drainage of water. The club provides facilities, which are of social nature.
Financial capital	Sugarcane, fish, rice mills, moneylenders and ponds.	People of the village naturally derive much benefit from these resources.

2.1 Natural capital

There are 5 ponds under individual ownership. The owners rear fishes like Rui, Catla, Magur, Silver Carp, Grass Carp, Pangas etc and garner profit by selling them in the nearby market. They also consume fish from their ponds to meet their protein demand. Although these are owned by

individual but others use them for bathing of their cattle, washing of domestic utensils and their personal baths.

To the east of the village there is a common *beel* where all can catch fish free of any charge. During the dry season paddy is cultivated in this land. Rui, catla, mrigal, boal, puti and few other species of fishes are available in this *beel*. The fishermen catch fish with the help of current net, darak and berijal. This is their mainstay of livelihood. In the dry season the ditches attract fishes and their owners come and catch them.

The area around the *beel* with a little elevation is suitable for cultivation and the farmers grow paddy, sugarcane and wheat there.

There is no forest or orchard inside the village. However along both the edges of the roads there are there are a number of trees planted.

2.2 Human capital

Although is no government school in the village the students travel a distance of one kilometer to the Ambari Government Primary School to get better education. This school provides free education for all. There is only one BRAC School standing as the only hope for those who cannot afford education. The villagers particularly those who are the poorest are getting benefited from this school.

So far there exists no collage in the village. But there is a collage, which is 4-5 kilometer from the village where few get the chance to be enrolled.

There is no health center so far been established either by the government or by the private sector. The villagers have to travel the family health care center and the charity hospital at Mohimaganj for their treatment and medical consultation services. Often they visit the so-called local doctors for treatment at a nominal fee. Some times some local NGO's such as BRAC comes out with medical facilities.

2.3 Physical capital

There is only one mosque where the villagers say their prayer five times a day. This is the center for all sorts of religious activities such as teaching of Arabic language. As there is no Hindus in this village there is no Hindu temple in the village.

There is no government school in the village. But there is a non-government school, and a BRAC school in the village. The BRAC School is providing free education for the children who come from poor families. So far there exist no collage in the village. But there is a collage, which is 4-5 kilometer from the village where few get the chance to be enrolled. There is a Forkania madrassa which providing traditional Islamic Education to the local students. Students from all strata are allowed to learn Arabic and skills required reading the holy Quran.

No initiatives have so far been undertaken to construct a pitched road in this village. However, there is 3 kilometers of earthen roads run across the village. There is 3 kilometers of earthen roads run across the village. Rickshaws, van, buffalo vans are among the most common which

ply over the road. During the wet season often the roads are left muddy and slippery leaving the villagers stranded. There is no bus stand of its own in the village. Villagers have to travel a distance of 4 kilometer to avail transports leading to townships.

There are two rice mills in the village in the village, which is serving the inhabitants of this village to process their rice. This also serves the villager by grinding the wheat. None of the villagers have so far taken initiative to set up any factory in this village. But there is a sugar where the local farmers sell their sugarcane, which is 4 kilometers away from the village.

2.4 Financial capital

There are no banks or to land money to the people. However, people have opportunities to take loan from institutions like BRAC, Grameen Bank, Rajshahi Krishi Unnoyan Bank, Sonali Bank and Shonirbhar Bangladesh. The borrowed money is utilized by the borrowers to do small business and for poultry farming for cultivation of sugarcane, which give them financial benefits. The go by the name of Mohajons and there are only a few of them. In times of need people apply for loan to them although at a very high rate of interest. There are two clubs named Surja Torun Club and Jonokollyan Club in the village. The poor people get financial and social assistance from these clubs.

3. Institutional Processes: Importance and Roles

Table 3.1 The role of development organizations

Type of organization	Types of work involved in	Beneficiaries/Stakeholders
Government institutions	The village does not have any government primary school. There is however one such school situated about one kilometer away.	Children receive free education from the government primary schools mentioned earlier. For this they have to walk up and down one kilometer each way.
NGOs, CBOs, Co-operatives	Muslims of all classes go to the mosque to say prayer. Madrassa imparts religious education while BRAC schools provide education for the poor class at a nominal cost. The clubs observes cultural programs from time to time and help finance marriage for those who are at the bottom of the socio-economic stratum.	Infect all the villagers get facilities from these institutions. Poorer class is given more attention by the BRAC school and the club.
Informal organizations	The village has two clubs. These clubs arrange various cultural functions and supplies games materials for the boys. The clubs also try to settle disputes (shalish) among the villagers and at times help the poor people at the time of their marriage of their daughters.	Generally the poorer part of the population derives benefit from these institutions.
Private sectors	People get husking and grinding facilities from the rice mills at costs. The big businessmen and the money- lenders provide credit short-term facilities to the needy people.	Almost every body gets the benefit of the rice-mills and the money-lenders and businessmen

4. Seasonal Vulnerability and Coping Strategies

Table 4.1 Seasonal differences in village Charpara

Item	April -May	May - June	June - July	July -Aug	Aug- Sept	Sept -Oct	Oct- Nov	Nov- Dec	Dec- Jan	Jan- Feb	Feb- Mar ch	Mar ch- April
	<i>Baish akh</i>	<i>Jaist ha</i>	<i>Asha r</i>	<i>Shra bon</i>	<i>Bha dro</i>	<i>Ash win</i>	<i>Karti k</i>	<i>Augr ahay an</i>	<i>Pous h</i>	<i>Mag h</i>	<i>Falg oon</i>	<i>Chait ra</i>
Temperature	12	11	9	8	7	5	4	3	1	2	6	10
Rainfall	4	8	12	12	10	9	7	6	5	1	2	3
Employment opportunity	11	12	4	5	6	1	2	3	9	10	8	7
Food deficit	10	1	2	3	4	5	6	7	8	9	11	12
Borrowing	10	1	2	2	2	3	5	7	8	9	11	12
Lean period	10	1	2	3	4	5	6	7	8	9	11	12
Fish availability	1	2	3	11	12	10	9	8	7	6	4	1

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Temperature

Maximum temperature in this area is recorded in the month of Baishakh. Temperature goes down to minimum in Poush. At that time the weather remains very much foggy.

4.2 Rainfall

During the month of Ashar heaviest rainfall takes place. It may be mentioned that Ashar and Shrabon constitute the rainy season of Bangladesh. Rainfall drops to its minimum during the month of Magh.

4.3 Employment opportunity

Although employment opportunity prevails all throughout the year the month of Jaistha offers best scope of works. Because at that time harvesting of IRRI paddy takes place. The month of Ashwin means lean period lean period for jobs in terms of job opportunity. This is caused by closer of the sugar-mills and the fact that sugarcane field does not require any labour. Moreover, in that area Aman is not cultivated at all. During the month of Chaitra people hardly find any job opportunity. The reasons are draught and drying up of the *beel*. To face the situation the people go out to the townships and work as rickshaw-puller, van-puller and day labour, which enable them to earn money.

4.4 Food deficit

Food shortage occurs but for short period. It however reaches the highest level in the month of Chaitra when the cultivators do not have any crops to harvest. Moreover the paddy (IRRI) which they have harvested few months ago becomes exhausted by this time. The reason is that there is no harvest at that time and the people remain out of pocket. To meet up the difficulty they sell away their cows, goats, ducks, poultry birds. If these are not enough they take loans from the rich people named the Mohajons. The people become well to do in the months of Jaistha because at that time another IRRI harvesting takes place. People also get employment opportunity in this period.

4.5 Borrowing

Most of the people take loans in Chaitra when food scarcity and unemployment situation becomes very acute. If and when they fail to borrow they have to sell their belongings to keep themselves alive. Because of harvesting period no loan is require by the villagers in the month of Jaistha.

4.6 Lean period

The month of Chaitra has been specifically mentioned the worst. There is hardly any rainfall at this time of the year. At times continued draught makes life miserable. No job opportunity and hardly any cash income compound the situation of food shortage. Prices of daily essentials shoot up. During the flood and famine people are forced to borrow money and their savings become exhausted. They have also to quite often sell their belongings as earlier mentioned.

When loan facilities are not available from banks and private mohajons there remains no other alternative than to sell their cows, goats, poultry birds and most unfortunately their land.

4.7 Availability of fish

Discussion with the villagers reveals that villagers can catch fish both during day and night time almost throughout the whole year. However the catch of fish becomes maximum during the month of Bhadra because the *beels* remains full of water and rain fall also remains adequate. However in the month of Jaistha availability of fish reduces because of the fact that water level in the *beels* go down and rainfall does not remain adequate. In some cases the *beels* even become dried.

5. Well-being Pattern of the Village

Table 5.1 Well-being pattern in village Charpara

Wealth category Hhs 112	Livelihood assets	Livelihood strategies	Sustainable livelihood outcomes
Rich 4%	1. Possess 15-20 bigha lands, brick built house, house in town, 10/12 cattle, ponds and business.	1. Earn money from the produced crops, rent money of house, etc. 2. They use their assets in the developmental works.	1. Have a lot of earnings
Middle class 17%	1. Possess 8-10 bigha lands, house made of tin, 5-6 cows, shallow machine, shop in sub district town, half brick built houses, ponds. 2. Earn money by working as carpenter and by cultivation of fish.	1. Produce crops in the field and benefited financially.	1. The income is properly distributed
Upper poor 33%	1. Possess 2-3 bigha lands, house made of tin and hemp, 3-4 cows. 2. Earn money from fish cultivation, rickshaw pulling, service, working in hotels, etc.	1. Produce a small number of crops. 2. Earn livelihood by pulling rickshaw and working hard	1. Low income
Poor 21%	1. Possess a few lands of own homestead and very few cultivable lands(1.5 bigha), 2. Keep leased cow, Cultivate fish, and work hard to earn.	1. Earn livelihood by selling, buying, borrowing and fishing.	1. The income is lowest.
Destitute 25%	1. Very few people possess homestead 2. Earn livelihood by pulling rickshaw, van working as day labourer, by fishing and begging.	1. Through the year used to work in peoples' house and earn livelihood by begging.	1. Do not have any earning, they have to take loans and beg.

Table 5.2 Well-being data of village Charpara

Wealth category	Percentage (n = 112)	HH identification number
Rich	4% (4)	20, 27, 52, 67
Middle class	17 % (19)	25, 26, 28, 29, 30, 31, 42, 46, 55, 64, 65, 66, 72, 91, 92, 97, 107, 109, 110
Upper poor	33% (37)	1, 2, 5, 7, 8, 11, 15, 18, 21, 24, 32, 33, 39, 40, 41, 43, 44, 48, 53, 54, 57, 60, 61, 62, 63, 70, 71, 73, 76, 79, 81, 83, 95, 98, 106, 108, 111
Poor	21% (24)	4, 22, 34, 38, 49, 50, 58, 59, 68, 69, 75, 77, 78, 80, 84, 88, 89, 93, 94, 99, 100, 101, 102, 104
Destitute	25% (28)	3, 6, 9, 10, 12, 13, 14, 16, 17, 19, 23, 35, 36, 37, 45, 47, 51, 56, 74, 82, 85, 86, 87, 90, 96, 103, 105, 112

II. Profile of Village Ambari

1. Contextual Analysis

1.1 Historical background

According to the statement of the villagers of the Ambari the village was once very popular for its mango production. The inhabitants of the village used to make a remarkable profit by selling these mangoes in the nearby market and elsewhere. The village was named Ambari (Aam is mango and Bari is home) from that time. Ambari is located 4 kilometer northwest of Mohimagonj. There is a Beel (floodplain) at the east Side of the village, which represents the heritage of the village. A number of different professionals live in this village. The standards of living of the inhabitants are fairly well. There are a number of schools, mosques, one shrine for the Hindu, club, community center present in the village. Few NGO's are also operating in the village, which are providing loans for various income generating activities. Ambari has got a very nice scenic view.

1.2 Physical infrastructure

Fokirpara at north, Garamara at south, Shanapara at east and Shibpur at the west encircle the village. The village is 1 kilometer in length and 0.25 kilometer in width with an area of 0.25 square kilometer. A total of 190 houses are present in the village with a population of 1650. All the villagers are Muslims. The village is inhabited by a variety of professionals. Among them 60% are farmers, 20% fisherman, 15% labours and 5% others. The literacy rate within the village is 60%, which includes those who can only write their names. There is one government school and three non-government schools, 4 mosques, one madrassa, one community club, two rice mills and three shops in the village. There is also one socks factory. No initiatives have been so far taken by the government to construct a pitched road. Total length of the Kacha (earthen) roads in the village is 1.5 kilometer. There is a Beel (floodplain) at the Southeast side of the village, which teems with fish. So far no restrictions have been imposed on fishing in this Beel. All the villagers are allowed to lure fish from this Beel to meet their requirements.

1.3 Political context

The Upazila Chairman, members and other local leaders work shouldered to shoulder to strengthen and streamline the development activities in the village. Chairmen and Members of the Upazila Parishad (UP) are honored to take part in resolving any disputes that arise from any unwanted circumstances. But if any conflict goes beyond the control of the local leader than the villagers accept the court as their last resort. Little affect is apparent in the village during the hartal. No significant affect of hartal seems to be apparent in this village.

1.4 Administrative systems

The inhabitants of this village have to depend on Mohimagonj Thana for administrative facilities, which is at a distance of 4 kilometers. As it is within the boundaries of Mohimagonj Thana all sorts of development activities are controlled from the Thana offices of different governmental and non-governmental organizations.

1.5 Education

One government school along with three non-government schools is there in village 'Ambari'. Among other social and religious institutes to be mentioned are 4 mosques, one madrasa. Due to the presence of these institutes the literacy of this village is fairly high.

1.6 Health facilities

The community center that is existing in the village is currently rendering the medical service. This center is providing health facilities for the children as well as the pregnant women. The villagers have referred to either the Thana health complex or to the district hospital for sophisticated treatment.

1.7 Culture

According to the statement of the villagers that the existing community clubs takes the responsibility of organizing cultural programs. There are stray incidents of early marriage in this village. This was the result of the combined effort different NGO's and relevant government agencies to shape up community values against early marriage.

2. Village Resources

Table 2.1 Description of resources in the village

Type of resources	Brief Description of resources	Beneficiaries
Natural capital	Arable land, floodplains and trees	Farmers grow different crops in different seasons their crop fields. The fishermen lure out fish from the floodplains and make their livelihood. Water is pumped out of the floodplains to produce rice and other crop. The existing canopy increases the natural beauty of the village.
Human capital	Government school, BRAC school, satellite school, mosque, madrasa, health center, rice mills, road and culverts, open water bodies	Almost all the children go to school. The mosque is the center for worship for the Muslims. The health center organizes vaccination programs and provides medical services for the pregnant women. Few shops that are existing in the village are the spots to buy necessary items. The fisherman garners profit by selling their catch into the local market. But all the villagers are allowed to catch fish from the beels.
Social capital	Club, mosque, madrasa and playground	The existing club of the village organizes cultural functions. It also extends supports to put an end to the sufferings of the most distressed. The clubs comes out with sport facilities for the children as well as the adults. The mosque is the centers for practicing cultural norms for the Muslims. The madrasa is providing Islamic education to the children and the juveniles.
Physical capital	Roads, tube-wells, sanitary systems, playgrounds, ponds and shops.	The villagers are being benefited social and economically from these infrastructures.
Financial capital	Sugarcane, rice mills and a socks factory.	Farmers garner profit by selling their produce in the local market.

2.1 Natural capital

At a short distance from the village there is a *beel* to its southeast corner. The *beel* abounds with fish. People in general can fish in the *beel*, which has no fee on it. The fishes Rui, Catla, Puti, Mrigal, Puti, Koi, Tengra, Ghulsa, Air, Magur, Gucci, Shrimp Boal and Shoil, are available there. Some people for family consumption while others do it professionally to earn money. In

the dry season only in the low-level pockets made by certain people to which fishes are attracted and only those people can catch fish from there.

Around the *beel* there are cultivable land where the villagers grow paddy and sugarcane to increase their income. There is no forest or orchard in the village. However, beside and along the Kacha (earthen) roads there are various types of trees. There are seven tanks under private ownership and on private arrangement fish culture is practiced. However, although these are private tanks villagers of all classes use these for bath including cattle and washing of household utensils. This is an aspect of social welfare.

2.2 Human capital

The village has one government primary school, one non-government junior high schools. Besides, there is one BRAC school and another satellite school. The literacy percentage of the village is 60. Those who live on agriculture constitute 60% of the population. The fisherman class constitutes 20%, day labourers 15% and others account for 5%. The number of service holders is only 25.

There is one community health centre in the village where the children can receive medical treatment and the expecting mothers can receive health service and consultations.

2.3 Social capital

The village does not have any social service institutions of its own. Even then, outside institutions like BRAC, Grameen Bank, ISCOS, DORPAN, and GMF are providing not only loans but also service in the field of health, education, medical treatment, etc.

As mentioned earlier there is a club in the name of Late Abdul Aziz Memorial Shongha. Under the auspicious of this club various cultural functions as well as national functions are arranged from time to time. This club also renders assistance for the children of poor families by way of medical facility and at times also for marriage purposes.

2.4 Physical capital

The village has one government Primary school, one non-government, one school run by BRAC and one satellite school. Boys and girls of all social strata can receive education from those schools. As a result all the villagers are benefited. The village does not have any collage. The nearest degree collage is situated at Mohimagonj, about 4 kilometers away from the village. Students of the village receive higher education there.

There are four mosques in the village. Apart from Namaz (prayer) these are also used for imparting religious education. The village has one Madrassa where Muslim boys and girls receive leanings in Arabic. Various religious functions are organized there.

There is no pitched road inside the village. The unpaved roads of the village are linked up with the pitched roads some two kilometers out of the village. Across the middle of the village there is a unpaved road which is one and half kilometers long. The non-availability of the pitched roads creates more sufferings for the inhabitants of the village.

Since there is no bus stand in the village people have to use Mohimagonj bus stand which is some four kilometer away to move to the township and back from there.

There are two rice mills in the village. Produced paddy is husked there. There are some people who take the service of the rice mills not only husking rice but also for grinding wheat on commercial basis. There is only one factory that manufactures socks, which are marketed in the nearby village and townships. There are three grocery shops to cater to the needs of the people.

2.5 Financial capital

There are no banks or to land money to the people. However, people have opportunities to take loan from institutions like BRAC, Grameen Bank, EASCOS, Chashi Kollyan Dorpon, Shonirbhar Bangladesh and GMF. The borrowed money is utilized by the borrowers to do small business and for poultry farming. Although there are no banks in the village the people take loans from Rajshahi Krishi Unnayan Bank and Sonali Bank for cultivation of sugarcane, which give them financial benefits. The go by the name of mohajons and there are only a few of them. In times of need people apply for loan to them although at a very high rate of interest. There is none of them operating inside the village. However, the poor people can take financial assistance and co-operation from a memorial club set up by late Abdul Aziz.

3. Institutional Processes: Importance and Roles

Table 3.1 The role of development organizations

Name of the Organization	Type of Activities	Beneficiaries
Government institutions	Ensure primary education for the children.	All the villagers are equally benefited from the schools.
NGOs, CBOs, Co-operatives	The villagers go to the mosques to perform their religious rites. The club act organizes cultural functions for the community and the community hospital serves the community with health facilities. The satellite schools are providing education for the children who are very poor and cannot afford to bear the expenses of being a student. Usually students of BRAC schools goes to Junior High Schools after finishing their study in BRAC schools.	All the villagers are the beneficiaries of these activities
Informal organizations	There is a club that is named Late Abdul Aziz Memorial Club. Among other functions this club organizes cultural and sports programs for the children and youths. Often it helps the poor villagers in their marriage, health care, disputes etc	Those who are in the lower end of the socio-economic spectrum are getting most benefits.
Private sectors	Rice mills process the rice. The sock factory produces socks. Some of the rich villagers called mohajons supply loan to the villagers at a high interest rate.	All the villagers are equally benefited from the schools.

4. Seasonal Vulnerability and Coping Strategies

Table 4.1 Seasonal differences in village Ambari

Item	April- May	May- June	June- July	July- Aug	Aug- Sept	Sept- Oct	Oct- Nov	Nov- Dec	Dec- Jan	Jan- Feb	Feb- March	March- April
	<i>Bais hakh</i>	<i>Jaist ha</i>	<i>Asha r</i>	<i>Shra bon</i>	<i>Bha dro</i>	<i>Ash win</i>	<i>Karti k</i>	<i>Augr ahay an</i>	<i>Pous h</i>	<i>Mag h</i>	<i>Falg oon</i>	<i>Chait ra</i>
Temperature	12	11	10	8	7	6	5	3	1	2	4	9
Rainfall	5	8	11	12	10	9	7	6	1	2	3	4
Employment opportunity	3	11	1	2	6	7	8	9	10	12	5	4
Food deficit	10	1	2	3	4	5	6	7	8	9	11	12
Borrowing	10	1	2	3	4	5	6	7	8	9	11	12
Lean period	12	11	10	9	8	7	3	2	1	4	5	6
Fish availability	2	1	3	4	12	11	10	9	8	7	6	5

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Temperature

Maximum temperature in this area is recorded in the month of Baishakh. Temperature goes down to minimum in Poush and Magh. In the winter months the sun moves to 23° degree south. That is why the sunlight is inclined which reduces the heat. The temperature falls to its lowest level during the month of Magh.

4.2 Rainfall

According to the statement of the villagers maximum rainfall in this area occurs in Shrabon and minimum rainfall is recorded during the month of Poush

4.3 Employment opportunities

The scope of work in the village is fairly good all throughout the year. However the villagers consider of Magh as the best for this purpose because during this time almost all classes of people become engaged in IRRI cultivation. This gives rise to extra job opportunity. On the contrary job opportunity remains in the lowest level during the month of Ashar when the sky remains mostly overcast with cloud. It rains quite occasionally during this period. Rural roads remain wet and muddy so that movement of the people becomes limited.

Usually Ashar is considered to be the worst season for employment. Frequent and prolonged rain forces them to stay home. Vary few work is available during this time. A heavy rainfall makes the roads muddy which retards free movement. The villagers often migrate to distant places to find work. If for obvious reasons they have to stay back home they try to survive taking loans promising to repay afterwards.

4.4 Food deficit

After discussion with the villagers it has come to light that it is the month of Chaitra during which food scarcity becomes pronounced. Although during the rest of the year some scarcity occurs from time to time. In the month of Chaitra no harvesting of food crops is there, there is rainfall and the weather remains dry and so hence people suffer from food shortage. The poorest among the farmers are saved from selling their cattle and other belongings. It may be noted that

food scarcity remains less during the month of Jaistha because during that time of the year all classes of villagers get some crop and for the harvesting people also get earning opportunities. The result is plenty of work opportunity and all the farmers in the village have enough food in their stock.

4.5 Borrowing

The villagers informed that most of them have to borrow, to whatever extent during the whole year. However in the month of Chaitra this borrowing reaches the peak because there is no harvesting during that time. For cultivation of IRRI they need money to procure water and fuel as well as for the maintenance of shallow/deep tube-wells. The borrowing items among the villagers are food-grains, fuel wood, money etc. On the contrary the level of borrowings drops to the bottom during the month of Jaistha because every family can harvest in some amount of paddy and they can even sell a mound or two to repay the earlier debts.

4.6 Lean period

Naturally the villagers do not remain the same all throughout the year. Although the month of Baishakh is considered to be the worst because during that month the weather remains turbulent, Kalboishakhi (storm accompanied by gusty rain) disrupts life and activities. The villagers had termed the period of floods, droughts and cyclones as the worst period of the years. They have to sell their belongings in case of prolonged floods or droughts. Flood is predominant during Ashar and Shrabon whereas the Baishakh is characterized by frequent occurrence of cyclones. In the worst case scenario the poorest have to sell their cattle, chicken and food-grains. If the situation turns out to be the worst they don't even bother to sell their furniture and other household items.

The villagers consider Poush as the best month because it is followed by the month of Augrahyan, which is traditionally the best month for harvesting Aman crop. Moreover, at that time there occurs no rainfall or storm, drought, famine or natural calamity. It is also worth mentioning that during this period the villagers enjoy various types of indigenous cakes and rice crispy, which they take in groups outside corridors of their houses.

4.7 Availability of fish

Discussion with the villagers reveals that villagers can catch fish both during day and night time almost throughout the whole year. However, the catch of fish becomes maximum during the month of Bhadra because the *beels* remains full of water and rain fall also remains adequate. However in the month of Jaistha availability of fish reduces because of the fact that water level in the *beels* go down and rainfall does not remain adequate. In some cases the *beels* even become dried.

5. Well-being Pattern in Village

Table 5.1 Well-being pattern in village Ambari

Wealth category Hhs 190	Livelihood assets	Livelihood strategies	Sustainable livelihood outcomes
Rich 16%	1. Posses 24-25 bigha lands, brick built houses, motorcycle, shallow machine, rice mill, power tiller, 8-10 cattle. 2. Earn money by from service and business.	1. Produce a lot of crops and use cattle, mill and factory in developmental works.	1. A lot of earnings occur and they become financially developed.
Middle class 15%	1. Possess 4-5 bigha lands, half brick built house, tin shade houses, livestock, shallow machine, buffalo cart, business of livestock and small grocery shops.	1. Become economically solvent by producing crops, renting out cars and shallow machine.	1. The income is properly distributed.
Upper poor 9%	1. Possess 2-3 bigha lands, hemp and tin made house, livestock, grocery shop, rickshaw/van and business of raw goods.	1. Earn livelihood by producing a few crops, pulling rickshaw or van and by doing small businesses.	1. Little income.
Poor 15%	1. Possess a very few lands and homestead of their own. 2. Earn livelihood by fishing, cultivating leased lands, keeping leased cows, puling rickshaw/van, and doing business of onion, chilly and flour.	1. Cultivate leased lands, keep the leased cow and earn livelihood by borrowing and selling labour.	1. A very few income
Destitute 44%	1. Do not have any cultivated lands of their own but possess a few lands of homestead. 2. Used to work in people's house, pull rickshaw, catch and sell fish, do businesses lately and beg.	1. Earn livelihood by borrowing, working in people's house, selling things and by taking helps of others.	1. No income and need to borrow.

Table 5.2 Well-being data of village Ambari

Wealth category	Percentage (n=190)	HH identification number
Rich	16% (31)	1, 2, 5, 6, 7, 8, 9, 10, 11, 12, 20, 22, 35, 36, 44, 45, 46, 115, 121, 122, 173, 174, 175, 176, 177, 182, 183, 185, 188, 189, 190
Middle class	15% (29)	3, 4, 23, 24, 29, 30, 31, 32, 33, 34, 37, 39, 40, 47, 71, 72, 84, 85, 86, 101, 116, 119, 120, 161, 163, 170, 178, 179, 184
Upper poor	9% (18)	14, 41, 42, 43, 49, 52, 55, 68, 69, 70, 87, 96, 102, 125, 154, 155, 186, 187
Poor	15% (29)	13, 18, 21, 27, 48, 60, 62, 63, 65, 66, 74, 75, 76, 80, 81, 89, 92, 107, 111, 117, 127, 132, 156, 158, 164, 166, 167, 171, 172
Destitute	44% (83)	15, 16, 17, 19, 25, 26, 28, 38, 50, 51, 53, 54, 56, 57, 58, 59, 61, 64, 67, 73, 77, 78, 79, 82, 83, 88, 90, 91, 93, 94, 95, 97, 98, 99, 100, 103, 104, 105, 106, 108, 109, 110, 112, 113, 114, 118, 123, 124, 126, 128, 129, 130, 131, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 157, 159, 160, 162, 165, 168, 169, 180, 18

III. Profile of Village Ulipur Augpara

1. Contextual Analysis

1.1 Historical background

This is a village of Mohimagonj union parishad under Gobindogonj upazila in the district of Gaibandha. In the past many Peers, Dorbesh and Aoulia lived here. The village is situated 3-4 kilometres to the Southeast of Mohimagonj. A *beel* is there to the Southeast corner. The village is full of natural beauty. People of various occupations live there. Their average standard of living is fairly high. There are many schools, clubs, madrassas, NGO's operating in the village. A small, very old canal is carrying the historical tradition of the village.

1.2 Physical infrastructure

The village borders with Jibonpur in the north, Shalmara in the south, Ghooga in the east and Dangacha in the west. It is a fairly big village having length of one kilometer and breadth of one kilometer. The number of population is 1077 while the houses being 290. All the inhabitants are Muslims. Almost all-occupational sections reside in this village. Of them 29% are agriculturist, 17% fishermen, 38% are day labourers, 6% are traders and 10% is accounted for by people of other occupations.

The village has one government primary schools, two BRAC schools, three Moktobs, three clubs, one brick-built mosque, two rice mills. There is a 2-3 kilometres long unpaved road in the village. It has bridges and culverts. In the Southeast corner of the village there is a *beel* having an area of one square kilometre. The name of the *beel* is Satbeela. Most of the time it remains full of water. There is abundant fish resource in the *beel* and the inhabitants make most out of them. The *beel* is common to all and therefore all get fairly equal benefit out of it.

1.3 Political/ Administrative

In the development activities of the village local leaders and elders contribute more than the elected representatives to the Union Councils do. The village remains out of influence of hartals. Local leaders and elders generally settle disputes. However when disputes are of high magnitude and complicated the disputants resort to government course. People get facilities from government and non-government administrative setups. Problems of dowry, marriage disputes are often settled by local leaders while others are often settled by local leaders with the help of government administration particularly when parties involved are strong.

1.4 Education

There are many government and non-government institutions including religious education institutions. One government primary school, two BRAC schools, one mosque, three Moktobs are there to cater to the educational needs of the children of the village.

1.5 Health

There is no government or non-government health center. BRAC however, provides health service to the poor section of the population. These include vaccination of the children, medical checkups of the expecting mothers, maternity service during delivery etc. for higher treatment people have to go to towns.

1.6 Culture

According to the version of the people the schools and clubs arrange various cultural functions, Waaz Mehfil and Halkaya Zikir. National festivals are also observed appropriately.

2. Village Resources

Table 2.1 Description of resources in the village

Types of resources	Description of resources	Beneficiaries/stakeholders
Natural capital	Beels, cultivable land, cattle, poultry birds, trees and bushes.	The beels are the source of fish for the villagers. The fishermen carry on fish trade. The cows give milk for the children.
Human capital	Village doctors, schoolteachers, Imams, teachers in moktob, club officials, and kobiraj.	All people derive benefit or get services from the doctors, schools, mosques, moktob, and day labourers.
Social capital	Mosques, BRAC schools, clubs, government primary schools.	All the villagers particularly the children.
Physical capital	Roads, culverts, walkways, mosques, BRAC school, primary school, bridges, tube-wells, sanitary latrines, rail lines, grocery shop and rice mills	The roads facilitate mobility of the people. The primary schools provide free of least costly education. Tube-wells provide pure drinking water. All the villagers get benefit from the rice mills.
Financial capital	Paddy, sugarcane, fish, rice mills.	Sugarcane is a cash crop for the farmers. The comparatively rich cultivators sell their surplus paddy to generate cash income. Those who trade in fish use the beel as their main source of earning. The rice mill provides husking facility to all. The richer people called Mohajons give loans to the needy.

2.1 Natural capital

To the southeastern side of the village there is a beel. The name of the beel is Satbeel. It has an area of approximately 30 acres- having a length of 1.5 kilometer and breadth of 0.5 kilometer. Water remains in the beel throughout the year although at different levels. In Bhadra the water level peak while in Chaitra the level goes down to the lowest. There are 6 'Chuas', which attract fish during the dry season. Available fishes in the beel are Rui, Catla, Boal, Puti, Shoal, Tengra, Shrimp etc. everybody is entitled to catch fish without paying any fees in this government property. The fishermen maintain their lives by catching and trading of fish.

There is no big canal in the village. Only one small narrow one is there, which has connected the bed with Bangali River. Water enters through this when it rains. On all four sides of the beel enough cultivable land exists. The cultivators grow paddy, sugarcane, wheat and potato etc on the stretch.

2.2 Human capital

The village has only one government primary school, which gives free education to the children of all classes of people rich or poor. The 2 BRAC schools provide good educational facilities up to class five. BRAC schools give more attention to the poor families. No government or non-government health centers exists so far here. The villagers have to travel to Mohimagonj for attaining medical facilities and any sorts of medical consultations. However health assistants of BRAC provide some services in the form of vaccination of children, medical check-ups of the

pregnant women and maternity services. Literacy rate in the village is around 45%. Occupation-wise break-up of population is: agriculturists 29%, fishermen 17%, day-labours 38%, traders- 6% and others- 10%.

2.3 Social capital

There are three clubs. They stage various functions to provide recreation for the local inhabitants. These clubs also celebrate the national days. They help the poor during marriage of their sons and daughters. Besides these they extend primary medical facility to those who are the most distressed among all the villagers.

2.4 Physical capital

For saying praying five times a day and for teaching religion there is a big brick built mosque in Ullipara. As there is no Hindus residing in the village there is no temple in the village. A government primary school where children of the village receive education free of cost. BRAC runs 2 schools and impart general education to those children remaining to the bottom of the socio-economic spectrum. As a result of this literacy percentage of the village has gone up considerably. There is no madrassa here in Ullipara. However three moktobs offer educational facilities in religion to the children. 3 kilometers of unpaved roads are there in the village. The roads connect the village with a metal road at a distance of 3-4 kilometer ahead, which leads to Mohimagonj.

Two rice mills are there in Ullipara. People can have their stacks of paddy husked at a cheaper rate there. The village does not so far have any factory or mills within its boundary. However there is a sugar mill at a distance of about 3 kilometers from the village where they discharge their sugarcane produce at a fair price. Some people find seasonal job in the mill.

2.5 Financial capital

There is no locally established money-lending agency. However, Grameen Bank, BRAC, Rajshahi Krishi Unnayan Bank, Sonali Bank provide credit facilities for various production activities. The main recipients of loan are cultivators, poultry firms, fish firms and traders. There is one Mohajoni house, which extend credit facilities to the needy villagers. But the dark aspect is that they charge exorbitant rate of interest on loans.

3. Institutional Processes: Importance and Roles

Table 3.1 The role of development organizations

Name of Organization	Types of work involved in	Beneficiaries/stakeholders
Government institutions	Free education facilities for the children.	All villagers.
NGOs, CBOs, Co-operatives	Saying prayers, observing religious rites, learning Arabic and religion, cultural activities and assistance to the poor for marriage of their daughters.	All of the villagers in general and children particularly of the poorer class.
Informal organizations	Three clubs who arrange various functions.	Generally the poorer section of the people gets maximum facilities.
Private sectors	There are two rice mills for husking of paddy and grinding of wheat. Short term financial help in the form of loan given by the rich and the business class to the poor	All sections derive benefit from the rice mills. The needy people get the loan facilities from the Mohajons and traders.

4. Seasonal Vulnerability and Coping Strategies

Table 4.1 Seasonal differences in village Ulipur Augpara

Item	April-May	May-June	June-July	July-Aug	Aug-Sept	Sept-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-March	March-April
	<i>Baisakh</i>	<i>Jaistha</i>	<i>Ashar</i>	<i>Shrabon</i>	<i>Bhadra</i>	<i>Ashwin</i>	<i>Kartik</i>	<i>Magh</i>	<i>Poush</i>	<i>Chaitra</i>	<i>Baisakh</i>	<i>Jaistha</i>
Temperature	12	12	10	9	10	8	6	5	2	1	3	5
Rainfall	4	6	12	10	11	8	3	1	1			2
Employment opportunity	2	7	11	10	5	1	2	12	4	5	8	5
Food deficit	7		3	2	11	12	10	1		1	4	6
Borrowing	4	0	1	2	11	12	10	1		1	5	7
Lean period	9	8	5	4	11	10	1	1	5	10	7	12
Fish availability	5	3	1	1	2	11	12	10	2	2	8	11

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Temperature

Maximum temperature in this area is recorded in the month of Jaistha. Temperature goes down to minimum in Magh. At that time the weather remains very much foggy.

4.2 Rainfall

During the month of Ashar heaviest rainfall takes place. Rainfall drops to its minimum during the month of Chaitra. Because as a rule during the winter the weather becomes almost moist less during this period Fog also contributes to this situation.

4.3 Employment opportunities

Although employment opportunity prevails all throughout the year the month of Jaistha offers best scope of jobs. Because at that time harvesting of IRRI paddy takes place. The unemployment situation becomes worst during the month of Kartik and Ashar. Heavy rainfalls characterize this period, which leaves the roads muddy. As a result the mobility of the villagers comes to a halt. At times they go elsewhere to search for works.

4.4 Food deficit

Food shortage occurs but for short period. It however reaches the highest level in the month of Chaitra when the cultivators do not have any crops to harvest. Moreover the paddy (IRRI) which they have harvested few months ago becomes exhausted by this time. The people become well to do in the months of Jaistha because at that time another IRRI harvesting takes place. People also get employment opportunity in this period.

According to the information derived from the villagers it is learnt that food shortage becomes maximum in the month of Chaitra. They have very little saving in hand that is why they suffer from shortage of food even though there is abundance of work opportunities. Often they apply for loans from the local NGO's of local Mohajons. Usually the mohajons charge a higher rate of interest.

4.5 Borrowing

People have to borrow more or less during this period. They do it most in the month of Chaitra when food shortage becomes prominent and employment opportunity at its lowest. If and when they fail to borrow they have to sell their belongings to keep themselves alive. Because of harvesting period no loan is required by the villagers in the month of Jaistha.

4.6 Lean period

The month of Ashar has been specifically mentioned the worst time of the year. There is hardly any rainfall at this time of the year. At times continued draught makes life miserable. No job opportunity and hardly any cash income compound the situation of food shortage. Prices of daily essentials shoot up. According to the statement of the villagers cows, goats, poultry birds, roof tin, plots of land common items of sale during acute scarcity of food. In extreme cases the poorer section even sells out their land or takes loans just to maintain their families.

Flood and famine generally affect this area. It rains heavily in the months of Ashar and devastating storms damage houses and standing crop in Baishakh. Sometimes they lease their land to cash out some money. People can somehow avoid famine by sale of their belongings. At times the government and the NGO's support them with relief goods.

4.7 Availability of fish

Discussion with the villagers reveals that villagers can catch fish both during day and night time almost throughout the whole year. More or less throughout the whole year fish is available in the Satbeel. However the supply is maximum during the month of Magh. The month of Baishakh is a lean period for catching fish. The month of Augrahasan, Kartik, Poush and Ashwin are considered the time of enough supply of fish according to the statement of the villagers. People have equal right of fishing in the marshes and that is without any cost. There are 6 Chuas (low lying pockets in the dried beels) where the fishes take shelter during the dry season. These fishing spots remain under private ownership. Even so others are also given shares of catches in this area.

5. Well-being Pattern in the Village

Table 5.1 Well-being pattern in village Ulipur Augpara

Wealth category Hhs 290	Livelihood assets	Livelihood strategies	Sustainable livelihood outcomes
Rich 12%	1. Posses brick built house, car, lands, saw mill, rice mill, business and a good bank balance. 2. Have the ability of sending children into foreign countries	1. Earn money from the produced crops, rent money of house, etc. 2. They use their assets in the developmental works.	1. A lot of earnings occur and they become financially developed.
Middle class 18%	1. Possess lands, shallow machine, business of raw goods and cotton, livestock, sanitary latrine and tube well.	1. Produce crops in the field and benefited financially.	1. The income is properly distributed
Upper poor 13%	1. Possess a few lands of own, house made of tin, small business, buffalo cart, rickshaw, van, etc. 2. Sometimes earn money by cultivate leased lands, cultivating fish and by hard working.	1. Produce a small number of crops. 2. Earn livelihood by renting out rickshaw, van and working hard	1. Little income
Poor 8%	1. Do not possess any cultivable lands of their own but have their own homestead 2. Earn money by cultivating leased lands, keeping leased cows, pulling rickshaws, working as day labourer and by doing the business of rice, flour, pan, etc.	1. Earn livelihood by borrowing, lending, cultivating peoples land and selling labour.	1. A very few income
Destitute 50%	1. Do not have any lands or homestead of their own. 2. Earn livelihood by pulling rented rickshaw, doing business, selling milk, vegetables, working as barber, begging and by borrowing.	1. Through the year used to work in people's house and earn livelihood by begging.	1. No income and need to borrow.

Table 5.2 Well-being data of village Ulipur Augpara

Wealth category	Percentage (n =290)	HH identification number
Rich	12% (34)	6, 7, 8, 9, 16, 20, 21, 22, 30, 43, 46, 76, 77, 81, 85, 94, 121, 122, 123, 124, 125, 126, 127, 134, 135, 136, 137, 139, 181, 198, 236, 255, 284, 286
Middle class	18% (51)	10, 11, 12, 17, 18, 19, 44, 45, 47, 49, 53, 54, 62, 71, 72, 78, 80, 83, 93, 100, 104, 105, 116, 117, 128, 129, 140, 169, 183, 199, 201, 202, 203, 207, 209, 210, 224, 225, 226, 227, 228, 229, 230, 231, 234, 248, 260, 263, 281, 285, 287
Upper poor	13% (38)	3, 4, 26, 27, 28, 31, 33, 34, 35, 36, 40, 41, 42, 51, 59, 60, 61, 75, 82, 86, 87, 88, 89, 90, 97, 102, 109, 118, 133, 184, 185, 238, 258, 259, 262, 273, 274, 280
Poor	8% (22)	5, 13, 14, 15, 23, 25, 38, 48, 50, 52, 91, 92, 110, 112, 114, 138, 149, 178, 192, 200, 237, 261
Destitute	50% (145)	1, 2, 24, 29, 32, 37, 39, 55, 56, 57, 58, 63, 64, 65, 66, 67, 68, 69, 70, 73, 74, 79, 84, 95, 96, 98, 99, 101, 103, 106, 107, 108, 111, 113, 115, 119, 120, 130, 131, 132, 141, 142, 143, 144, 145, 146, 147, 148, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 170, 171, 172, 173, 174, 175, 176, 177, 179, 180, 182, 186, 187, 188, 189, 190, 191, 193, 194, 195, 196, 197, 204, 205, 206, 208, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 232, 233, 235, 239, 240, 241, 242, 243, 244, 245, 246, 247, 249, 250, 251, 252, 253, 254, 256, 257, 264, 265, 266, 267, 268, 269, 270, 271, 272, 275, 276, 277, 278, 279, 282, 283, 288, 289, 290

IV. Profile of Village Jagodishpur

1. Contextual Analysis

1.1 Historical background

The above village falls within the Mohimagonj Union Council of Gobindagonj Upazila under Gaibandha district. The distance between Jagodishpur and Mohimagonj and that between this village and Gobindagonj are 4 kilometer and 9 kilometer respectively. The Beel (floodplain) that is situated to the northeastern side is called NPBSS. The village was named after Jogodish Chowdhury who was a landlord during the British period. During that time 90% of the inhabitants were Hindus. After the partition of India most of them left for India and their present percentage share has come down to 34%. The rest belong to the faith of Islam. Across the middle of the village there runs a metal road. For communication of different quarters of the village there are 3 unpaved roads also. The village houses a mosque, a temple, some shops but no central market. There is a bazaar, which is located at a distance of 4 kilometer.

There is only one government primary school in the village. The nearest high school and collage where students of this village receive education are at a distance of 4 kilometer. Nearby there is a Madrassa and a Muslim library. The village has a tank, a co-operative society but no bank available. Occupational classification and percentage are agriculturist 20%, fishermen 30%, day-labourers 40%, traders and others 10%.

The rate of literacy is around 70%, which includes those who can barely write his name. The actual percentage is much lower. The main agricultural products are rice, jute, sugarcane and wheat, vegetables. There is no mill factory in or around the village. The women folk have by now come out of 4 walls of their houses and work outside for making their living. No cultural function is held in the village. There is no health-center however there is a paramedic who has a dispensary.

1.2 Physical infrastructure

Across the village there runs a metal road. There is a bus stop and transportation of goods and movement of people is quite easy. Those who are remain at the bottom of the socio-economic spectrum generally paddle rickshaws or vans to earn money.

The village has not so far come under the rural electrification network. Absence of electricity causes inconvenience to the people. The absence of electricity makes irrigation work difficult to accomplish. Even the shops, small factories find it difficult to run their business during night due to the lack of electricity. However, communication among various paras (quarters) is quite convenient. Even the villagers are deprived from enjoying electronic equipment such as television, VCR's and radios. For higher education there is no learning centers but a government primary school which is catering to the needs of the children of all classes. The village has a mosque for prayer. There is a temple for the Hindu community where they practice religious rites. Mills and factories are virtually absent in the village. There is no health center so far established either from the government or non-government sector. Only a village paramedic and a health assistant give whatever medical service they can. Their service however includes counseling in the field of family planning. There is no poultry firm. The only tank in the village produces some variety of fishes. The fishermen make use of this and other small ponds. They sell the cultured fish to the nearby bazaar to garner profit.

1.3 Political background

No one has been so far elected as a chairman from this village. The village receives little-attention of the Union Parishad chairman and the members so that development activities are minimum. Incoming facilities usually go to the selected handful persons. However there is no political strife. Strikes called by different political parties have little affect on the daily life. Only bus and tempo services come to halt are certain cases. Daily activities of the villagers continue as usual. The people informed that in respect of production and harvesting of fish in the beel people decide to work jointly. The Fishery Assistant of the government extends full co-operation to the people for proper pisciculture.

1.4 Administrative setup

Since there is no UP member or chairman the local elite and leaders settle disputes in meetings. People informed that government officials extend all sorts of co-operation and assistance for development activities. This extends to road construction, child education, financial assistance, and settlement of disputes. They never harass the villagers in any manner. People of this village are law-abiding.

1.5 Education

There is only one government primary school. Children of all social class and creeds receive elementary education there. There are 300 students so far enrolled in the schools. Average attendance is 250. The school has contributed fairly good rate of literacy.

1.6 Health service

The village does not have any health center. However a small dispensary is run, which does a village paramedic head. People get medical treatment at a nominal cost. People practice goodwill and close relationship with one another. They have a mutual close working relationship, which causes peace to prevail. People get health service from a health center at Mohimagonj, which is three kilometer from the village. BRAC also has a health center, which caters to the needs of the villagers. If and when disease attacks people go the district headquarters for treatment.

1.7 Cultural

The residents of the village include Muslims and Hindus. Their cultures are not exactly the same. The Hindus enjoy themselves during Pooja, their religious festival while the Muslims celebrate during the Ramadan and Eid. In the matter of marriage class difference does not stand in the way now a days. The cultural activities of the Muslims center on religious rites. In the past the women folk were hardly allowed to go out of the domestic precincts and they would have to seek permission from their husband if ever they would be out of the house. Now a days because of the motivational efforts over the radio and the Television as well as those made by NGO's the old value have changed and women are found particularly in different activities outside their homestead.

2. Village Resources

2.1 Natural capital

Any river does not serve the village. Beel is there. Cultivable land is there. The fertility of the cultivable land is fairly good.

2.2 Human capital

The percentage of real literacy is low, being 70%, which includes those who can barely write their names. Day labourers are unskilled and the rate of pay is very low. The women have just begun to work outside. But they are not at all trained and experienced. They help in construction of Kacha roads. The villagers feel neglected in respect of post primary school education. People try to live hygienically but the absence of good health center stands as a barrier. However NGO workers impart knowledge on nutrition.

2.3 Social capital

In this respect some NGO's have good contribution. Their field assistant's train the people in the matter of nutrition, environment, birth control, child marriage, necessity for pure drinking water etc. the NGO's also extend educational services at a nominal cost.

2.4 Physical capital

Cultivable land is in plenty and hence most of the people are dependent upon agriculture. Families own permanent homesteads. Tube-wells provide pure drinking water, which helps to avoid water-born diseases. The village does not have any poultry farm or organized fishery. Not any forest either. However there is a beel, which serves by supplying fish, which meets the protein requirement.

2.5 Financial capital

These include land cultivation, poultry farming on very small scale. Raising cows and goat is very common among the villagers. Few of the villagers culture fish in the ditches. They are also involved in paddling rickshaws, van, planting trees etc.

3. Institutional Processes: Importance and Roles

3.1 Government institutions

Only one is there, namely, government primary school. This imparts free education to the children of the village.

3.2 NGOs, CBOs, Co-operatives

A co-operative society is working in the village. Apart from this there is no other non-governmental organization. The co-operative accepts member's savings to their respective accounts. It also gives loans to its members in case of need. There is a mosque and an Islamic library is there too. However, Grameen Motshya Foundation (GMF) is there to help developing the fishery with due technical support.

3.3 Informal organizations

These include mosque, temple, Islamic *pathshala*.

3.4 Private sectors

People own vans and rickshaws, which are operated by drivers who hire the vehicles on daily basis against fixed amount. The surplus income over this goes to their pockets. Some people run nurseries to earn income.

4. Seasonal Vulnerability and Coping Strategies

Table 4.1 Seasonal differences in village Jagodishpur

Item	April- May	May- June	June- July	July- Aug	Aug- Sept	Sept- Oct	Oct- Nov	Nov- Dec	Dec- Jan	Jan- Feb	Feb- Mar- ch	Mar- ch- April
	<i>Bais hakh</i>	<i>Jaist ha</i>	<i>Asha r</i>	<i>Shra bon</i>	<i>Bha dro</i>	<i>Ash win</i>	<i>Karti k</i>	<i>Augr ahay an</i>	<i>Pous h</i>	<i>Mag h</i>	<i>Falg oon</i>	<i>Chai tra</i>
Temperature	11	10	8	7	9	5	4	3	2	1	6	12
Rainfall	6	8	12	11	10	9	7	4	5	1	3	2
Employment opportunity	11	12	7	4	9	8	3	10	5	6	2	1
Food deficit	2	1	6	9	4	5	10	3	8	7	11	12
Borrowing	2	1	6	9	4	5	10	3	8	7	11	12
Lean period	2	1	6	9	4	5	10	3	8	7	11	12
Fish availability	3	4	6	5	12	11	10	9	8	7	2	1

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Temperature

Maximum temperature in this area is recorded in the month of Chaitra. Temperature goes down to minimum in Magh.

4.2 Rainfall

During the month of Ashar heaviest rainfall takes place. Rainfall drops to its minimum during the month of Magh.

4.3 Employment opportunities

Although employment opportunity prevails all throughout the year the month of Jaistha offers best scope of jobs. As there are no factories, and the area of land is limited little work is available in this locality. During the month of Chaitra people hardly find any job opportunity. The reasons are draught and drying up of the beel. To face the situation the people go out to the townships and work as rickshaw-puller, van-puller and day labour, which enable them to earn money.

4.4 Food deficit

It however reaches the highest level in the month of Chaitra when the cultivators do not have any crops to harvest. At that time and the people remain out of pocket. To meet up the difficulty they sell away their cows, goats, ducks, poultry birds. If these are not enough they take loans from the rich people named the Mohajons. The people become well to do in the months of Jaistha

4.5 Borrowing

Those who are the poorest among all usually work in the crop fields. Even the availability of fishes declines. Most of the people take loans in Chaitra when food scarcity and unemployment situation becomes very acute. If loans are not available they have to sell their belongings as earlier mentioned. Least borrowings and loans take place in Jaistha.

4.6 Lean period

The month of Chaitra has been specifically mentioned the worst. There is hardly any rainfall at this time of the year. No job opportunity and hardly any cash income compound the situation of food shortage. The affect of flood is very little in this village. The month of Ashar comes with heavy rainfall. The month of Baishakh leaves back devastation to the crop fields due to hailstorm. During the flood and famine people are forced to borrow money and their savings become exhausted. They have also to quite often sell their belongings as earlier mentioned. There often exists food shortage, which results in famine in the village. The villagers have to take loans for their survivals. When loan facilities are not available from banks and private Mohajons there remains no other alternative than to sell their cows, goats, poultry birds and most unfortunately their land.

4.7 Availability of fish

However the catch of fish becomes maximum during the month of Bhadra and remains to its lowest in the month of Chaitra.

5. Well-being Pattern in the Village

Table 5.1 Well-being pattern in village Jagodishpur

Wealth category Hhs 93	Livelihood assets	Livelihood strategies	Sustainable livelihood outcomes
Rich 16%	1. Possess 330-600 decimal lands, brick built and tin houses, sanitary latrine, ring slab, tube well, cattle, shallow machine, van rickshaw, bamboo bush. 2. Earn money by doing service and business.	1. Produce many crops in the lands 2. Get the rent money of the van and rickshaw and shallow machine. 3. Earn money from service and business.	1. Profitable
Middle class 23%	1. Possess 100-300 decimal lands, cattle, tube well, sanitary latrines and ponds. 2. Earn money from small business	1. Earn money by producing crops, from fishing and business. 2. Use the sanitary latrine and tube well for their own use.	1. Profitable
Upper poor 16%	1. Possess 33 decimal of lands., cattle, sanitary latrine, shallow machine. 2. Take the lease of lands and do business of fish and fishnet.	1. Earn money by producing crop, from the business of fish and fishnet. 2. Get the rent money of the shallow machine.	1. The earning of the family is depended on the hard work. 2. They have to take loans and sell assets.
Poor 30%	1. The number of possessed lands is little. 2. Possess house, cattle, rickshaw and van. 3. Work as day-labourer, farm labour, and cattle broker and off farm labour.	1. Earn money by selling dairy milk, by pulling rickshaw or by working as cattle broker.	1. Have to depend fully upon the physical labour 2. During the worst period have to live by disposing assets.
Destitute 15%	1. Earn money by working as day labourer and by fishing. 2. Widow, divorced women and children have to work.	1. Earn money by fishing. 2. Earnings occur if only they can get works.	1. Cannot get food without working. 2. Do not get loans. 3. Can lend money at the rate of 20% interest only

Table 5.2 Well-being data of village Jagodishpur

Wealth category	Percentage (n =93)	HH identification number
Rich	16% (15)	1, 3, 4, 10, 17, 18, 23, 29, 31, 37, 38, 39, 40, 63, 81
Middle class	23% (21)	5, 6, 7, 16, 22, 24, 25, 26, 28, 30, 32, 33, 36, 48, 49, 54, 55, 58, 59, 60, 61
Upper poor	16% (15)	9, 12, 19, 56, 64, 72, 84, 85, 86, 87, 88, 89, 90, 91, 92
Poor	30% (28)	2, 8, 13, 14, 20, 21, 27, 34, 35, 42, 43, 45, 46, 47, 51, 52, 53, 57, 67, 68, 73, 74, 75, 77, 78, 79, 82, 83
Destitute	15% (14)	11, 15, 41, 44, 50, 62, 65, 66, 69, 70, 71, 76, 80, 93

V. Profile of Village Puntair Moddhyapara

1. Contextual Analysis

1.1 Historical background

Puntair Moddhyapara is a village of Mohimagonj Union under Gobindogonj Upazila in the district of Gaibandha. The distance between this village and Mohimagonj is 2 and a half kilometers while Gobindogonj Upazila Sadar is nearly 14.5 kilometers away. The Puntair River, after which the village has been named flows down to the northeastern edge. A village folk told that they do not know further about its history. There is a beel in the southern side of the village. It is connected to the river. All the inhabitants belong to the faith of Islam. Most of them are agriculturist by profession. Only 10% of the inhabitants are fisherman who lives on catching and selling fish on the beel and the river.

The rate of literacy is 60%. Within this is included those who can barely write his own name. A metal road runs one kilometer away from the village. There is an unpaved road, which runs across the heart of the village. All the villagers use it.

There is no Hat or Bazaar for marketing. Inhabitants go to the one that is located 2 and half kilometers away. No school or collage is there in Puntair Moddhyapara. The nearest college is 2 and a half-kilometer from it. There is a mosque and a Furkania Madrassa. BRAC runs its own school. The village does not have any health center or any lending agency. A bank is there, which is again two and half kilometers away. People live on agricultural products, some are in jobs, some are van or rickshaw-pullers and some carry on small trade and business. The poorer section catches fish from the beel and the river to maintain their families.

In the past women folks remained confined within the domestic activities in the houses. But the situation has now changed and they go out to take part in the activities relating to the development of the village and thereby eke out a living.

1.2 Physical infrastructure

There is only one unpaved road within the village. Van, rickshaw is the common transport vehicle. Electricity is available. One metal road runs about one kilometer away from the village. It has link road with the village. Only one school is run by BRAC. A mosque is there where the religious say prayer. There are no mills or factories in the village except a rice mill. People have their paddy husked in that mill. There is a charitable dispensary, which caters to the primary needs of the people. There are two bamboo bushes and a mango grove in Puntair Moddhyapara. No other NGO setup exists there in the village except BRAC. The health assistance of which councils the villagers on family planning matter, child marriage, sanitary latrines etc. there is no poultry farm or fisheries. The fishermen fish in the ponds owned by individuals. The fishing community carryout fishing in the nearby river and beel and thereby maintain their living.

1.3 Political/Administrative

The elected Union Parishad member of the village conducts development activities. There is no political rivalry worth mentioning. Political Hartals have little bearing. Strife between different political parties hardly exists, so development efforts are not affected. The beel is a central place

of economic activities because people in general benefit from it. The Assistant Fisheries Officers of the government extends co-operation to the people in development of pisciculture in the beel.

The UP member and the elderly people of the village sit in judgement whenever dispute arises between individuals or groups. Generally the judgements are conciliatory and not punitive. However disputes of big dimension are generally taken to the civil or criminal courts as the case may be. The government and non-government officers extend co-operation for the development of the village. Nobody put pressure on the administration.

1.4 Educational

Neither governmental nor private school exists in the village except the one run by BRAC. There is however one Furkania Madrassa. The literacy percentage is 60. The children receive from BRAC School while the Furkania madrassa teaches Quran. One government primary school and one college, which are respectively one kilometer and two and half kilometers distant, provide education facilities to the boys and girls also.

1.5 Health

There is no health center but a dispensary works. The dispensary has a rural doctor. People get both allopathic and homocopathy medical treatment. The health assistants of the government as well as NGO's give councils on health matters, family planning etc. All the villagers drink water from the tube-wells. As a result epidemic diseases do not occur. The number of sanitary latrines is very small. The people alleged that they are deprived of health services because no health centers exist in the village.

1.6 Cultural

All the inhabitants of the village are Muslims and they conduct their lives according to Islamic tenets. Marriages are solemnized, the dead are engraved according to Islamic culture. The women folk observe purdah but that does not deter them from taking part in development activities. Inspired by governmental, non-governmental NGO's they work side by side with the male workers in various development projects.

2. Village Resources

2.1 Natural capital

Natural resources of this village consist of river and beel plus agricultural land. Cultivable lands are always utilized for producing crops and vegetables. Soil fertility is good. The beel is a great use and benefit to the poor people who make their livelihood by fishing there.

2.2 Human capital

Actual literacy rate is low in the village although the rate is quoted as 60% because this percentage includes whoever can write his own names only. The women of the village do not work as labour outside. However, there are exceptions. When they work both the male and female get proper remuneration. They do not have any training because the facilities are not available. The village is deprived of higher education. It has been observed that people have fare idea about healthy living. They try to take nutritious food and are aware of necessity of cleanliness. All drink tube-well eater.

2.3 Social capital

The NGO workers provide good level of social service. They educate the people in the field of nutrition, environment, education, birth control, ecology, early marriage, roads, development and pure drinking water. These are very valuable for development.

2.4 Physical capital

Cultivable lands are available and most of the people are dependent on agriculture. By and large they have got permanent houses. They get drinking water from the tube-well. There is no dairy farm worth its name. No forest but only bamboo bushes. One river and one beel are there. The beel is used for fishing and washing. People also take bath there.

2.5 Financial capital

Agriculture land is the main resource. Next comes fruit bearing trees. People rear poultry birds, practice pisciculture, dairy farming in small scale. They use shallow irrigation machines. Food shortage is met by extra earning from cash crops.

3. Institutional Processes: Importance and Roles

3.1 Government institutions

There is no government institution to cater to the needs of education, health service and planned development activities. In the absence of such institutions people have to go to the government institutions, which are some kilometers away from the village. Because of the absence of primary schools small children take the travel of getting education from the nearby village.

3.2 NGOs, CBOs, Co-operatives

Except the BRAC school and the Ectedia Madrassa there are no non-governmental institutions in the village. The children of the poor go to BRAC schools. The children receive religious education in the madrassa where in particular they learn recitation of from the holy Quran. Recently one private institution namely Grameen Motshya Foundation (GMS) has started to encourage and motivate the poor people for development of fish culture.

3.3 Informal organizations

As said earlier this village has one mosque and one madrassa. People make united effort for the development of the mosque and the madrassa.

3.4 Private sectors

These include transportation by van, rickshaw, husking of paddy in rice mills, growing of fish by poor people in ponds and raising of bamboo bushes for cash income, sale of trees and fruits, and trading small scale activities.

4. Seasonal Vulnerability and Coping Strategies

Table 4.1 Seasonal differences in village Puntair Moddhyapara

Item	April-May	May-June	June-July	July-Aug	Aug-Sept	Sept-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-March	March-April
	<i>Baisakh</i>	<i>Jaistha</i>	<i>Ashar</i>	<i>Shrabon</i>	<i>Bhadra</i>	<i>Ashwin</i>	<i>Kartik</i>	<i>Magh</i>	<i>Poush</i>	<i>Chaitra</i>	<i>Chaitra</i>	<i>Chaitra</i>
Temperature	11	12	7	6	9	5	4	3	2	1	8	10
Rainfall	6	8	12	11	10	9	7	4	5	1	3	2
Employment opportunity	11	12	8	7	1	2	3	6	4	5	9	10
Food deficit	10	1	8	9	12	7	6	5	4	3	2	11
Borrowing	9	1	2	3	12	8	7	6	4	5	10	11
Lean period	9	1	2	3	12	10	6	7	8	4	5	11
Fish availability	6	7	8	9	10	11	12	3	2	1	4	5

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Temperature

The month of Jaistha is the hottest while the month of Magh is the coldest.

4.2 Rainfall

Maximum rainfall occurs in Ashar and the minimum in Magh.

4.3 Employment opportunity

The area has little scope for jobs in mills and factories in fact compared to the number of population scope for gainful employment of any kind is very little. The unemployment situation becomes worst in Bhadra. The poor section of the people however finds employment in fishing activities. Others have to take loans from various sources in times of need or sell their belongings to feed themselves.

4.4 Food deficit

Food shortage becomes maximum in the month of Bhadra and the minimum in the month of Jaistha. It is at its maximum in Bhadra because no harvesting takes place around Bhadra and job opportunity is minimum during that period. Therefore, people have to sell many things like poultry birds, goat's etc to purchase rice and pulse for existence. The month of Jaistha is the month of harvest of IRRI. This is why food shortage remains at its minimum.

4.5 Borrowing

The villagers have to resort to huge borrowing in large scale in the month in the month Bhadra and Chaitra. Day labourers are huge number. They suffer most in those months when they cannot find any employment. They have to either borrow food stuffs and cash or sell whatever they have.

4.6 Lean period

The worst time of the year is Bhadra in respect of family economy. Flood and famine generally affect this area. It rains heavily in the months of Ashar and devastating storms damage houses and standing crop in Baishakh. But people can somehow avoid famine by sale of their

belongings. Cows, goats, poultry birds, roof tin, plots of land and fancy items like radio, television and cycles are the common items of sale during acute scarcity of food stuff. In extreme cases the poorer section even sell out their land just to maintain their families.

4.7 Availability of fish

The supply of fish is the greatest in the month of Kartik and smallest in the month of Magh.

5. Well-being Pattern in the Village

Table 5.1 Well-being pattern in village Puntair Moddhyapara

Wealth category Hhs 107	Livelihood assets	Livelihood strategies	Sustainable livelihood outcomes
Rich 20%	1. Possess 250-500 decimal lands. 2. Owns buffalo cart, shallow machine, tube well, power tiller, sanitary latrine, cattle and fishing nets. 3. Do not need to borrow, and don't face food deficit. 4. Earn money from services, business etc.	1. Produce many crops in the lands and earn money. 2. Earn money from the service, business, from cattle, buffaloes carts, power tiller and shallow machine.	1. Profitable
Middle class 17%	1. Possess 50-100 decimal lands, brick built house and tube well 2. Earn money from cattle, rickshaw, shop and by doing service and business.	1. Earn money from cattle, shop, rickshaw, lands, business and services.	1. Profitable
Upper poor 19%	1. Possess house, a few lands, tube well, rice mill. 2. Earn money by working as day-labour, business, carpentry, rickshaw pulling, and fishing. 3. Opportunity of non-agricultural work is negligible. 4. Give the lease of lands.	1. Earn money from lands, rice mills, business, fishing and driving of rickshaw – van etc. 2. Work as day labourers.	1. Due to the inadequate job opportunity, after cultivation they have to spend life by borrowing and have to work hard.
Poor 26%	1. Possess houses. 2. Earn livelihood by driving rickshaw, van and working as day labourer.	1. Earn livelihood by working as day labourer and by driving rickshaw and vans.	1. They are dependable on the hard work. 2. Used to borrow and sell assets.
Destitute 19%	1. Houses are made of hay or tin. 2. Earn by begging, working as day labourer, as color painter, fisherman, as maidservant and driver of rickshaw.	1. Earn by begging, working as day labourer, as color painter, fisherman and driver of rickshaw.	1. They are dependable on the hard work. 2. Used to borrow and sell assets.

Table 5.2 Well-being data of village Puntair Moddhyapara

Wealth category	Percentage (n =107)	HH identification number
Rich	20% (21)	2, 13, 23, 42, 50, 51, 52, 53, 54, 55, 56, 72, 73, 83, 86, 96, 97, 98, 99, 100, 102
Middle class	17% (18)	1, 12, 24, 25, 30, 40, 49, 63, 66, 70, 71, 74, 77, 81, 88, 89, 90, 101
Upper poor	19% (20)	4, 5, 9, 20, 26, 31, 39, 61, 62, 67, 75, 76, 78, 79, 84, 85, 87, 91, 92, 95
Poor	26% (28)	7, 8, 10, 14, 21, 27, 28, 29, 32, 34, 36, 38, 41, 44, 45, 48, 57, 58, 59, 60, 64, 65, 69, 80, 82, 93, 94, 105,
Destitute	19% (20)	3, 6, 11, 15, 16, 17, 18, 19, 22, 33, 35, 37, 43, 46, 47, 68, 103, 104, 106, 107

VI. Profile of Village Kumiradanga

1. Contextual Analysis

1.1 Historical background

There was a river in this village, which eventually disappeared due to change of its course. People used to live on the Chars across the embankments. This village was named under the name of a Kumir (crocodile), which was killed by the local inhabitants in the past. The village is located in Gobindogonj police station in Gaibandha district. The distance between Gobindogonj Thana and Kumiradanga is nearly 10 kilometres. Nurulia Beel (floodplain) at the north and two other small Beels at west and south encircle the village. The road network within the village comprises of a single pitched road and a number of unpaved roads. Although Government schools are yet to be present, the children have access to 4 schools that has been set up by BRAC. There is plenty of cultivable land in the village. Mosque and a Hindu shrine are acting as centres for practice of cultural rites for Muslims and Hindus. In the recent past women of this village seldom enjoyed the opportunity of talking with outsiders. But recently with the blessing of education they have qualified to be conscious. They have started to take part in various activities, which they believe will eventually ensure to push them forward from the lower end of the socio-economic spectrum. Neither a bank nor a NGO have so far set up a branch in this village. There is yet to be a market in this locality. Only a few shops are the last resorts for the villagers to buy daily necessities.

1.2 Physical infrastructure

The road connecting Gobindogonj Upazila with Mohimagonj Upazila had passed through this village. An unpaved road, which have streamlined with the main pitched road, have ramified into narrow unpaved roads at the opposite end leading to different parts of the village. The Rural Electrification Board (REB) is yet to expand their service in this village. There are only four schools established by BRAC but still remarkable absence of Government schools is visible. A number of Mosques are visible where the Muslims gather to pray. Medical facilities are relatively poor due to the absence of health centres and doctors. Sanitary latrine facilities and tube-wells bless villagers. Rickshaw, tempo, buses and tempo are the means of transport. Neither the government nor the private sector has flourished to establish hatcheries in this locality. The villagers are so far maintaining an appreciable communal harmony.

1.3 Political/Administrative

Till date there is no Chairman elected from this village. But one of the Upazila Parishad members have been voted from Gobindogonj who plays a pivotal role in strengthening and streaming development activities. Political conflict are absent because of the willingness of the local leaders to keep a harmonious environment in the locality. Very little affect of hartals is visible but vehicles stop plying over the road during hartal hours. Local aligns themselves on the same platform for any sort of development activities for the village.

The government and non-government officials together with local leaders put every effort for development of the village. Local leaders and the UP members are honoured to participate in resolving local disputes. The villagers receive all sorts of co-operation from different government departments. They have no allegations against the officials. If any unavoidable

dispute arise they use the court to resolve the conflict. No restrictions have so far been imposed on fishing in the government owned open water bodies.

1.4 Educational

There seems to be no initiative from the government to establish a primary school. Even there is no private school in the village. Only 4 BRAC schools and a Madrassa stand as a symbol of education. These deprived children have to travel 3-4 kilometres to get access to better education facilities. The result is lower literacy rate. Although it is claimed that 80% of the inhabitants are literate, this includes a large number of those who are only able to write their names. There is one Adult Education centre where the women learn to write their names.

1.5 Health

The health services are very poor in the locality. There exists only one dispensary but no health centres/hospitals. Usually the villagers buy their drugs from the nearby dispensary. Most common diseases to be mentioned are flu, caught, viral fever. They depend on BRAC health centres for better treatment, which is 4 kilometre apart from the village.

1.6 Cultural

Cultural activities in this village are regulated by religious norms. For example, Hindus organize cultural programmes during Pooja. Women sing folk songs in the marriage ceremonies. Few NGO's have expanded their network in the village. They are working with the women to open up new horizon of thoughts, which they think, would pull them out of the lower end of the socio-economic spectrum. Although the Hindu culture is still engulfed by cast system, especially in the case of marriage, the Hindus in this village have managed to overpower it.

2. Village Resources

2.1 Natural capital

Most of the land are cultivable are cultivable fertile land. Most of the villagers are engaged with agricultural production. Those who do not possess land of their own work as labourers in others land. Few catch fish from the Beels and sell them in the market nearby. Bamboo is one of the most common products in most backyards, which are used for building homes. There are also a few fruit and vegetable gardens. The owner sells the surplus from these gardens in the market.

2.2 Human capital

Out of total 80% of the inhabitants are registered to be literate. But the actual percentage is much lower because this figure includes those who can only writes their names. Women sell their labour excavating for ponds and constructing roads for CARE, a NGO involved in building roads in this area. Little training facilities are available for the villagers. The average health condition in the village is fare. They try to keep themselves sound in terms of health according to their affordability.

2.3 Social capital

There are few NGO's working for building social capital in the village. The programmes of these agencies include awareness building about health, sanitation, use of safe drinking water, environment education, family planning, early marriage, etc.

2.4 Physical capital

Most of the inhabitants of this village are dependent on agriculture. Except few all the villagers possess house and at least a patch of cultivable land. Bamboo is very common in most of the backyards, which is either sold in the market or used up by the owner for making their cottage. The villagers lure fish from the Beel (floodplain), which act as a major source of protein for the poor. There is only one pitched road and a few Kacha (earthen) roads pass through the village. Sanitary latrine facilities have reached in almost all the houses. Rickshaw, tempo, van and buses are the major transport.

There are four BRAC schools, one Forkania Madrassa and one Adult Learning Centre in the village. Three mosques and a Hindu shrine are the centres for religious activities. The BRAC schools are providing education for the children and whereas the Madrassa is assisting for Quran and Islamic studies. The adult education centre is teaching women to write their names. The dispensary sells medicine according to the villager's needs.

3. Institutional Processes: Importance and Roles

3.1 Government institutions

So far no government offices or institutions such as schools, hospitals, agriculture extension office exists in village 'Kumiradanga'. The villagers have to travel 3-4 kilometres to avail such services.

3.2 NGOs, CBOs, Co-operatives

Among the non-government institutions 4 BRAC schools, one Ektadia madrassa and one Adult Learning Centre are to be mentioned. The BRAC schools provide formal education to the children, adult learning centre provides non-formal education for the women.

3.3 Informal institutions

Madrassa provides Quran and Islamic education. The mosque and temples are centres for practicing religious norms. Various cultural and development activities are performed by the clubs.

3.4 Private sectors

There are four private rice mills in the village where a number of women from the village sell their labour. The rickshaw garage owners lease rickshaws on contact basis to the rickshaw pullers. Few villagers produce fish in their own pond to meet their demand and sell the surplus into the market. Those who own horticulture gardens sell vegetables and fruits after fulfilling their demand.

4. Seasonal Vulnerability and Coping Strategies

Table 4.1 Seasonal differences in village Kumiradanga

Item	April -May	May - June	June - July	July -Aug	Aug- Sept	Sept -Oct	Oct- Nov	Nov- Dec	Dec- Jan	Jan - Feb	Feb- Mar ch	Mar ch- April
	<i>Baish akh</i>	<i>Jaist ha</i>	<i>Asha r</i>	<i>Shra bon</i>	<i>Bha dro</i>	<i>Ash win</i>	<i>Karti k</i>	<i>Augr ahay an</i>	<i>Pous h</i>	<i>Ma gh</i>	<i>Falg oon</i>	<i>Chait ra</i>
Temperature	11	10	8	7	9	5	4	3	2	1	6	12
Rainfall	6	8	12	1	10	9	7	4	5	1	3	2
Employment opportunity	11	12	7	4	9	8	3	10	5	6	2	1
Food deficit	2	1	6	9	4	5	10	3	8	7	11	12
Borrowing	2	1	6	9	4	5	10	3	8	7	11	12
Lean period	2	1	6	9	4	5	10	3	8	7	11	12
Fish availability	3	4	6	5	12	11	10	9	8	7	2	1

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Temperature

Highest temperature recorded in the month of Chaitra. Lowest temperature recorded in Magh.

4.2 Rainfall

Rainfall is highest during the month of Ashar. Rainfall is lowest in Magh.

4.3 Employment opportunity

Job opportunities boost up during Baishakh, Jaistha, Poush, Magh, Falgoon and Chaitra. Baishakh, Jaistha, Augrahan and Poush are the months of harvest. Jute and wheat are harvested in Falgoon, and Chaitra accordingly. Work availability declines during the month of Shrabon and Bhadra. The villagers often migrate to places looking for jobs. If for obvious reason they fail to find work they stay back at home and try to survive taking loans and borrowing money and food-grains from others. During this harvesting period it is easy for labourers to find work. Villagers engage themselves in sheaving paddy. Earth excavation starts to build ponds and roads in the month of Falgoon.

4.4 Food deficit

Maximum food deficit is visible during the month of Shrabon and Bhadra. In this period the employment opportunities drop near to its lower limit. Least food deficit prevails during the month of Augrahan. Food scarcity prevails in Chaitra. Supply of food is satisfactory in Jaistha.

4.5 Borrowing

Borrowing items among the villagers are money, food-grains, fuel-woods etc. In case of emergency the poor inhabitants of the village sell their chickens, cattle, food-grain, fuel-wood etc. They don't even bother to sell their furniture and other belongings in the worst case scenario. Most villagers take loans during Chaitra but borrowing and loan reduce in Jaistha.

4.6 Lean period

This village is not frequently affected by flood and even it appears the after affects are limited to its magnitude. Gusty rain, thunderstorms and hurricanes characterize Ashar and Shrabon, which

leave behind devastation to crops and houses. Disease breaks out during this period. During this period poor villagers often sell their cattle, grains and other belongings to put an end to their sufferings and reduce daily food intake.

4.7 Fish availability

Amount of fish catch in minimum in the month of Chaitra and flourish in Bhadra.

5. Well-being Pattern in the Village

Table 5.1 Well-being pattern in village Kumiradanga

Wealth category Hhs 274	Livelihood assets	Livelihood strategies	Sustainable livelihood outcomes
Rich 5%	1. Possess 20-50 bigha of lands, brick built houses, threshing floor, rice mill, sanitary latrine, livestock, tube-well and television. 2. Earn money by doing service and business. 3. Do not need to borrow and never face food deficit.	1. Produce many crops in the lands 2. Get the rent money of the house in town 3. Employ day labourers in the crop fields 4. Can buy lands. 5. Can let the children to go to school. 6. Capital are increased	1. Profitable
Middle class 13%	1. Possess lands, brick built house, shallow machine, tube-well, sanitary latrine, cattle and television. 2. Earn money by working as service holders.	1. Earn money from lands, shallow machine and livestock	1. Profitable
Upper poor 23%	1. Owns a few lands. 2. Works as day labourer, fisherman, rickshaw and van puller and worker in threshing floor.	1. Earn money by pulling rickshaw and van, by fishing by working as day labour and working in the threshing floor.	1. Depended only upon the physical labour.
Poor 25%	1. Work as day labourer, as rickshaw puller and work in threshing floor. 2. Give the rickshaw and van rent out to other. 3. Have house to live anyhow.	1. Work as day labour, as the driver of tempo, puller of rickshaw, van. 2. Earn money by working in threshing floor and giving rickshaw rent out to other.	1. Depended only upon the physical labour.
Destitute 34%	1. Possess no lands and used to live hand to mouth. 2. Earn money by begging, working as day labourer, rickshaw puller, fishing in the beel, working in people's house and by working in the threshing floor. 4. The widow, divorced woman and old people cannot do work and have to eat two times a day..	1. Earn livelihood by fishing in beel, working in threshing floors and by working in peoples' house. 2. Live their livelihood somehow by working as day labourer and pooling rickshaws.	1. If they get job, can afford food otherwise they starve. 2. Have to take loan at high interest. 3. Work hard to live.

Table 5.2 Well-being data of village Kumiradanga

Wealth category	Percentage (n =274)	HH identification number
Rich	5% (14)	48, 59, 67, 140, 174, 177, 178, 229, 266, 270, 275, 276, 286, 290
Middle class	13% (36)	29, 39, 40, 63, 64, 70, 79, 94, 96, 104, 107, 109, 112, 114, 120, 143, 146, 151, 152, 153, 154, 155, 156, 165, 170, 171, 173, 176, 228, 262, 263, 265, 267, 291, 292, 307
Upper poor	23% (63)	9, 11, 12, 22, 41, 45, 46, 47, 49, 50, 51, 60, 61, 62, 65, 66, 71, 77, 78, 105, 113, 118, 121, 123, 125, 129, 131, 142, 144, 145, 147, 149, 157, 158, 159, 160, 162, 166, 172, 182, 185, 219, 220, 227, 230, 231, 235, 239, 247, 248, 260, 261, 264, 269, 271, 274, 281, 283, 289, 294, 301, 306, 308
Poor	25% (69)	16, 19, 23, 24, 27, 31, 32, 35, 42, 43, 44, 53, 55, 56, 69, 72, 73, 74, 75, 82, 83, 84, 89, 90, 91, 92, 93, 95, 100, 106, 108, 111, 133, 136, 137, 138, 139, 148, 150, 167, 168, 179, 180, 187, 189, 190, 191, 192, 196, 201, 207, 209, 212, 213, 221, 222, 223, 226, 234, 236, 238, 240, 243, 268, 278, 284, 303, 304, 309
Destitute	34% (92)	4, 12, 13, 14, 15, 17, 20, 21, 25, 30, 34, 52, 54, 57, 58, 68, 76, 80, 81, 85, 86, 87, 88, 97, 98, 99, 101, 102, 103, 110, 116, 124, 126, 132, 134, 135, 141, 161, 163, 169, 175, 184, 186, 193, 194, 195, 197, 198, 199, 200, 203, 204, 206, 208, 210, 211, 214, 215, 216, 217, 218, 232, 233, 237, 241, 242, 245, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 272, 273, 277, 279, 280, 282, 285, 287, 288, 293, 295, 302, 305, 310, 311

Socio-Economic Baseline Survey of Open Water Fisheries

Profile of

Shoshikor Beel, Kalkini, Madaripur

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Shoshikor Beel

Shoshikor has a *beel* stocking project operated by Bahumukhi Unnayan Society-(BUS). Nine villages surrounding the *beel* are under FFP, and out of these three villages have been taken up to understand the livelihood conditions of the villagers through Participatory Rural Appraisal (PRA) and household survey. The study villages - Uttar Shoshikor, Paschim Shoshikor and Nayakandi – are located under Kalkini upazila of Madaripur district.

1. Vulnerability Context

The *beel* was named after a pious man Shoshi who came and settled in the area during the time of a Zaminder. The sample villages Uttar (north) Shoshikor and Paschim (west) Shoshikor are situated on the northern and western sides of the *beel* respectively. The third village Nayakandi was named while a few people came from Jessore district and decided to there.

The villages are about 12 kilometer away from the nearest upazila headquarter, Kalkini. Stated population in the study villages is 6,798. There are 632 households identified through PRA exercises. Almost all people in the study area are Hindus. There are six temples in the study villages. The main occupation of 27% household heads is agricultural work, 53% do fishing, 16% of them is wage labourers who live on selling manual labour and the rest 4% are involved with other economic activities.

The Union Parishad office is situated in this area. Chairman and the members of the Union Parishad are not in good terms with one another. If any government relief materials come to the Union Parishad, the villagers often do not get their due share. In the last Union Parishad election there was a candidate for chairmanship from one of these villages, but he could not win. No development work has been initiated in the villages in the last two years. Including a female member there are three Union Parishad members who have been elected from these three villages. They try their utmost for the economic development of the area. They make efforts to distribute among the needy persons of this area whatever aids are received from the government.

If any conflict, land dispute or any small problems occur in the village the villagers try their best to settle these by themselves. If they fail to solve any, they take help of *salish* (informal village court) consisting of wealthy and dignified persons of the villages as well as the chairman and the members of Union Parishad. They go to the formal court at upazila headquarter for solving the critical disputes. Political strike, which takes place at times, has very little effect on the locality.

2. Livelihood Assets

The villagers identified five wealth categories of people in their villages; rich, middle, upper poor, poor, and destitute. In the following table the rich and middle class are combined into one category, as there are no significant differences between their asset holding positions. The livelihood assets of all categories of people have been determined by the villagers who took part in the PRA sessions.

Table 2.1 Well-being pattern in Shoshikor *beel* villages

Wealth category	Household # 632	Livelihood assets
Rich and middle class	20% (127)	• Possess a good number of assets like land, large agricultural farm, shallow machine for irrigation, and threshing machine. • Have business dealing in money lending, car, fish, repair workshop, tailor shop and pharmacy. • Own brick built house and high-breed cows. • Do services. • Do work in foreign countries. • Mostly educated.
Upper poor	25% (156)	• Possess land, pond, small shop, small-scale businesses of cloths, betel-leaf, and vegetables. • Skill labourers like carpenter, quack, fisherman, and photographer. • Works in other people's lands as day labourer. • Fourth-class employee in government and other offices.
Poor	14% (87)	• Own homestead only, no cultivable land. • Work as fourth-class employee, fisherman, day-labourer, boatman, <i>fakir</i> (practice spiritual power), and hawker of seasonal fruits. • Self-employed, do business of puffed rice.
Destitute	41% (262)	• Live in other's land, few own homesteads only. • Fishermen, collect the snail for fishing, make bamboo products. • Own poor assets. • Work as day-labourer in peoples' houses, rickshaw/van puller. • Many households headed by female.

2.1 Natural capital

Shoshikor *beel* is the major common natural resource of the villages to which all villagers have access for their everyday necessities. Other uses of *beel* are fishing and irrigation. FFP has introduced program in this *beel*, which gives the fishermen opportunity to catch fish in a disciplined manner. There are several canals of different sizes passing through and by the edge of the villages. Local poor fishermen catch fish in the canals and earn their livelihood by selling those fish in the market. The canals are also being used for transportation by boats. The rich and middle class people own a large proportion of cultivable land in the villages. During cultivation and harvest most of the poor work there as day labours. There are few ponds inside the villages. The owners do cultivate fishes in these ponds.

Table 2.2 Use of natural capital by different wealth groups

Wealth group	Shoshikor <i>beel</i>	Land
Rich and middle class	Low	Very high
Upper poor	Medium	High
Poor	Very High	Low
Destitute	Very high	-

2.2 Human capital

Education

There are one government primary school, one non-government primary school, three NGO operated schools, and one community school in the study villages. These institutions employ both male and female teachers from the villages. Children from all wealth groups have the opportunity to attend these schools. The standard of education is more or less good in these schools but the NGO schools are a bit ahead in providing quality education. Last year one student from the school achieved the union based scholarship. There are BRAC's non-formal primary schools comprised of 33 students in each. The majority of the students are from poor households. One female teacher, selected from the village is acting as teacher of the school.

Labour

Most of the population in this study area is involved in fishing and they earn their livelihood by earning money from catching and selling fish. There are also teacher, service holders, *thakur* (Brahmin Priest facilitates in marriage ceremony, social and religious festival of the Hindu community), *ojha* (cure people from snakebites) and *kabiraj*. If the villagers have any lawsuit in the court on any issue, the deed-writers make contact with the lawyer to handle the case. In this way they help the villagers.

Health

There is a Family Welfare Centre in this study area. The people do not get sufficient services from the centre. The majority of the beneficiaries are from the poorer section of the village. There are quack, *ojha* (cure people from snakebite), and *kabiraj* in Shoshikor *beel* villages who follow their own codes for the treatment of the villagers. When people get sick they go to quacks for treatment and in case of serious illness they go to the health centre or government hospitals at Kalkini, Madaripur or Barishal for better treatment.

The villagers have good access to the drinking water. There are many tube-wells in the villages and a few of these are deep tube-wells. Poor people who do not own tube-wells of their own depend on deep tube-wells for drinking water. As most of the poor households do not own sanitary latrine, they use open latrine, which pollutes the environment of the villages. The water is being contaminated that is a source of disease among the poor people.

2.3 Social capital

The villagers of Shoshikor *beel* have not identified any specific social capital. Seven NGOs are working in this area that work mostly for the poor and destitute people. NGOs work following group approach so they could manage to grow fellow feelings among the group members.

2.4 Physical capital

There is no metal road inside the villages so heavy vehicles cannot come to the villages. The road maintenance program of CARE is in operation in Uttar Shoshikor over the last couple of months. Women from the poor and destitute households work on the road for subsistence even though working outside home is considered not a dignified work for women in the village. A few

canals which originated from Shoshikor *beel* are flowing within the villages. These canals are used as means of transportation. Electricity is available in two of the study villages and only a few households can afford this facility.

2.5 Financial capital

The villagers identified seven NGOs working in their area as the major source of financial capital for them. Mainly the poorer section of the village depends on the initiatives of the NGOs for supporting their livelihoods. Moreover, there are two rice mills, one saw mill, few shops and one permanent bazaar in the villages where the poor can find some work to earn their livelihoods. People who have business in the nearest market are considered as financial capital also for the villages because they are employing few persons in their enterprises. There is a wholesale shop outside the village that employs a small number of the poor from the village.

3. Structure and Process

3.1 Government institutions

There are only two public institutions in the village, Union Parishad and a health centre known as Family Welfare Centre. Chairman and members of the Union Parishad held meeting once a month. Developmental work of the locality is discussed in that meeting. For example, food for work program, distribution of vulnerable group development (VGD) cards, old age allowance, widow and destitute women allowance, development of roads and embankments are discussed in the meeting. In the case of problem arises in the villages, the chairman, members and other important persons make decisions to resist or resolve that. Government operates a primary school in this study area considered to be very much inadequate for the villagers.

3.2 Non-government Organizations, Community-based Organizations and Co-operatives

One international NGO, two national NGOs, and four CBOs are working in the study villages with a range of development activities including micro-credit. BRAC has formed village organizations with the poor and destitute women through which it is trying to involve them in self-employed activities. BRAC's focus is on the improvement of the household's socio-economic condition. In BRAC school mostly the poor children can study. Proshika gives loan both to poor men and women for tree plantation and excavates ponds for fish cultivation. An international NGO, CARE, is working for construction and maintenance of roads.

The CBOs give loan to their members organized in groups. The members are investing loan money to small trade and business, which in turn are benefiting them by increasing their earnings. No co-operative society exists in the village. Bahumukhi Unnayan Society (BUS) works for FFP. It gives micro-credits to the poor people for fish cultivation. During August 2001, fingerlings are released in the Shoshikor *beel*. As it has not yet grown up to the desired size, catching has not yet started. BUS offers scholarships among the girl students of the schools and provides loan to the poor people for installation of sanitary latrine and tube-well.

3.3 Informal organizations

There are six temples in this study area where the Hindus observe their rituals. Both men and women regularly visit temples to listen to religious discussions. People from all wealth groups can participate in the religious activities in the temples.

There is a youth club and a club for Village Defense Party (VDP) in one of the three villages. The youth club collects money from the service holders of the locality to provide financial supports to the poor children who cannot afford to continue their education. The Ansar VDP club provides security training to the youth for the defense of the village. Every year this club arranges cultural programs for the entertainment for the villagers.

3.4 Private sector

There is a saw mill in the village, both rich and poor people depend on it for making household furniture and boats. Some poor villagers earn their livelihood working in the saw mill. There are two mills husking paddy for the villagers. The traders sell rice in the local market, the poor people work in the mills as day-labourer.

Table 3.1 Access to institutions

Wealth group	Government institution	NGOs, CBOs, Co-operatives	Informal organization	Private sector
Rich and middle class	High	Low	High	Very high
Upper poor	Medium	High	High	Medium
Poor	Low	Very high	Medium	Low
Destitute	Low	Very high	Low	Low

The villagers reported that the NGOs are working sincerely for the poorest. The villagers rated the activities of the NGOs very high as they are targeting the frontiers of development of the whole community. The private sectors are appraised highly as they are employing the poor of the village. Informal organizations are rated satisfactory, as they are not in the frontline with other development initiators. Government institutions are rated low because of their less responsiveness to responsibilities.

4. Livelihood Strategies

The livelihood strategies of people belonging to different wealth groups, as perceived by the villagers, are presented in table 4.1.

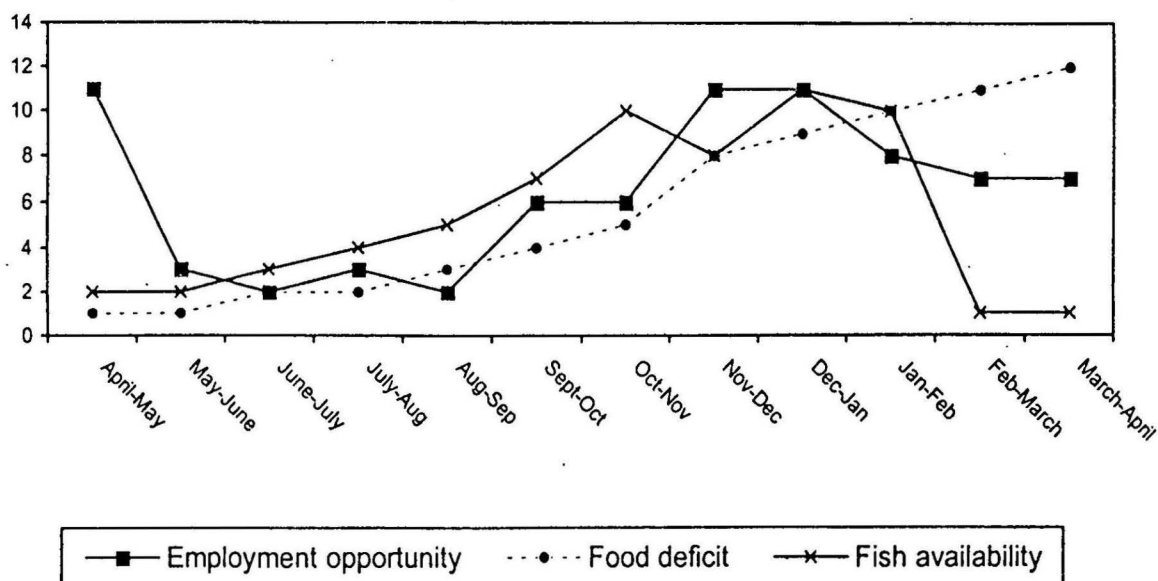
Table 4.1 Livelihood strategies of different wealth groups

Wealth category	Livelihood strategies
Rich and middle class	• Employ day-labourers in own land and business. • Make maximum use of household assets. • Lend money to the poor with high interest. • Develop social and economic network by helping people. • Use modern technology to cultivate land, and produce variety of seasonal crops. • Multiple sources of income. • Educating children.
Upper poor	• Involved in seasonal multiple economic activities. • Borrow seasonally with interest. • Lend money in small-scale with interest. • Take lease of land to cultivate. • Cultivate lands themselves.
Poor	• Borrow during seasonal food deficit. • Do mortgage-out of assets. • Work hard everyday. • Frequent borrowing. • Children do work for livelihoods. • Migrate out for work seasonally. • <i>Fakirs</i> use the beliefs of people for subsistence.
Destitute	• Sell manual labour everyday for livelihood. • Do business with small capital. • Do seasonally available activities. • Women and children do work for income earning. • Migrate out for work.

4.1 Seasonal differences on livelihoods

The livelihood strategies of the villagers are seasonally affected, as their major resources are completely lands based. While this *beel* is used for fish stocking, fishing is prohibited during a certain period for which 53% of the households who depend on fishing as main income source have to look for other activities. Figure 1 shows the seasonal variation of employment opportunities and deficit of food for the villagers over the year. It also includes availability of fish that regulates opportunity of work for the fishermen and fish consumption of majority of the villagers.

Figure 1: Seasonal vulnerability in the villages



Employment opportunity

The month of April-May in dry season generates the highest employment opportunity in the villages. At this time, crops near to be harvested and the farmers also prepare land for the next cycle of cultivation. The next highest opportunity for work is November to January as Amon crop is harvested at this time and farmers also prepare their land for next cycle of production.

Lack of employment is high during the months of May to September. During the later part of this season all crop fields remain full of water. Villagers cannot go outside of their house. They survive by consuming food stored earlier. They sell crops as well as household assets like duck, chicken, cow, goat and so on. Some of them migrate to the nearest town and work as day-labourer.

In February and March, there is scarcity of work for fishermen. They cannot catch fish, as there is hardly any available fish. They have to find alternative strategies to cope with this situation like borrowing money from the moneylenders and different NGOs.

Food deficit

During the drier months of January to March the food deficit is very high. At this time food is not available in poor households. The poor farmers need to buy fertilizers and insecticides for their crop fields at that time. During the months of April to June there is no shortage of food, because the new crop (HYV paddy) is harvested at this time. As a result their stores get fulfill with rice.

The villagers sell their assets to cope with food deficit during lean seasons of the year. Seeds kept for next cycle of production are sold for buying foods and fertilizer. To cope with food deficit the poor and destitute people often reduce the number of meals taken in a day. Borrowing from others for subsistence is a common strategy for the poor. People try to fulfill their needs by taking loans from NGOs, CBOs, bank and the traditional moneylenders. They mainly borrow from moneylenders for crop cultivation.

Availability of fish

During winter from October to January water from the water bodies goes down to the canal. As a result fishermen can get good catch. Fish is least available in February and March so the fishermen struggle most at this time with less work available and food scarcity.

Worst time of the year

People of Shoshikor *beel* villages phrase drought and storm as the worst thing for themselves. Due to massive drought during the month of February and March the crops are damaged. People have to lead their life by borrowing money. In the month of April, due to *kalbaishakhi* (monsoon storm), crops and houses get destroyed. Also at this time the hailstorm destroys the harvests considerably. Due to excess drought devastating epidemic breaks out from time to time.

Flood occurs largely during the months of August and September. Houses get inundated, and people face sufferings along with the domestic animals. The villagers make high platform with bamboo and live on top of it during the flood. Boats are used as the only transport for the entire locality. The villagers suffer from moving from one place to another whenever the level of floodwater continues to rise.

In the months of September and October many diseases like influenza, diphtheria and chickenpox break out among the villagers.

April and May are the best period for the villagers because the new crop (HYV paddy) is harvested at this time. There is not much natural calamity and there remains no shortage of food. The villagers do not face many problems at that time.

5. Livelihood Outcomes

The livelihood outcomes for different wealth groups as perceived the people in the study villages are presented in table 5.1.

Table 5.1 Sustainable livelihood outcomes for different wealth groups

Wealth category	Sustainable livelihood outcomes
Rich and middle class	• Secured healthy life. • Multiple sources of sustained income. • Livelihoods depend on own production. Livelihood assets increase rapidly. • Good savings in bank for further investment. • Good harvest and production due to irrigation and mechanized cultivation. • Educated children get jobs. • Develop patron-client relationship with day-labourers. • Good relations with villagers. Do some development work for the village with own income.
Upper poor	• Produce inadequate crops. • Unstable livelihoods. • Seasonal unemployment. • Poor savings. • Unable to inherit property.
Poor	• Inadequate income. • Seasonal unemployment causes indebtedness. • Seasonal food deficit. • Ill health.
Destitute	• Chronic food deficit. • Insecure life. • Malnutrition and chronic disease. • Low standard of life with illiterate children.

6. Expected Impact of Fourth Fisheries Project by Beneficiaries

The people of Shoshikor *beel* villages hope that they will be benefited economically with the implementation of FFP as it is supposed to work for the development of their community. If the fish can lay eggs in the *beel* safely, the production of fishes should be increased. It should be prohibited not to catch fish to bail out the water from the deep area of the *beel*. Then the fish will rapidly grow and increase in number. There are some weeds and mosses that grow in the water, and pollutes the water of the *beel*. So these should be cleaned out properly. Fish passes through the canal that is beside the *beel*. By building embankments in that canal plenty of fishes can be caught.

The fishermen reported that in the August of the year 2001, FFP has released fingerlings in the *beel*. These fingerlings are yet to grow big. For this reason they are facing income loss in September which normally does not happen. They argued that fingerlings should be released in July that would help them to catch fish in time.

The fishermen mentioned that there is no wholesale fish market in the village. They sell fish in the bazaars outside the village. Few of them go to the district towns for the same. They felt that there should be a fish-processing centre in their village. They like to sell fish in terms of their weight not in terms of number. They desire FFP will consider and implement the policy with the help of the concerned implementing organization. The fishermen demand loans with low interest to make boats and fishing nets. They appreciate the activities of VDC and FMC regarding implementation of FFP. They should sit together regularly and make the decisions jointly. They feel that if the farmers, service holders and fishermen of the villages work together FFP will succeed.

7. Key Findings of Shoshikor Beel based on Household Survey

7.1 Introduction

The methodologies used in conducting this baseline survey have earlier been discussed in some details. For the purpose of the survey, household members of the sample villages were classified into four wealth categories (WC) through PRA exercises, such as, Rich/Middle, Upper Poor, Poor and Destitute. In the household survey, sample was taken from each study village proportionately according to the aforesaid wealth grouping. This part of the report contains analysis of the data collected through questionnaires from the sample households in the Shoshikor Beel water body area. It is located in Kalkini upzila of Madaripur district.

7.2 Findings

Total sample households in this water body were 48. Highest proportion of the HHs of this water body was categorized as the destitute (42%), followed by rich/middle category (23%), upper poor (21%) and poor (14.6%) (see methodology for the criteria of categorization).

Table 7.1 shows distribution of HH heads by their occupation (main¹, secondary², always fishing³, sometimes fishing⁴ and subsistence fishing⁵ - as defined by M & E Specialist of Fourth Fisheries Project). One third of the sample HH heads had always fishing occupation, all of them belonging to three categories, viz., upper poor (60.6%), poor (14.3%) and destitute (45.0%) category respectively. Only 15 percent of the HH heads had the sometimes fishing occupation, this was 25.0% in the destitute category. More than 12 percent of the HH heads had also the subsistence fishing occupation and none of them belong to the destitute category. Data reveals that a few percentages had secondary occupation (8.3%) and all of them from the rich/middle and upper poor categories.

Table 7.1: Distribution of HH heads by occupation and wealth category

Wealth category	Secondary occupation	Fishing occupation		
		Always fishing	Sometimes fishing	Subsistence fishing
Rich/middle (n=11)	18.2 (2)	0	9.1 (1)	18.2 (2)
Upper poor (n=10)	20.0 (2)	60.0 (6)	10.0 (1)	10.0 (1)
Poor (n=7)	0	14.3 (1)	0	42.9 (3)
Destitute (n=20)	0	45.0 (9)	25.0 (5)	0
Total (n=48)	8.3 (4)	33.3 (16)	14.6 (7)	12.5 (6)

Note: Figures in the parentheses indicate the number

Note: All HHs had the main occupation.

Note: Multiple responses were considered.

Table 7.2 shows socioeconomic and demographic characteristics of the households. Sex ratio was the highest amongst the rich/middle (161 per 100 female), but it was the lowest amongst the

Main occupation means primary employment of the HH from which it gains its income

Secondary occupation means the next most important means of livelihood for the HH

Always fishing means professional fishers – those who engage in fishing as their main livelihood

Sometimes fishing means occasional fishing

Subsistence fishing means those HHs who fish to supplement HH diets

upper poor group (148 per 100 female). Average age of the HHs head was the highest amongst the rich/middle class (48). The age-dependency ratio⁶ was highest amongst the upper poor category (88). Average years completed in the school by HHs head was the highest amongst the rich/middle class (10 years). Just 44 percent of the HHs were involved with fishing with highest being amongst the destitute (43%). About 19 percent of the HHs involved with the NGO activities, and this was also highest amongst the destitute.

Table 7.2: Household composition in the Shoshikor water body

Wealth category	Average sex ratio= (male/female) ×100	Average age of HHH	Age dependency ratio	Average years completed in school (%)		HH involved with fishing (%)	HH involved with NGO (%)
				HH head	HH Member		
Rich/middle (n=11)	160.7	48	58.6	10.0	5.3	14.3 (3)	33.3 (3)
Upper poor (n=10)	148.3	45	87.8	6.7	4.1	28.6 (6)	11.1 (1)
Poor (n=7)	152.4	47	57.1	7.9	3.7	14.3 (3)	11.1 (1)
Destitute (n=20)	158.3	45	64.9	4.3	2.4	42.9 (9)	44.4 (4)
Total (n=48)	155.9	46	67.2	6.6	3.6	43.8 (21)	18.8 (9)

Note: Figures in the parentheses indicate the number

Table 7.3 reveals the average land ownership pattern of the HHs of this water body. On average the HHs had 53 decimals of the cultivated own land, this was the highest amongst the rich/middle category (123.9 decimals), followed by upper poor (56.5 decimals) and poor (41.4 decimals). On average the HHs had 5 decimals of the pond or *doba* own land this was the highest amongst rich (18.0 decimals), followed by poor (3.0 decimals). On average the HHs had over 9 decimals of cultivated leased-out land which is the highest for the rich/middle (25.5 decimals), followed by the upper poor (10 decimals). Whilst the cultivated leased-in land was found on average about 5 decimals.

Table 7.3: Average amount of land (in decimal) owned by HHs by wealth and land category¹

Wealth category	Owned				Leased-out	Leased-in
	Homestead	Cultivated	Pond/ <i>doba</i>	Fallow	Cultivated	Cultivated
Rich/middle (n=11)	11.6	123.9	18.0	0.9	25.5	0
Upper poor (n=10)	7.2	56.5	2.6	3.5	10.0	8.0
Poor (n=7)	6.4	41.4	2.9	0	0	0
Destitute (n=20)	4.2	16.0	0	0	3.0	7.0
Total (n=48)	6.9	52.9	5.1	0.9	9.2	4.6

Table 7.4 shows the percentage of the materials used in construction of main rooms of the houses. The floors of main rooms of all houses were made of mud. Over 60 percent walls of the houses were made of tin, and this was much higher among rich/middle and poor category (100% and 86%). But 40 percent of the sample HHs had the wall of natural item⁷, this was the highest amongst destitute (65%), followed by the upper poor (30%). Almost every roof of main room of the houses was made of tin.

⁶ The age-dependency ratio is the ratio of persons in the dependent ages (under 15 and over 64 years) to those in the "economically productive" ages (15-64 years) in a population

⁷ Natural items means bamboo, jute stick, hay, leaves of tree, straw etc.

Table 7.4: Percentage of materials used in construction of main rooms of the houses by WC

Wealth category	Floor	Wall			Roof	
	Mud	Tin	Natural	Mud	Tin	Natural
Rich/middle (n=11)	100.0 (11)	100.0 (11)	0	0	100.0 (11)	0
Upper poor (n=10)	100.0 (10)	70.0 (7)	30.0 (3)	0	100.0 (10)	0
Poor (n=7)	100.0 (7)	85.7 (6)	14.3 (1)	0	100.0 (7)	0
Destitute (n=20)	100.0 (20)	25.0 (5)	65.0 (13)	10.0 (2)	95.0 (19)	5.0 (1)
Total (n=48)	100.0 (48)	60.4 (29)	39.6 (19)	4.2 (2)	97.9 (47)	2.1 (1)

Note: Figures in the parentheses indicate the number

Data reveals that the sample members had main room on their own and all members of the sample HHs took more than one meal in a day during 2000-2001.

Table 7.5 illustrates that the strategies adopted in case of income or asset loss. About 80 percent of the HHs adopted the borrowing as a strategy in case of economic crisis, this was highest among poor (85.7%), followed by the destitute.

Table 7.5: Percentage of HHs adopted the strategies in case of income or asset loss by wealth category

Wealth category	Strategies			
	Borrowing	Borrowing by interest	Draw money from their bank savings	Lease or sell the land
Rich/middle (n=11)	0	63.6 (7)	9.1 (1)	27.3 (3)
Upper poor (n=10)	10.0 (1)	80.0 (8)	0	10.0 (1)
Poor (n=7)	14.3 (1)	85.7 (6)	0	14.3 (1)
Destitute (n=20)	15.0 (3)	85.0 (17)	0	0
Total (n=48)	10.4 (5)	79.2 (38)	2.1 (1)	10.4 (5)

Note: Figures in the parentheses indicate the number

Note: Multiple responses were considered.

Table 7.6 describes the percentage of the HHs economic solvency situation within last 12 months. Over 35 percent of the HHs had always deficit, this was highest in the destitute category (70%). About 40 percent of the HHs had the occasional deficit and 80% of the upper poor HHs had this economic crisis, which is unusual.

Table 7.6: Percentage of the HHs economic status within last 12 months by wealth category

Wealth category	Status			
	Always deficit	Occasional deficit	Breakeven	Surplus
Rich/middle (n=11)	9.1 (1)	9.1 (1)	63.6 (7)	18.2 (2)
Upper poor (n=10)	10.0 (1)	80.0 (8)	10.0 (1)	0
Poor (n=7)	14.3 (1)	71.4 (5)	14.3 (1)	0
Destitute (n=20)	70.0 (14)	25.0 (5)	5.0 (1)	0
Total (n=48)	35.4 (17)	39.6 (19)	20.8 (10)	4.1 (2)

Note: Figures in the parentheses indicate the number

Table 7.7 shows the percentage of the HHs who took loans in different months of 2000-2001. One third of the HHs took loans in February-March, this was 60% in the upper poor. One quarter of the HHs took loans in January-February and March-April, and in both of the time the upper poor were highest (40% and 30%).

Table 7.7: Percentage of the HHs taking loans in different months of 2000-2001

Wealth category	Apr - May	May - Jun	Jun - Jul	Jul - Aug	Aug - Sep	Sep - Oct	Oct - Nov	Nov - Dec	Dec - Jan	Jan - Feb	Feb - Mar	Mar - Apr
	Baishak	Jaistha	Ashar	Shrabon	Bhadro	Ashwin	Kartik	Augrahasan	Poush	Magh	Falgun	Chaitra
Rich/middle (n=11)	0	0	0	9.1 (1)	0	0	18.2 (2)	0	0	9.1 (1)	18.2 (2)	18.2 (2)
Upper poor (n=10)	10.0 (1)	0	0	0	0	0	10.0 (1)	0	0	40.0 (4)	60.0 (6)	30.0 (3)
Poor (n=7)	0	0	0	0	0	0	14.3 (1)	14.3 (1)	0	28.6 (2)	28.6 (2)	28.6 (2)
Destitute (n=20)	5.0 (1)	5.0 (1)	0	5.0 (1)	0	10.0 (2)	20.0 (4)	5.0 (1)	0	25.0 (5)	30.0 (6)	25.0 (5)
Total (n=48)	4.1 (2)	2.1 (1)	0	4.1 (2)	0	4.1 (2)	16.7 (8)	4.1 (2)	0	25.0 (12)	33.3 (16)	25.0 (12)

Note: Figures in the parentheses indicate the number

Table 7.8 shows the percentage of HH heads remained unemployed in certain parts of the year and things done at that time. Over 70 percent remained unemployed with the highest amongst poor (100%) and lowest amongst rich (18.2%). During the unemployment period most them had no work and a few were involved with the net making (26.5%).

Table 7.8: Percentage of the HH heads remains unemployed in certain parts of the year and things done at that time by WC

Wealth category	Remain unemployed	Things done when unemployed			
		Fishing/net making	Indirect earning	Direct earning	Training/no work
Rich/middle (n=11)	18.2 (2)	0	50.0 (1)	0	50.0 (1)
Upper poor (n=10)	70.0 (7)	14.3 (1)	82.9 (3)	0	42.9 (3)
Poor (n=7)	100.0 (7)	14.3 (1)	0	14.3 (1)	71.4 (5)
Destitute (n=20)	90.0 (18)	16.7 (3)	27.8 (5)	5.6 (1)	50.0 (9)
Total (n=48)	70.8 (34)	14.7 (5)	26.5 (9)	5.9 (2)	52.9 (18)

Note: Figures in the parentheses indicate the number

Table 7.9 presents health-seeking behaviour of the HHs. About 92 percent went to village doctors during illness which was the highest for destitute (100%) and the lowest for upper poor (81%).

Table 7.9: Health-seeking behavior of the HHs by WC

Wealth category	Health-seeking behavior		
	MBBS doctor	Village doctor	No where
Rich/middle (n=11)	9.1 (1)	90.9 (10)	0
Upper poor (n=10)	10.0 (1)	80.8 (8)	10.0 (1)
Poor (n=7)	14.3 (1)	85.7 (6)	0
Destitute (n=20)	0	100.0 (20)	0
Total (n=48)	6.3 (3)	91.7 (44)	2.1 (1)

Note: Figures in the parentheses indicate the number

Data shows according to the perception of the people of this water body, the fish production was decreased in last five years. Except two HHs the rest samples inferred that the activities of fisheries department could be beneficial.

Profile of Three Villages under the Water Body Shoshikor Beel

Under the water body Shoshikor three villages have been taken up to understand the livelihood conditions of the villagers through participatory rural appraisal (PRA). The villages Uttar Shoshikor, Paschim Shoshikor, and Nayakandi are situated under Kalkini upazila of the district of Madaripur.

I. Profile of Village Uttar Shoshikor

The PRA team of the Fourth Fisheries Project (FFP) has collected the following data in front of the temple "Kali Mondir" of the village Uttar (north) Shoshikor. The informant group consists of Bashishwar Barui, Chitto Sarkar, Bijoy Krishno Haldar, Jotil Sarkar, Niran Sarkar, Komol Mistri, Shonkor Barui, Shuklal Sarkar, Krishno Haldar, Khokon Gharami, Kanai Modhu, Shopon Barui, and Shonai Bishwash,

1. Contextual Analysis

1.1 Historical background

During the period of Zaminders, on the occasion of the arrival of a pious man named Shoshi in that area, it was named Shoshikor that means moonlight. The water body is also called Shoshikor beel and as the sample village is situated in the northern side of the water body it is called Uttar (north) Shoshikor.

1.2 Village infrastructure

Village Uttar Shoshikor is 12 kilometer far from the nearest upazila Kalkini. The nearest metal road and bus stop are one kilometer away from the center of the village. There are four temples in the village. There are also one non-government primary school, one BRAC school, one club of village defense party (VDP), another club named Tarunikanto Smriti Sangho, the office of union parishod, three shops, two rice mills, one sawmill, four bridges, and three bamboo path over the canals. There is no metal road in the village only three different unpaved roads with a total length of three kilometer. About 95 households of the village own electricity.

1.3 Political/Administration

Chairman and the members of the union parishod have squabble among themselves. If any government relief comes to the union parishod, the villagers do not get their due share. In the last election of union parishod there was a candidate for the chairmanship from this village, but he could not be elected so that no developmental work has done in the village over last two years. Although there is one elected union parishod, he can not do any developmental work in spite of his utmost endeavor. There is a *salish* (village court) in Uttar Shoshikor consists of wealthy

the chairman and the members of union parishod. They even go to formal court at upazila for solving the disputes.

1.4 Educational

There is a non-government primary school in the village, which employs three teachers of this village; two of them are male and one is female. There are 215 students in the school. The standard of education is more or less good. Last year one student had achieved the union based scholarship. Children from all wealth groups get the opportunity of study there. There is one BRAC's non-formal primary school in the village, which is comprised of 33 students. The majority of the students are from poor households.

1.5 Health

There is a Family Welfare Center in the village. The people of the area do not get sufficient medicine from that. They get only the diction for their treatment. The majority of the beneficiaries are from the poorer section of the village. There are quack, *ojha* (cure people from snakebite), and *kahiraj* in village Uttar Shoshikor who follows their own codes for the treatment of the villagers.

There are 57 tube-wells in the village, 7 of that are deep tube-wells. It was argued that all villagers are using tube-well for drinking water. Poor people depend on deep tube-well for drinking water. As most of the poor households do not own sanitary latrine, they are using open latrine, which pollutes the environment of the village.

1.6 Cultural

There is a BRAC school in the village where boys and girls can learn singing and dancing. There is no other organization having good environment for learning dancing, singing or acting. There are temples in the village where the Hindu peoples go regular to listen the religious discussion. Women also join there. In the religious activities people from all wealth groups can participate they mentioned. The Ansar VDP club arranges entertainment cultural programs every year for the villagers.

2. Village Resources

Likewise the sustainable livelihood framework five types of capital were tried to identify by the people of village Uttar Shoshikor.

2.1 Natural capital

The beel Shoshikor is the major common natural resource of the village to which all villagers have access for their everyday necessities. Other uses of beel are fishing and irrigation. There are six different sizes of canals passing inside and at the end of the village. Local villagers mostly the poor used to catch fish in those canals. They meet their livelihoods by selling the fish. The canals are also being used for transportation by boats. There is large amount of cultivable land in the village owned by the rich and middle class people. The poor people give manual labour in those lands.

2.2 Human capital

The population of the village is about 4,053 and there are about 317 households. Ninety nine percent of the villagers is Hindus and rest is Muslim. The main occupation of 50% of the household heads is agricultural work, 45% do fishing, very few are day-labourer and around 4% is involved with other income earning activities. They are teacher, traditional healer, *thakur* (Brahmin Priest facilitates in marriage ceremony, social and religious festival of the Hindu community), *ojha* and *kabiraj*. Irrespective to the wealth groups in the village; all have equal access to the human resources of the village.

2.3 Social capital

The villagers in Uttar Shoshikor have not identified any specific social capital. However, this profile limits on it as it could not emphasize on the social relations of different people of the village.

2.4 Physical capital

There are three shops in the village. Majority of the customers of the shops belongs to the poor class. There are three different unpaved roads with a total length of three kilometer. The road maintenance program of CARE is going on in village Uttar Shoshikor over last couple of months. Women from the poor and destitute households work on the road for subsistence even though to work outside home is not honourable for women in the village. There are four bridges and three bamboo path over the canals which people of all wealth groups use freely.

2.5 Financial capital

There are two rice mills and one sawmill in the village. Poor villagers earn their livelihood by working there. Some villagers possess pharmacy in the nearest market. They earn money by selling medicine. Some households in the village have dairy cows, which produce milk and meet the needs of the people who can bear the cost. One international NGO, two national NGOs and three community-based organizations (CBOs) are working in village Uttar Shoshikor with a range of development activities including micro-credit. Mainly the poorer section of the village people depends on such development initiatives of the NGOs for enhancing their livelihoods.

3. Institutional Processes: Importance and Roles

3.1 Government institutions

There are only two government institutions identified in the village; union porishod and a health centre called family welfare centre. Chairman and members of the union porishod held meeting once a month. Developmental work of the locality is discussed in that meeting. As for example, food for works, distribution of vulnerable group development (VGD) cards, old age allowance, widow and destitute women allowance, development of roads and embankments, and so on are discussed in the meeting. If there appear any annoyances in the villages, the chairman, members and other important persons make decisions to resist or solve that.

There is one health center in the village. Poor people can get medical services from the center. In case of any serious disease they use to go to upazila, Kalkini or district, Madaripur for better treatment.

3.2 NGOs, CBOs, Co-operatives

One international NGO, two national NGOs, and three community-based organizations (CBOs) are working in village Uttar Shoshikor with a range of development activities including micro-credit. BRAC formed a village organization for the poor and destitute women through which it is trying to involve them with self-employed activities. BRAC's focus is on the improvement of the household's socio-economic condition, which might be reflected on the development of the village as a whole. Proshika gives loan both poor men and women for tree plantation and by excavating ponds for fish cultivation. The CBOs Tarpue and PEP give loan to their members organized in a group. The members are using the loan money to small trade and business and being benefited towards increasing their earnings. No co-operative is mentioned exists in the village.

Bahumukhi Unnayan Society (BUS) works for FFP. It gives small credits to the poor people for fish cultivation. During August 2001, fingerlings are released in the Shoshikor beel. As it has not yet grown up much, catching of fish has not yet started. CARE is working for construction and maintenance of roads.

3.3 Informal institutions

There are four temples in the village. Religious festival of the Hindu community is observed in those temples. People from different classes both poor and rich join the festivals. In the middle of the village and in front of the Kali Mondir religious discussions are held at 12 noon everyday. Thus the villagers can learn religious education. Taronikant Smriti Sangha collects money from the service holders of the locality to provide financial supports to the poor children who cannot afford to continue their study. The Ansar VDP club provides security training to the youth for the defense of the village. Every year this club arranges cultural programs as an entertainment for the villagers.

3.4 Private sectors

There is a sawmill in the village, both rich and poor people depend on it for making household furniture and boats. Some poor villagers earn their livelihood working in the sawmill. There are two rice mills in the village meeting the needs of the villagers for processing of paddy. The traders sell rice in the local market, the poor people work in the mills as day-labour.

Table 3.1 Ranking of different organizations in village Uttar Shoshikor

Organization	Type of work	Rank	Comments
Proshika	There are 4 societies of Proshika. It creates employment generation through providing loan for renovation of derelict ponds and fish cultivation. Besides for the better environment of the locality they have program for roadside tree plantation.	1	Proshika has done good work for the development of the village and hence the villagers put the NGO in the top of the list.
BRAC	There is one society of BRAC. The poorer section of the village generates employment by taking loan from that society. Also it helps destitute women and widows to make their livelihood by providing V.G.D. card. One BRAC School is established in the village, which create opportunity for children education.	2	BRAC is also doing developmental work in the village so the villagers put it in the second position.
Multipurpose Development Society	The society gives small loan to the poor villagers and works for F.F.P. in the Shoshikor beel for alleviation of poverty and employment generation of the poor villagers	3	Multipurpose Development society has done good works for the poor villagers so it is put in the third position of the list.
CARE	Some women of the village North Shoshikor are the members of CARE. It distributes loans among its members and does several works for the construction and modification of the roads of the village.	4	As CARE is not involved in overall developmental work of the village, it has put in the fourth position.
P.E.P.	P.E.P. only give loans to the rich and poor class of people.	4	P.E.P gives loan mostly to the rich and it is in the fourth position in the list.

Note: 1 = very good, 2 = good, 3 = satisfactory, 4 = not satisfactory

4. Seasonal Vulnerability and Coping Strategies

Table 4.1 Seasonal differences in village Uttar Shoshikor

Item	April-May	May-June	June-July	July-Aug	Aug-Sept	Sept-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-March	March-April
	<i>Bais hakh</i>	<i>Jaist ha</i>	<i>Asha r</i>	<i>Shra bon</i>	<i>Bhad ro</i>	<i>Ash win</i>	<i>Karti k</i>	<i>Augr ahayan</i>	<i>Pous h</i>	<i>Mag h</i>	<i>Falg oon</i>	<i>Chaitra</i>
Temperature	12	11	3	7	10	5	2	4	1	6	8	9
Rainfall	10	7	12	11	6	8	9	3	1	1	1	2
Employment opportunity	12	2	3	4	1	5	5	11	10	6	9	8
Food deficit	1	1	1	1	2	3	4	8	9	10	11	12
Borrowing	1	2	3	4	5	6	7	8	9	10	11	12
Lean period	9	1	2	3	4	5	6	8	9	10	11	12
Fish availability	1	1	2	3	4	5	9	11	12	10	1	1

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Employment opportunity

Unemployment problem is occurred largely during the month of Bhadro in rainy season. At that time all crop fields are filled with water. Villagers cannot go outside of their house. They have to maintain their life with the stored foods. They sell crops as well as household assets like duck, chicken, cow, goat and so on. Some of them migrate to nearest town and work as day-labour. The month of Baishakh in dry season generates the highest employment opportunity in the

village, because at that time crop harvesting and threshing happen in the village and the farmers prepare land for the next cycle of cultivation.

4.2 Food deficit

During the month of Falgun and Chaitra in dry season deficit of food occurs largely. At that time food is not available in poor households. Seeds kept for next cycle of production are sold for buying foods. People try to fulfill their needs by taking loans from NGOs, CBOs, bank and the traditional moneylenders. During the month of Baishakh and Jaistha there is no shortage of food, because the new crop is harvested at that time. As a result their stores remain full of rice. To cut down the list of food items to cope with food deficit vulnerability is very common for the poor and destitute group of the village.

4.3 Borrowing

Borrowing from others for subsistence depends on the livelihood strategies of the villagers. Most of the borrowings occur in the month of Chaitra and least in the month of Baishakh. The villagers mainly borrow from moneylenders for crop cultivation. In Baishakh, however, farmer households have paddy in the house so they do not need to borrow.

4.4 Lean period

The people of Uttar Shoshikor phrases draught and storm as lean period for them. Due to massive draught during the month of Falgun and Chaitra the crops are being destroyed. People have to lead their life by borrowing money. In the month of Baishakh due to the storm *Kalbaishakhi* the crops and households are destroyed. During the month of Jaistha there is not much natural calamity and every household has sufficient food. The villagers do not face many problems at that time.

4.5 Fish availability

During winter, from Kartik to Magh the excess water of rain goes down to the canal so the fishermen can catch fish heavily.

5. Well-being Pattern in the Village

The villagers of Uttar Shoshikor identified five wealth categories of people in their village; rich, middle class, upper poor, poor, and destitute.

Table 5.1 Well-being patter in village Uttar Shoshikor

Wealth category Hhs 317	Livelihood assets	Livelihood strategies	Sustainable livelihood outcomes
Rich 2%	1. Possesse large agricultural farm, cloth shop, business of money lending, car, and pharmacy. 2. Do services in bank, and fish cultivation. 3. Do work in foreign countries. 4. Own brick built house and high-breed cows.	1. Employ day-labourer in own lands. 2. Rent out cars. 3. Lend money to the poor with high interest. 4. Invest money in different businesses, cultivating fish, selling medicine, and keeping high-breed cows. 5. Get remittance. 6. Often help the villagers.	1. Secured healthy life. 2. Do some development work for the village with own income. 3. Fulfill their needs with own produced crops and by selling the surplus. 4. Livelihood assets increase rapidly. 5. Develop patron-client relationship with day-labourer.
Middle class 11%	1. Possess lands, shallow machine, repairing workshop, threshing machine, tailor shop and high-breed cow. 2. Service holders and village doctor, <i>kabiraj</i>. 3. Own ponds. 4. Mostly educated.	1. Earn livelihood by doing services, producing crops, selling water for irrigation of the lands, repairing the metal things, threshing rice, cultivating fish in ponds, making dress, keeping cows. 2. Help the villagers in various ways.	1. Multiple sources of sustained income. 2. Secured life. 3. Livelihoods depend on own production. 4. Good relations with villagers.
Upper poor 27%	1. Possess lands, ponds, and small-scale businesses of cloths, betel-leaf, and vegetables. 2. Skill labourers like carpenter, quack, and photographer.	1. Involve in seasonal economic activities. 2. Multiple activities. 3. Borrow seasonally.	1. Produce inadequate crops. 2. Unstable livelihoods. 3. Seasonal unemployment.
Poor 16%	1. Own homestead only. 1. Work as fourth-class employee, fisherman, work at bakery, boatman, <i>fakir</i> (practice spiritual power), hawker of banana, and make puffed rice.	1. Borrow for seasonal food deficit. 2. Do mortgage-out of assets. 3. <i>Fakirs</i> use the beliefs of people for subsistence. 4. Children do work.	1. Inadequate income. 2. Seasonal unemployment. 3. Seasonal indebtedness.
Destitute 44%	1. Few own homestead only. 2. Live in other's land. 3. Work as day labourer, collect the snail for fishing, and make things with bamboo. 4. Own poor assets.	1. Sell manual labours for others, pull van, and sell the snails. 2. Do business with small capital. 3. Earn money by making bamboo baskets or making puffed rice. 4. The Brahmin priests earn money by observing Hindu rituals.	1. Chronic food deficit. 2. Insecure life. 3. Malnutrition and chronic disease.

Table 5.2 Well-being data of village Uttar Shoshikor

Wealth category	Percentage (n = 317)	HH identification number
Rich	2% (7)	33, 34, 109, 113, 155, 184, 200
Middle class	11% (34)	2, 4, 49, 50, 53, 63, 64, 82, 86, 92, 104, 105, 112, 137, 139, 142, 143, 144, 145, 146, 154, 160, 161, 186, 192, 193, 201, 227, 232, 233, 234, 238, 252, 288
Upper poor	27% (87)	3, 7, 10, 15, 16, 18, 23, 25, 28, 42, 51, 52, 57, 58, 62, 65, 68, 77, 81, 83, 87, 88, 91, 93, 94, 95, 100, 101, 108, 110, 111, 118, 129, 130, 135, 150, 151, 152, 157, 158, 159, 175, 177, 187, 189, 190, 203, 209, 210, 211, 212, 214, 230, 231, 243, 244, 247, 248, 249, 250, 251, 256, 259, 260, 262, 263, 264, 271, 272, 273, 275, 280, 281, 282, 283, 284, 289, 294, 297, 298, 300, 301, 302, 303, 304, 309, 310
Poor	16% (50)	1, 6, 11, 14, 17, 24, 27, 32, 35, 39, 41, 46, 59, 61, 70, 72, 76, 84, 85, 89, 98, 103, 106, 120, 124, 125, 127, 148, 149, 153, 170, 172, 180, 197, 198, 202, 207, 220, 223, 224, 236, 237, 239, 240, 254, 267, 277, 286, 306, 307
Destitute	44% (139)	5, 8, 9, 12, 3, 19, 20, 21, 22, 26, 29, 30, 31, 36, 37, 38, 40, 43, 44, 45, 47, 48, 54, 55, 56, 60, 66, 67, 69, 71, 73, 74, 75, 78, 79, 80, 90, 96, 97, 99, 102, 107, 114, 115, 116, 117, 119, 121, 122, 123, 126, 128, 131, 132, 133, 134, 136, 138, 140, 141, 147, 156, 162, 163, 164, 165, 166, 167, 168, 169, 171, 173, 174, 176, 178, 179, 181, 182, 183, 185, 188, 191, 194, 195, 196, 199, 204, 205, 206, 208, 213, 215, 216, 217, 218, 219, 221, 222, 225, 226, 228, 229, 235, 241, 242, 245, 246, 253, 255, 257, 258, 261, 265, 266, 268, 269, 270, 274, 276, 278, 279, 285, 287, 290, 291, 292, 293, 295, 296, 299, 305, 308, 311, 312, 313, 314, 315, 316, 317

6. Expected impact by beneficiaries of FFP

6.1 Comments of fishermen

The people of the village Uttar Shoshikor hope that FFP will work for the development of their community. If the fishes get chance laying eggs in the beel safely, the production of fishes should be increased. People should be concerned about not to kill fishes to bail out the water from the deep area of the beel. Then the fishes will rapidly grow and increase the resources. The fishermen mentioned that there is no wholesale market of fish in the village and they use to sell their fish in the bazaars outside the village. Few of them go to the district towns for that. They deserve a fish processing center in their village. They like to sell fish in weight not to counting the numbers. They desire FFP will consider it and implement with the help of the concern implementing organization. The fishermen demand loans with low interest while making boats and fishing nets. They appreciate the activities of VDC and FMC regarding implementation of FFP. They regular sit together and make the decisions jointly. They feel if the farmers, service holders and the fishermen of the village work together FFP could be succeed.

6.1 Comments of the PRA team

The local villagers have become conscious with the launching of FFP. At present the fingerlings have not grown much, so the villagers cannot catch the fish. If the fingerlings were released at the beginning of month Ashar, by the time the fish would be bigger enough and the villagers could catch fish. To benefit the local people, fingerlings should release in proper time.

II. Profile of Village Paschim Shoshikor

The PRA team of FFP has collected the following data from a group resides with Bimol Haldar, Poolin Haldar, Gokul Talukdar, Jogodish Haldar, Bipul Haldar, Shamoli Haldar, Kolpona Haldar, and Geeta Haldar in village Paschim (west) Shoshikor.

1. Background of the Village

1. Contextual Analysis

1.1 Historical background

During the period of Zaminders, on the occasion of the arrival of a pious man named Shoshi in that area, it was named Shoshikor that means moonlight. The water body is also called Shoshikor and as the sample village is situated in the western side of the water body it has got the name Paschim (west) Shoshikor.

1.2 Village infrastructure

Village Paschim Shoshikor is 12 kilometer away from the nearest upazila Kalkini. There is no metal road in the village and the bus stop is two kilometer far from the village. In the western part of the village there is a one-kilometer long unpaved road alongside the canal called WAPDA (Water and Power Development Authority). The borderlines of the road are being damaged. In the middle of the village canal Nishikant flows from the west to the east. The village owns one grocery shop but no permanent bazaar inside the village. There is a temple in the northern part of the village. Electricity does not reach to the village yet.

1.3 Political/ Administration

There are two members of union porishod both male and female have been elected from village Paschim Shoshikor. They try for the economic development of the area. Aid received from the union porishod is being distributed among the needy persons. There is no squabble among the villagers about that. If there any trifling quarrels occur, the villagers try to settle that among themselves. If they failed, they try to solve it with the elite and respectable person of the village. Also in case of any big quarrels the villagers take their help. If they failed the people used to take the shelter of law.

1.4 Educational

There is one government Primary School in the village, which employs three teachers. Two of them are male and one is female. The students of this school are some children of west Shoshikor and Noyarbari. Children from all classes like rich, poor and middle class get the opportunity to study there. There are five private primary schools (*pathshala*) established out of the own efforts of the villagers. In those school one can learn up to class three. Besides these, there is one BRAC School in the village. Only the children of poor society get the opportunity of learning there. BRAC provides the expenditure of the students in the school for purchasing free books, pencils etc.

two brick built latrines, twenty-one sanitary latrines, and forty *katcha* latrines made of wood and bamboo. The number of tube well in the village is 17 and only one of them is deep tube well. The population of the village is 1,405 and all of them are the Hindus.

1.5 Health

There is no Health Center in the locality. When people get sick, they go to the village doctor for treatment and get the medicines from there. When they don't get the proper medical treatment from the village doctor, they used to go to Kalkini, Madaripur or Barishal for better treatment.

1.6 Culture

In every house religious festivals are observed. In BRAC school students can learn singing and dancing.

2. Village Resources

2.1 Natural capital

Canal: In the middle of the village a canal named Nishikant flows from the west to the east. There is another canal in the southern side of the village named 'Shoshikör khal', which flows from the west to the east. Local village fishermen used to catch fish in both canals and earn their livelihood by selling those fish in the market. People from all walks of life use boats for their communication. A canal named WAPDA flows from the north to the south beside the western side of the village. People from remote areas use the canal for navigation purpose.

Cultivable land: There is a large number of cultivable land in the village. People from all class, rich middle class or poor, who have their own cultivable land. Cultivate land to fulfill their needs by producing crops. And by selling the surplus one they meet the other demands of their family. During the time of cultivation and harvest mostly the poor people work there as day labours.

Beel: There is a *beel* in the village named 'Kalitala'. When fishes are available in the *beel* the poor people of the locality earn their livelihood by catching fish from there.

Pond: There are ponds inside the village. Local villagers used to earn money by cultivating fish in those ponds.

2.2 Human capital

Service Holders: their earnings benefit them themselves, their families and relatives.

Teachers: Boys and girls from all class of people get the opportunity of being educated. Teachers earn their livelihood by teaching students.

Village Doctor: People from all class of the village including his neighbors get medical treatment from him.

Ozha : If snakes bite anybody in the village they used to make him cured from the poison, which helps the villagers.

Fisherman: They earn their livelihood by earning money from catching and selling fishes.

Deed-writer of the Court: If the villagers have any litigation in the court about lands or any other subject, the deed-writers used to make contact with the lawyer and organize the cases. In this way they help the villagers.

2.3 Social capital

School: There is one government primary School in the village. There the children from all economical class get the opportunity of learning. Besides there is also a BRAC school where the poor children are getting most opportunity to learn. BRAC provides the expenditure of the students in the school for purchasing free books, pencils etc.

Temple: The villagers used to observe several religious festivals in the temple without making any discrimination among the rich and poor.

2.4 Physical capital

Sanitary Latrine: There are twenty-three sanitary latrines in the village. Villagers try to get remedy from the water contaminated diseases by using those latrines. In the village there are forty open toilets made of wood and bamboo. Thus the water carried diseases spread and the villagers are attacked.

Unpaved Road: There is a one kilometre long unpaved road by the side of the canal WAPDA in the western part of the village. The road is broken in some places. As a result it become difficult to walk through the road. They have to use boats for going from one place to another. And there is no other way of communication in that locality.

Tube well: There are 57 tube wells in the village; of which 2 are deep tube wells. Using tube well water is benefiting the villagers. Both rich and poor people can use the deep tube well water.

Shop: There is only one shop in the village. Majority of the customers of the shop belongs to the poor class.

School: There are one government Primary School and one BRAC School in the village. In the government school children from all classes get the opportunity of learning. In BRAC School the poor children get the most opportunity to learn. They provide the expenditure of the students in the school for purchasing free books, pencils etc.

Private Primary School (*pathshala*) : One private Primary school has established with the children of two or three households. The teachers employed in this school get their salary from the guardian of the students of the school. Every children of the village cannot get the opportunity of learning there.

2.5 Financial capital

There is a wholesale shop outside the village. Some poor people work there as salaried.

3. Institutional Processes: Importance and Roles

3.1 Government institutions

A government primary School is situated in the village where rich, poor or people from any economical class get the opportunity of learning.

3.2 NGOs, CBOs, Co-operatives

Proshika: Proshika gives loan through the society. With those loans poor people can do some small business and maintain their family with the earning.

B.U.S: They offer scholarship among the female students of the school and provide loan for sanitation and installing tube well.

BRAC: They give loans through the women society. They distribute wheat among the very poor women of the village. While giving loans they also give chicken, seedlings and seed. With the loan money the members of the society become economically solvent by small trades and business. BRAC has a school in the village.

Sheba: They used to give small loans to the poor class people with that they can fulfill their needs.

P.E.P: P.E.P gives loan through its society to the poor people. With the loan money people try to improve their economic condition.

V.D.O: they give installment-based loan for building house to those who are unable to do so economically.

3.3 Informal institutions

There is one temple in the village and the local villagers observe many religious festivals by raising subscription.

3.4 Private sectors

There is no private Sector organization in the village.

Table 3.1 Ranking of development organizations in village Paschim Shoshikor

Organization	Nature of work	Quality	Comments
BRAC	The poor section of the village generates employment by taking loan from BRAC. They used to give loans among the V.F.D cardholders and gives chicken, seed and seedlings with the loan. There is a school of BRAC in the village.	1	BRAC has done good work for the poor people and the development of the village, hence the villagers put the NGO in the top of the list
Proshika	Proshika give only loans and nothing else.	2	Proshika used give big loans so it has achieved the second position
B.U.S	They offer scholarship among the female students and give loans for sanitation and establish tube wells.	3	It offers the poor female student scholarship so it has taken the third place.
P.E.P	Give small loans	4	It is in the fourth position because it gives small loans to the villagers.
Sheba	Give small loans	4	It is in the fourth position because it gives small loans to the villagers.
V.D.O	The villagers who can't build their house for economic problem, V.D.O give them loan in installment	3	It works for giving house loans, so it is in the third place of the ranking.

Note: 1 = very good, 2 = good, 3 = satisfactory, 4 = not satisfactory

4. Seasonal Vulnerability and Coping Strategies

Table 4.1 Seasonal differences in village Paschim Shoshikor

Item	Apri l- May	May - June	June -July	July- Aug	Aug- Sept	Sept -Oct	Oct- Nov	Nov- Dec	Dec- Jan	Jan- Feb	Feb- Mar ch	Mar h- April
	<i>Bais hakh</i>	<i>Jaist ha</i>	<i>Asha r</i>	<i>Shra bon</i>	<i>Bha dro</i>	<i>Ash win</i>	<i>Karti k</i>	<i>Augr ahay an</i>	<i>Pous h</i>	<i>Mag h</i>	<i>Falg oon</i>	<i>Chait ra</i>
Temperature	12	11	3	7	10	5	2	4	1	6	8	9
Rainfall	10	7	12	11	6	8	9	3	1	1	1	2
Employment opportunity	12	2	3	4	1	5	5	11	10	6	9	8
Food deficit	1	1	1	1	2	3	4	8	9	10	11	12
Borrowing	1	2	3	4	5	6	7	8	9	10	11	12
Lean period	9	1	2	3	4	5	6	8	9	10	11	12
Fish availability	1	1	2	3	4	5	9	11	12	10	1	1

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Employment opportunity

Unemployment problem is occurred largely during the month of Falgun and Chaitra . Because at that time people have no work as the water recedes from the lands and there remain no ways of fishing. People have to borrow money from the moneylenders and different NGOs. In the month of Kartik there remains the most opportunity of employment. Because it is the time of sowing.

4.2 Food deficit

During the month of Falgoon and Chaitra deficit of food occurs largely. At that time there remains no work for the people and food is not available in any house. Then they have to give fertilizer and insecticides in the crop fields. Seed kept for next crop production is sold and the fertilizers purchased. Then they fulfill the food deficit by taking loan from moneylenders and from different NGOs. During the month of Baishakh and Jaistha there remains no shortage of food because the new crop is harvested that time.

4.3 Borrowing

Most of the borrowing occurs in the month of Chaitra and least in the month of Baishakh. During the month of Falgun people and Chaitra people have shortage of food and they have to give fertilizer and insecticides in the land. As they face the shortage of money they have to borrow money from the moneylenders and from relatives. In Baishakh however every households have paddy of their own and don't face any scarcity. So they don't need to borrow.

4.4 Lean period

People face the worst period of the year during the month of Chaitra because the hailstorm used to destroy the harvest. Due to excess draught there appears devastating epidemic. As a result there remains no work and. The month of Baishakh and Chaitra are the best period because the new crop is harvested at that time. There remains no shortage of food. The villagers used to sell paddy, rice, chicken, duck, cow, goat, plant, fish, pumpkin, banana, vegetable etc.

5. Well-being Pattern in the Village

Table 5.2 Well-being pattern in village Paschim Shoshikor

Wealth category Hhs 140	Livelihood assets	Livelihood strategies	Sustainable livelihood outcomes
Rich 5%	1. Possess a good number of assets, lands, mill, pharmacy, and shallow machine. 2. Earn money from the service.	1. Earn money from the service works. 2. Used to give lease of lands to the poor villagers. 3. Employ some people in their pharmacy. 4. Used to irrigate the land with the water of tube well.	1. Earn money by hard work and keep the family. 2. Produce crops by cultivating land. 3. The poor villagers can be employed in their shops. 4. The quality of crops is good due to the irrigation.
Middle class 16%	1. Possess few lands. 2. Have the business of snail and fish	1. Produce paddy and other crops in their land. 2. Collect snails from the beel and sell 3. Earn money by fishing	1. Earn livelihood by cultivating lands. 2. Earn money by selling snails or fish.
Upper poor 15%	1. Possess a few lands. 2. Works in other people lands as day-labourer and lend money with interest.	1. Work in own lands and produce crops. 2. Take the lease of land and cultivate. 3. Used to borrow from the rich with interest.	1. Live their livelihood with the produced crops. 2. Earn money from the interests and by working as day-labourer.
Poor 22%	1. Possess only the homestead, no lands. 2. Used to work in other people's lands.	1. Have to work hard everyday and have to migrate. 2. Used to borrow.	1. Though they try to earn their livelihood with hard work, they have to suffer from food deficit.
Destitute 42%	1. Some people neither have any lands nor homestead 2. Work as day-labourer in peoples' house.	1. Have to sell labour. 2. Women used to borrow but nobody wants to lend money to them.	1. They have to suffer from food deficit through the whole year. 2. Spend a low standard life with illiterate children. 3. Have to suffer from malnutrition.

Table 5.2 Well-being data of village Paschim Shoshikor

Wealth category	Percentage (n = 140)	HH identification number
Rich	5% (7)	35, 88, 111, 112, 113, 118, 136
Middle class	16% (22)	2, 4, 5, 9, 10, 12, 26, 46, 70, 71, 81, 87, 89, 90, 91, 92, 105, 114, 125, 127, 133, 134,
Upper poor	15% (21)	1, 7, 36, 37, 38, 39, 43, 58, 63, 64, 65, 66, 67, 72, 73, 74, 75, 76, 82, 83, 140
Poor	22% (31)	6, 19, 25, 27, 28, 29, 30, 31, 32, 33, 34, 40, 41, 42, 44, 54, 56, 57, 61, 68, 69, 93, 106, 107, 108, 109, 110, 124, 128, 135, 138
Destitute	42% (59)	3, 8, 11, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 45, 47, 48, 49, 50, 51, 52, 53, 55, 59, 60, 62, 77, 78, 79, 80, 84, 85, 86, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 115, 116, 117, 119, 120, 121, 122, 123, 126, 129, 130, 131, 132, 137, 139

6. Expected impact by beneficiaries of FFP-

6.1 Comments of fishermen about FFP

The people of west Shoshikor will be benefited economically with the launching of FFP. If all rich and poor people of every service work together it will be advantageous for the *beel*. There grow some types of water hyacinth and moss, which pollute the water of the *beel*. So these should be clean properly. Fish passes through the canal, which is beside the *beel*. By building embankments in that canal plenty of fishes can be caught. If catching fish by irrigation from the wells of the *beel* could stop plenty of fishes would available from the *beel*. The fingerlings that FFP authority released have not grown much yet. As a result the fishermen cannot catch fishes now. If they would release the fingerlings in the end of the month of Ashar by this time the fish would grow bigger size than at present and people could catch fish.

6.2 Comments of PRA team

FFP authority should plan and take decision on any matter after discussion with the VDC and FMC members. If the fingerlings were released during the first of the month Ashar by the time the fish would grow bigger enough and the villagers could earn money by catching fish.

III. Profile of Village Nayakandi

1. Contextual Analysis

1.1 Historical background

During the period of the Nawab some people came to the land from Jessore district on the same day and they began to live together. Since then the village has got the name “Nayakandi”.

1.2 Village infrastructure

There is a temple in the village where the people from all classes of the Hindu community as rich, poor etc. used to do religious worship without facing any hindrance. There is a community school where the children both poor and rich can study from class one up to class three. Few days ago a BRAC school has established where only the local poor children are getting the opportunity to learn. One lady teacher, selected from the village is managing the school. She is trying to educate the poor children in good manner with her labour and wisdom. There is an NGO named Sheba. They used to give loans among the poor people for their economical development. With the loan money they do small trade and business. There are one rice mill and one flatted rice mill in the village where the poor villagers can get the opportunity to be employed.

A market is situated in the southern side of the village. In the market the local people used to buy and sell their daily necessities. In the middle of the village there are three small shops. Majority of the customers of the shops belong to the poor class, who used to buy their necessary goods from those shops. There are twelve tube wells in the village. Of them three are deep tube wells and nine are shallow tube wells. All class of local people uses the water of those tube wells. The number of sanitary latrines in the village is 35. Many of the villagers have no sanitary latrines in their house. They pollute the environment using the open fields, bushes and jungles in this purpose. There is a bridge in the village. A *katcha* road passes from the south to the north by the side of the village canal. The road remains overflowed with water about for six months of the year. Cent percent of the villagers are the Hindus.

1.3 Political/ Administration

In the area there is no an elected member or chairman. Incase of any developmental work the local village leaders try to do it through the chairman and members of Union porishod. Any political strike has very little effect on the locality. There are four temples where they try to develop conscious among the people by holding religious festivals.

If there occurs any wrangle, land dispute or any small problems, first the villagers try to settle that among themselves. If they become failed they try to solve it with the elite and respectable persons of the village. If this is also failed they try utmost to solve the problem with the chairman and the members or they have to take the shelter of law.

1.4 Educational

A community school is situated in the northern side of the village, where 98 children are getting the opportunity of learning. There is a BRAC School where 33 students are getting opportunity of learning.

1.5 Health

There is no health center in the village. So the people of the village cannot get better facilities of medical treatment.

1.6 Cultural

In the middle of the village on every Friday musical songs of the Hindu religion is performed in a temple. Students of the Community school and BRAC School are taught dancing and singing.

2. Village Resources

2.1 Natural capital

Usually the rich and middle class people of the village have their own cultivable lands. They produce crop by cultivating the lands. While cultivation the people from poor class work in those lands as day labour. There is a *beel* in the western side of the village. Usually the poor people catch fish in the *beel* to earn their livelihood. Sometimes the middle class people used to catch fishes from the marsh. By the eastern side of the village a canal has flown from the south to the north. During the rainy season poor and middle class people used to catch fish from the canal.

2.2 Human capital

Service Holders: He himself, his family and other relatives are benefited.

Teacher: Boys and girls from all class of people get the opportunity of being educated.

Ozha: If snakes bite anybody in the village, the ozha used to make him cure from the poison and the poor people are benefited from him mostly.

Village Doctor: Middle class and poor people get medical treatment from him.

2.3 Social capital

BRAC School: The poor children get the most opportunity of being educated.

Community School: Children from all class both rich and poor get the opportunity of learning there.

Temple: The Hindus of the locality observed different religious festivals in different times where people of all classes join without making any discrimination among the rich and the poor.

2.4 Physical capital

Sanitary Latrines: Those who have sanitary latrines in their house use that themselves and give opportunity to use that to others.

Tube well: Villagers who have tube well in their house use the tube well water themselves and give opportunities to others to use that water.

Shop: There are three shops in the village. Majority of the customers of those shops belongs to the poor class. The rich people buy things from those shops very often.

Katcha Road: There is a two km long katcha road, which becomes overflowed with water about for six months in a year. Then the people suffer most to move from one place to another. Then they have to use boat for communication.

Rice Mill: A rice mill is situated in the southern side of the village. Usually poor people work in the mill to earn their livelihood. People from all classes both rich and poor get the opportunity to husk rice here.

Metal Bridge: There is a metal bridge in the middle of the village. All people can use the bridge.

2.5 Financial capital

Chira (flatted rice): In the Chira Mill Chira is made from rice for selling. Some poor people work in that mill.

Rice Mill: Some people buy rice from village hats and markets. After boiling and processing the paddy they make the rice from paddy. By selling that rice they earn their livelihood. All classes of people have to process paddy from the mill.

3. Institutional Processes: Importance and Roles

3.1 Government institutions

There is no government organization in this village.

3.2 NGOs, CBOs, Co-operatives

Community School: Both and rich children can get education here.

SHEBA: In the village there is n NGO named SHEBA. It creates facilities for the people through providing loan among the middle class people.

BRAC: BRAC give loans to some poor people. Poor children get the opportunity of learning in the BRAC School.

3.3 Informal institutions

There is one temple in the village. Every Friday religious discussions are held in the temple.

3.4 Private sectors

There is no private sector organization in the village.

Table 3.1 Ranking of development organization in village Nayakandi

Organization	Nature of Work	Quality	Comments
BRAC	There is a society of BRAC with the 24 poor women of the village. BRAC used to distribute loan in small installment among them. BRAC helps some destitute women to make their livelihood by providing V.G.D card as the member of their society. They used to give training on duck, chicken and cultivation of fish to the V.G.D cardholder women. One BRAC School is established in the village which create opportunity for children education by providing the expenditure of the students in the school for purchasing free books, pencils etc.	1	In the village BRAC has done the most benefits to the villagers so it is put in the top of the list
Sheba	There is a local NGO named Sheba in the village. They used to give small loans to the villagers.	2	Sheba gives only loan to the villagers and is not involved in other developmental work of the village. So it has taken the second position in the ranking.

4. Seasonal Vulnerability and Coping Strategies

Table 4.1 Seasonal differences in village Mayakandi

Item	April- May	May- June	June- July)	July- Aug)	Aug- Sept	Sept- Oct	Oct- Nov	Nov- Dec	Dec- Jan	Jan- Feb	Feb- Mar- ch	Mar- ch- April
	Bais- hakh	Jaist- ha	Asha- r	Shra- bon	Bha- dro	Ash- win	Karti- k	Aug- raha- yan	Pous- h	Mag- h	Falg- oon	Chai- tra
Temperature	12	9	7	6	8	5	4	3	1	2	10	11
Rainfall	9	8	12	11	10	6	7	3	1	2	5	4
Employment opportunity	9	5	1	2	3	7	8	10	12	11	4	6
Food deficit	1	2	3	4	5	6	7	8	9	10	12	11
Borrowing	1	2	3	4	5	5	7	8	9	12	11	10
Lean period	10	9	8	11	12	6	4	3	1	2	6	7
Fish availability	4	5	6	7	8	12	11	3	10	9	2	1

Note: 10 - 12 = Very high, 7 - 9 = High, 4 - 6 = Medium, 1 - 3 = Low

4.1 Employment opportunity

Unemployment problem is occurred largely during the month of Ashar and Shrabon. Because of the overflowed water there remain no works in the lands for cultivation. Employment opportunity is highest during the month of Poush and Magh because at that time people get the opportunity to cultivate their land.

4.2 Food deficit

During the month of Falgoon and Chaitra deficit of food occurs largely. People have to sell stored rice to get the money for sowing and thus shortage of food remains in about every house. During the month of Baishakh there is no food deficit in the village. Their stores remain fulfill of rice and they don't have to face scarcity.

4.3 Borrowing

Most of the borrowing occurs during the month of Magh and Falgun. Because to give fertilizer and insecticides in the crop-fields, people have to borrow money, seed and rice from moneylenders or relatives. They also fulfill their needs by taking loans from different NGOs. In the month of Baishakh people have to borrow least because at that time they have a good storage of rice in their house.

4.4 Lean period

Flood occurs largely during the month of Bhadro. Households remain overflowed with the floodwater and people have to face sufferings with the domestic animals. The villagers used to make *Matcha* to live. Boats become the only mean of communication. They have to suffer most to move from one place to another. In the month of Baishakh and Jaistha the water pressure come suddenly. Then the crops of the field overflow with floodwater. Due to hailstorm during the month of Falgun and Chaitra the crops destroyed. In the month of Ashwin and Kartik many diseases like influenza, diphtheria, smallpox etc are occurred among the villagers. The best period of the year for the villagers is the month of Poush. Because at that time the water increases and people can move from one place to another very fluently. The villagers used to sell

paddy, rice, jute, fish, plants, ducks, chickens, cows, goats, eggs, pumpkin, gourds, etc. in the local markets.

5. Well-being Pattern in the Village

5. Well-being pattern in village Nayakandi

Wealth category Hhs 175	Livelihood assets	Livelihood strategies	Sustainable livelihood outcomes
Rich 4%	1. Possess a good number of assets as lands, mills etc. 2. Earn money from service	1. Works in different services. 2. Employ villagers in the mills. 3. Used to cultivate land themselves.	1. With the income they can lead their family in a good way. 2. Use to get crops from the fields through the year. 3. The owner himself and the labourers are earning their livelihood with the income of the mill.
Middle class 29%	1. Work as village doctor, teacher, small business, 2. Possess lands	1. Doctors help the villagers by giving medical treatment and the teachers used to teach education to all class of children. 2. Cultivate land and sell things in hat bazaar.	1. The villagers are getting help from their profession and they can earn their livelihood with the income. 2. As the children can be educated they can get the jobs 3. They can save money in bank with the surplus earning 4. Increase the production of crops by cultivation.
Upper poor 27%	1. Possess lands, small shops. 2. The assets are fisherman, carpenter, fourth-class employee, and Brahmins priest.	1. Cultivate the lands themselves. 2. Used to do fishing, services and business. 3. Do the work of wooden furniture. 4. Used to observe the Pooja function in home and in the temples.	1. Lead life somehow with the income. 2. Earn their livelihood by fishing. 3. People from all class of the village are being benefited with their earnings.
Poor 3%	1. Possess a very few lands. 2. Work as fisherman, carpenter	1. Earn money by fishing, cultivation and making furniture.	1. Live their livelihood with the income from fishing. 2. The produced crops are not adequate for the whole year so they have to work or borrow.
Destitute 37%	1. Do not have own lands. 2. Earn money by pulling van.	1. Earn money by cultivating in the leased lands, pulling vans and by working in peoples' house.	1. The produced crops are not adequate for the whole year so they have to suffer through the year and have to starve. 2. Sometime the income from pulling van is also inadequate.

Table 5.2 Well-being data of village Nayakandi

Wealth category	Percentage (n = 175)	HH identification number
Rich	4% (7)	9, 24, 46, 48, 51, 113, 159
Middle class	29% (50)	1, 2, 3, 4, 5, 6, 7, 13, 15, 23, 29, 35, 36, 40, 41, 47, 49, 50, 52, 53, 56, 63, 64, 73, 74, 75, 76, 87, 89, 95, 101, 102, 103, 107, 109, 110, 111, 122, 124, 130, 131, 133, 138, 141, 142, 145, 161, 164, 165, 166
Upper poor	27% (48)	8, 10, 11, 12, 14, 16, 17, 18, 19, 21, 22, 25, 31, 38, 43, 44, 54, 57, 58, 59, 60, 61, 62, 65, 66, 67, 68, 70, 79, 82, 84, 86, 88, 99, 100, 106, 127, 128, 136, 139, 147, 168, 169, 171, 172, 173, 174, 175
Poor	3% (6)	149, 155, 156, 157, 162, 163
Destitute	37% (64)	20, 26, 27, 28, 30, 32, 33, 34, 37, 39, 42, 45, 55, 69, 71, 72, 77, 78, 80, 81, 83, 85, 90, 91, 92, 93, 94, 96, 97, 98, 104, 105, 108, 112, 114, 115, 116, 117, 118, 119, 120, 121, 123, 125, 126, 129, 132, 134, 135, 137, 140, 143, 144, 146, 148, 150, 151, 152, 153, 154, 158, 160, 167, 170

6. Expected impact by beneficiaries of FFP

6.1 Comments of fishermen about FFP

The fishermen of the village Nayakandi think that if all rich and poor fishermen and all others work together it will advantageous for the beel. The fish species, which lay egg in beel, if given opportunity to do so will increase the fish resources in the beel. FFP authority release the fingerlings in the end of the month of the Srabon but if they would release it in the month of Ashar by this time the fish would grow bigger size than at present. But as it has been released at the end of the month of the Shrabon the fish could not grow much. As such the fisherman cannot catch the fish. After a month or so the water level will decrease. So the villagers faced a loss due to the release of fingerlings in Shrabon.

6.2 Comments of the PRA team

FFP authority should plan and take decision on any matter after discussion with the VDC and FMC. At present the fingerlings have not grown much the villagers cannot catch the fish. By the time the fish would be bigger enough and the villagers could catch it if the fingerlings were released in the month of Ashar.

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