Perceptions of Direct Stakeholders on Coastal Livelihoods

Working Paper WP004

Dhaka September 2002

Program Development Office for Integrated Coastal Zone Management (PDO-ICZM)

Perceptions of Direct Stakeholders on Coastal Livelihoods

Working Paper WP004

Prepared by Mohiuddin Ahmad

Saimon Centre, Road 22, House 4/A, 5th floor Gulshan 1, Dhaka 1212 Tel & Fax: 8826614; Tel: 9892787; Email: <u>pdo@iczmpbd.org</u> Web: www.iczmpbangladesh.org

Dhaka, September 2002

FOREWORD

One of the important tasks of the PDO-ICZM project is to improve the understanding of the vulnerabilities and challenges of households in the coastal zone. This is essential for the development of a meaningful coastal zone policy and strategy and for proposing effective interventions that really contribute to the improvement of their livelihood conditions.

This task has many dimensions. Livelihoods differ strongly in different social, environmental and institutional settings along the coast. In addition, one should address the issue that poverty and vulnerability cannot only be measured in absolute and objective terms. Information about the way people perceive their conditions in terms of poverty and vulnerability and their possibilities to improve them is as important as official statistics about household income and poverty indices and interventions to improve these. Needles to say that these perceptions are strongly gender biased.

The present working paper documents findings of a household survey, which was carried out in the context of a Coastal Livelihood Analysis (CLA) study. The purpose of the survey was to have more information on the *perceptions of direct stakeholders on coastal livelihoods*. In a later stage information from this survey will be complemented with secondary data, analyzed in more detail and reported in a first CLA-report (January 2003). As mentioned, this report on coastal livelihoods is considered a crucial baseline document for the ICZM process. It is intended to update the January 2003 report as soon as new information becomes available during the project period. In this sense, CLA is considered an ongoing process that would help in understanding and conceptualization of coastal conditions, fill up knowledge gaps and identify areas for priority actions.

STUDY TEAM

Research Officer

Sayed Iftekhar Afsana Yasmeen

Data Analyst

Maksuda Khanam Rounakul Islam

Rural Livelihood Specialist

Hamidul Huq Dirk Frans

Gender Specialist

Begum Shamsun Nahar

Principal Scientific Officer

Md. Shahjahan

Contributor

John Soussan Rob Koudstaal

Socio-Economist and Study Coordinator

Mohiuddin Ahmad

TABLE OF CONTENTS

FO	REWO	DRD	
STI	JDY T	EAM	
TA	BLE C	DF CONTENTS	V
LIS	T OF	TABLES	VI
LIS	T OF	FIGURES	VI
		/MS	
-	-	RYV	
-			
1.			
	1.1	Genesis	
	1.2	Background	
	1.3	Objective	
	1.4	Analytical framework 1.4.1 Household as decision-making unit and focal point of the ICZM approach	
		1.4.1 Thousehold as decision-making unit and jocal point of the ICZM approach 1.4.2 The household's environment	
		1.4.3 Improving livelihood conditions	
		1.4.4 Issues: areas for decision-making and implementation	
	1.5	The coastal zone	
2	METI	HODOLOGY AND APPROACH	. 5
-	2.1	Survey methodology	
	2.2	Data collection and limitations of the study	
	2.3	Data processing	
	2.4	Report	
3	LIVE	LIHOOD ASSETS	. 9
	3.1	Human capital	.9
	3.2	Social/institutional capital	
	3.3	Natural capital	
	3.4	Physical capital	0
	3.5	Financial capital	1
	3.6	Processes	1
		3.6.1 Human capital	
		3.6.2 Social-institutional capital	
		3.6.3 Natural capital	
		3.6.4 Physical capital 3.6.5 Financial capital	
	3.7	Social stratification	
	3.8	Perceptions on poverty	
	3.9	Household characteristics and poverty	
4			
-	4.1	Vulnerability issues	
	4.2	Area-specific vulnerability	
	4.3	Occupation and vulnerability	
	4.4	Poverty and vulnerability	
	4.5	Vulnerability and impact on households	

	4.7		19 19 19 20
	4.8	Recommendations for solution	20
5	LIVE	LIHOOD STRATEGIES	.21
	5.1	Choice of activities	21
		Choices	21
	5.3	Activities	21
	5.4	Migration	22
		Income	
	5.6	Disposal of income	22
	5.7	Consumption	22
	5.8	Social payment	23
	5.9	Investment	23
	5.10	Outcome	24
6	VISIC	ON FOR FUTURE	.25

LIST OF ANNEXES

ANNEX A: LIVELIHOOD SYSTEMS IN COASTAL DEVELOPMENT	27
ANNEX B: METHODOLOGY AND APPROACH	39
ANNEX C: PDSCL SURVEY DATA	55
ANNEX D: LIFE STORIES	93
ANNEX E: DEFINITION OF KEY WORDS	125

LIST OF TABLES

Table 1: Distribution of the coastal zone *	4
Table 2: Difference between the poor and the non-poor	14
Table 3: Household characteristics	15
Table 4: Geographic distribution of main vulnerability issues	15
Table 5: Occupational distribution of vulnerability issues	.19
Table 6: Distribution of main vulnerability issues by socio-economic strata	20
Table 7: Disposal of income	23

LIST OF FIGURES

Figure 1: Community capacities to enhance livelihoods	1
Figure 2: Location of PDSCL survey	6

ACRONYMS

CDS	Coastal Development Strategy
CDSP	Char Development and Settlement Project
CEGIS	Center for Environmental and Geographic Information Systems
CLA	Coastal Livelihoods Analysis
CPR	Common Property Resources
GNAEP	Greater Noakhali Aquaculture Extension Project
GoB	Government of Bangladesh
HH	Household
ICZM	Integrated Coastal Zone Management
KJDRP	Khulna-Jessore Drainage Rehabilitation Project
NGO	Non-Governmental Organization
PBAEP	Patuakhali-Barguna Aquaculture Extension Project
PDSCL	Perceptions of Direct Stakeholders on Coastal Livelihood
SBCP	Sundarban Bio-diversity Conservation Project
SLF	Sustainable Livelihoods Framework
UP	Union Parishad

GLOSSARY

Ashar	Bangla month of rainy season between June-July
Chanda	Forced contribution/extortion
Char	Newly accreted land
Chollisha	Ritual observed on 40 th day after death of a family member
Dalali	Act of commission agent
Eid	Muslim religious festival
Gher	Shrimp field
Ghush	Bribe
Juda	Nuclear family
Khalu	Aunt's husband
Khorposh	Subsistence from husband and compensatory subsistence after divorce
Khas land	Leased land
Khatna	Circumcision
Mama	Mother's brother
Mastan	Terrorist/ muscleman
Mukhe bhat	Hindu ritual to feed a baby first time with rice
Niribili	Nuclear family
Puja	Hindu religious festival
Shalish	Traditional court for mediation
Sravan	Bangla month of rainy season between July-August
Tadbir	Lobbying
Union	Administrative unit under an upazila comprising several villages
Upazila	Administrative unit under a district comprising several unions
Union	Parishad local government

1. INTRODUCTION

1.1 Genesis

How do women and men who live and work in the coastal zone of Bangladesh make a living? What do they consider their main resources, vulnerabilities, options and constraints? Looking at the future, what do they expect from the government and what are their own plans to improve their livelihoods? This report on the "Perceptions of Direct Stakeholders on Coastal Livelihoods" (PDSCL) deals with these and related questions.

It has been endeavored from the outset to obtain a first hand understanding and insight about coastal livelihoods. Collection and analysis of quantitative statistical data has not been an intention, nor it was felt necessary for such an understanding.

1.2 Background

The natural environment with accompanying opportunities and vulnerabilities of the coastal zone is different from the rest of the country and hence it needs special form of management. Integrated Coastal Zone Management (ICZM) offers a methodology of balancing competing demands of different users of coastal resources and of managing the resources in a sustainable way to optimize the benefits. This calls for a multi-sectoral, integrated and long-term management strategy for conservation and development of the coastal resource base.

The main output of the ICZM will be a coastal development strategy (CDS) for resource management. Such a strategy will be based on several building blocks. One major building block or element that will feed the CDS is "community capacity to enhance livelihoods". Within this framework a "coastal livelihoods analysis" (CLA) has been planned to understand the processes and dynamics of people's livelihoods in a coastal environment. The "Sustainable Livelihoods Framework" (SLF) has been used as a conceptual model to understand these processes and dynamics. The analysis will be substantiated and consolidated through selective in-depth case studies (Figure 1). As a part of the CLA, a perception survey of direct stakeholders has been undertaken.

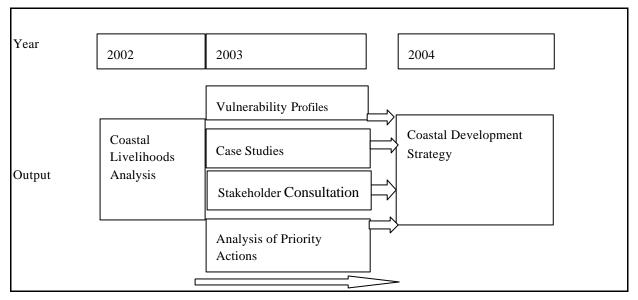


Figure 1: Community capacities to enhance livelihoods

1.3 Objective

The main objective of the explorative PDSCL is to enable inhabitants of the area, particularly from the poorer households, to voice their understanding of coastal livelihoods, their main assets, the key vulnerability issues and the opportunities for priority action. Furthermore the PDSCL will focus on gaining experience in applying the SLF in the coastal context.

It is to be borne in mind that this report is based on primary information that would help understand the situation and processes pertaining to coastal livelihoods from the perspective of the local people, mainly the poor. This exercise will help build knowledge base based on a pool of primary information. The sequence is as follows:

Information: Understanding: Insight: Knowledge: Wisdom

From the perspective of the local people, it is their accumulated wisdom that defines the context and the perspective on which the planners are to gain understanding and insight about coastal issues and processes and then develop policies and strategies for enhancement of their livelihoods.

1.4 Analytical framework

The SLF (see Annex A: Livelihoods Systems in Coastal Development) presents the main factors that affect people's livelihoods and the relationships between them. In particular, the framework

- ♦ provides a checklist of important issues and outlines the way they link to one another;
- \diamond draws attention to core influences and processes; and.
- \diamond emphasizes the multiple interactions between the various factors that affect livelihoods.

The SLF puts households as core of the analysis. Households are considered as primary decisionmaking units; and the main concern is the enhancement of their livelihoods through a proper understanding of what assets they possess, what strategies they make, what vulnerabilities they suffer from, and what coping mechanisms they adopt.

1.4.1 Household as decision-making unit and focal point of the ICZM approach

According to the SLF, people draw on a set of *capital assets*, which include: human, natural, financial, technical and social/institutional resources (Carney, 1998). Using the selected assets, people then undertake a *series of activities* which generate *income* (goods, services and cash), which can be spent on: (i) investments in livelihood assets (land, training) and activities (hiring labor, buying pesticides); (ii) social payments (membership fees, taxes); and consumption (food, clothes).

This model focuses on the household as a decision-making unit and thus provides a workable concept to support an ICZM approach, which aims to enhance livelihood conditions of the people in the coastal zone.

The above implies the following definition of households: a group of people living together sharing meals from a common kitchen that make choices (decisions) on the use of assets available to them and on spending of the generated income, which has been generated by the activities based on the use of these assets.

1.4.2 The household's environment

Their local environment influences household assets and activities. First there is the *local resource base* to which the households have access or not (access filter). This creates *opportunities*. Secondly there are the dynamics and changes in this resource base, which are beyond the household's control to which these households might be sensitive. Households become *vulnerable* when they lack the *resilience* to

prevent such dynamics and changes that lead to poverty or increased poverty. In other words, *vulnerability* refers to *the ability of people to avoid, withstand or recover from impacts of the dynamics and changes in the local resource base that are beyond their immediate control and that disrupt their lives, leading to poverty or increased poverty.*

Vulnerability also deals with the available resources and the household's access to them. These create the resilience to withstand the external forces beyond the household's control. The combination of external forces constitutes the *vulnerability context* and consists of the variability, trends and shocks in the components of the same resource base. Lack of resources is not part of this vulnerability context, but it certainly increases the household's vulnerability as it reduces the resilience to meet the dynamics and changes of the resource base.

The dynamics and changes in the local resource base stem from a combination of the stochastic nature of many components of the resource base, such as the seasonal variation in water levels or extreme flood events, and external/exogenous changes affecting the local resource base. External changes would refer to changes, which can be affected at a national level, such as water extractions and pollution upstream of the coastal zone. Exogenous changes refer to changes really beyond control such as climate change and world market prices.

1.4.3 Improving livelihood conditions

Improving livelihood conditions is the driving objective of ICZM. Vulnerability is considered a key dimension of coastal poverty and thus the most important component in any strategy to improve livelihood conditions. In the terminology of the above conceptual model, reducing vulnerability should consider:

- ◊ "reducing the vulnerabilities context", or more correctly, reducing changes in components of the vulnerability context; and
- \diamond "increasing the opportunities" or increasing the resilience to cope with these changes.

Increasing opportunities refers to both availability of and access to the local resource base. This leads to three rather distinctive types of "interventions":

- ♦ increasing the availability of local resources;
- \diamond increasing the access of households to the available local resources; and
- ♦ changing the variability, trends and shocks that are part of the vulnerability context.

1.4.4 Issues: areas for decision-making and implementation

"Issues" is too loose a term to be useful in the above conceptual model. The connotation of "issues" may vary from the general issue "that people living in the coastal zone are more vulnerable than people in other parts of the country" to the specific issue of "over exploitation of the deep aquifer in the Noakhali coastal area", which is again an issue within the issue of the "public water supply and sanitation". In the context of a CDS, an issue would refer to a major policy area or field, where policy and decision-making and subsequent implementation would have an operational level of autonomy, without loosing the need for coordination.

In such a policy area a logical approach would be that one GoB department would take the lead in developing and implementing a policy in different networks of coordination.

1.5 The coastal zone

The coastal zone includes all administrative districts either facing the sea and the estuary or impacted by the tidal/salinity regime. In the perspective of the ICZM, it is important to have a clear understanding about the zone itself. A zoning exercise with clear delineation of the boundary will facilitate an

understanding of the distinctive features that call for special strategies and options. A tentative zonification has been done for the purpose of the PDSCL. Table 1 presents zonification mainly based on geo-physical and ecological characteristics.¹

SI	Zone	Location	Area (km²)	Estimated population (2001)
1	Islands	Chittagong: Sandwip	6,361	2,777,292
		Cox's Bazar: Kutubdia, Moheshkhali, St. Martin's Island		
		Noakhali: Hatiya		
		Bhola: Entire district		
	C1 1	Patuakhali: Rangabali union in Galachipa upazila	5 4 4 0	1 070 (71
2	Chittagong	Chittagong: Mainland upazilas except statistical	5,448	4,373,674
	coast	metropolitan area		
2	<u> </u>	Cox's Bazar: Mainland upazilas	2 1 0 2	1.566.406
3	Coastal char	Feni: Mainland upazilas facing the coast	2,183	1,566,486
		Noakhali: Mainland upazilas facing the coast		
4	Old land,	Lakshmipur: Mainland upazilas facing the coast Barisal, Barguna, Pirojpur and Jhalkati, Shariatpur:	10,956	7 456 0 4 1
4	lower	Entire district	10,936	7,456,041
	Ganges basin	Patuakhali: Entire district except Rangabali union in		
	Ganges basin	Galachipa upazila		
5	Sundarban	Satkhira: Shyamnagar upazila	6,953	924,364
5	Sundarban	Khulna: Dacope and Koyra upazilas	0,755	724,504
		Bagerhat: Mongla and Sharankhola upazila		
6	Old land,	Chandpur: Entire district	3,999	5,514,959
0	Meghna	Feni, Noakhali and Lakshmipur: Inland upazilas except	3,777	5,511,555
	basin	the coastal ones		
7	Old land,	Khulna: All upazilas except Sundarban and the	4,992	3,541,691
	upper	metropolitan area	,	
	Ganges basin	Satkhira and Bagerhat: All upazilas except Sundarban		
8	Urban	Chittagong: Statistical metropolitan area	1,253 4,429,949	
		Khulna: Statistical metropolitan area		
9	Marine		?	-
Tota	1		42,153	30,584455

Table 1: Distribution of the coastal zone \ast

*This exercise was done using the old definition of the coastal zone covering sixteen districts facing the sea or the estuary.

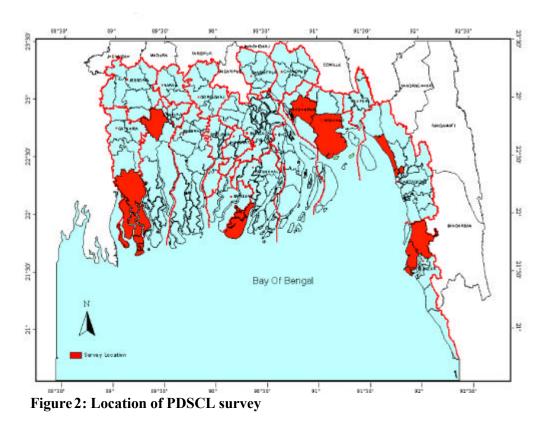
¹ This has been detailed and updated later that includes 19 dis tricts.

2 METHODOLOGY AND APPROACH

2.1 Survey methodology

It was decided at the outset that about 100 households would be covered in the survey. The idea is to gain an insight about the coastal zone through the eyes of 100 households in their struggle for livelihood. The following methodology and approach were adopted

- The coastal zone was divided into nine zones based on geographic and physical characteristics (See Table 1).
- The number of households (HH) to be interviewed per zone has been decided primarily on the basis of the number of different types of vulnerabilities identified for each zone through secondary sources (see Annex B.1).
- The second factor influencing the number of HHs to be interviewed per zone was the population of each sub-zone (Annex B.2).
- The actual number of households to be interviewed per zone was determined by a weighted index in which the numbers of vulnerability issues in each zone and the number of people in that zone each carry equal weight. To arrive at the percentage of HHs to be interviewed from that zone, the number of issues is multiplied by the percentage of the population (Annex B.3).
- Within zones the households were selected on the basis of eight main occupational categories, as perceived by the households themselves. The percentage distribution of the households across these eight categories in a zone is based on secondary sources and the team's experience and knowledge of the different zones (Annex B.4).
- By combining the number of HHs to be interviewed per zone (Annex B.3) and the spread of occupational categories in each zone (Annex B.4) the spread of the HHs to be interviewed across each occupational category in a zone has been planned (Annex B.5). Furthermore, for each zone one or two female -headed household was interviewed, with a total of 10 interviews. See Figure 2 and Annex B.7 for location of the survey. And B7
- Partner/facilitating agencies in each zone were requested to assist with local logistics as well as the selection of the actual households and the necessary introduction of the researchers (Annex B.6).
- One male and one female researcher interviewed the senior male and female member of each selected household separately, using a checklist (Annex B.9).
- Towards the end of the interviews in a zone, the researchers identified one/two household(s) for each zone for an in-depth life-story study. These life-stories, separate for the senior male and female of the HH, have focus on a comprehensive view of their livelihood strategies over the last 3-4 decades.
- Immediately after completing the interviews in a zone the individuals interviewed were invited to a debriefing/validation workshop along with a few experienced staff of the partner/facilitating organization where the researchers presented their main findings and solicited feedback (Annex B.8).



2.2 Data collection and limitations of the study

Household interviews started on 6 May and continued up to 9 August 2002. A team of two researchers, one female and one male, administered the interviews of household males and females using a checklist (Annex B.9). Staff of partner/facilitating organizations supported them. It was endeavored at the outset to involve ongoing projects and institutions targeting to livelihood enhancement of the communities in the coastal zone. Some have explicitly incorporated a livelihood approach. Some are implementing programs that are targeted to socio-economic well being of various disadvantaged people. Among these are the Khulna-Jessore Drainage Rehabilitation Project (KJDRP), Center for Environmental Geographic Information System (CEGIS), Sundarban Bio-diversity Conservation Project (SBCP), Patuakhali-Barguna Aquaculture Extension Project (PBAEP), Greater Noakhali Aquaculture Extension Project (GNFEP), Char development and Settlement Project (CDSP) and some non-governmental organizations (NGOs). It is felt important to link all these endeavors to benefit from each other's experience. The survey methodology was developed in consultation with representatives of these partners and an outline paper was shared and discussed with them in Dhaka on 2 May 2002.

In two locations of Cox's Bazar, Maheshkhali and Chakaria/Pekua, the researchers had to use interpreters, as they were not familiar with local dialect. Validation workshops with all interviewees were held in all the locations, except in two areas, Chakaria/Pekua and Chittagong urban area, because of logistics problems.

Two senior researchers took interviews for the in-depth life stories. In total 18 life-story interviews were taken from 11 households with equal number of male and female from amongst the respondents covered by PDSCL survey. Among them, seven are couples.

2.3 Data processing

"MS Access" has been used to process information obtained through the checklists. The software package "N5", specially designed to analyze qualitative data, has also been used to some extent. While some consolidated data has been used in the main text, detailed information is provided in Annex C.

The in-depth interviews were tape-recorded and the tapes were transcribed into *Bangla*. These transcripts were then summarized in English (Annex D).

2.4 Report

The report has been organized in six sections. Section 1 describes the context and the conceptual framework. Section 2 describes the methodology and approach. Details of the methodology have been provided in Annex B. Sections 3 to 6 describe responses and perceptions of the direct stakeholders embedded in the perception survey. Detailed findings of the survey are provided in Annex C. Definitions of key words have been presented in the Annex E.

3 LIVELIHOOD ASSETS

Here assets, resources and capital are used with similar connotation. According to the SLF, all household assets/resources are broadly grouped into five categories. Ownership/control of or access to these assets/resources is vital for decision making for livelihood activities. In the concrete situation of the Bangladesh coastal zone, it was endeavored to know what are considered as resources in the perception of the people and which resources are available at the household level. Based on the findings of the PDSCL survey, an inventory of livelihood assets have been made. These are summarized below (for details, see Annex C.1).

3.1 Human capital

Human capital is mainly comprised of selected household members along with some indicators reflecting quality of life, such as, health, education and training, which transform a human being into a human resource. These are:

- ♦ Wife
- ♦ Son
- ♦ Daughter
- ♦ Family
- ♦ Relatives
- ♦ Health
- ♦ Education
- ♦ Training

Perceptions with regard to human capital are similar among all strata of households. For women the birth of a son, their own and other's health and schooling are the main assets. For men, education of sons and daughters, marriage of daughters and skill training are the main assets.

3.2 Social/institutional capital

Among social/institutional assets are various formal and informal associations and coalitions from which an individual or a household tends to derive certain benefit, privilege or power. Among these are:

- ♦ NGO group
- ♦ Cooperative society
- ♦ Club
- ♦ Madrassa committee
- ♦ School committee
- ♦ Mosque committee
- ♦ Union Parishad
- \diamond Trade union
- ♦ Political party
- ♦ Salish
- ♦ Neighborhood relationship
- ♦ Family/relatives
- ♦ Nuclear family
- ♦ Relief
- ♦ Network of connections

♦ Bank

♦ Being part of majority/minority

While marriage is considered as an important asset among all socio-economic strata, poorer households consider living *juda* or *niribili* (nuclear family) as an asset. 'Relief' is vital for the very poor. The rich considers membership of *Union Parishad* (UP), trade union and political party as AN asset.

3.3 Natural capital

Natural capital includes a host of natural resources, which are under private use. Some of these may not be under *de jure* private ownership, but are accessible to individuals and households for their own benefit. These are:

- ♦ Land: private, joint ownership and/or leased
- ◊ River/canal/watercourse
- ♦ Wetland
- \diamond *Khas* land
- ♦ Homestead
- ♦ Homestead garden
- ♦ Tree
- ♦ Medicinal plant
- ♦ Pond
- ♦ CP resources: fish, wood, reeds, *char*, honey, crab, shrimp fry, etc.

All households irrespective of rich or poor consider land, pond and homestead garden as asset. Poorer households particularly mention about common property resources (CPR), such as, river/canal, fish, crab, etc. Women mention their homestead land and garden most often as their main natural asset with ponds taking the second place.

3.4 Physical capital

Among physical capitals are a wide range of infrastructures, fixtures, tools, services and utilities that contribute to household livelihood and comfort. These are:

- ♦ House
- ♦ Garden
- ♦ Trawler/boat
- ♦ Fishing gear
- ♦ Furniture
- ♦ Household utilities
- ♦ Productive tools/equipments
- \diamond Tube well
- ♦ Latrine
- ♦ Rickshaw van
- ♦ Poultry
- ♦ Cattle
- ♦ Rickshaw van
- ♦ Electricity
- ♦ Road
- ♦ Embankment

The poorer households mention more items than the rich. However, households of all strata consider house, cattle and poultry as assets.

3.5 Financial capital

Financial capital includes possession/dispossession of cash and items that are readily transformed into cash. Few activities that bring cash have also been perceived as financial capital. These are:

- ♦ Savings
- ♦ Credit
- ♦ Insurance
- ♦ Job
- ♦ Gher
- ♦ Income generating activities
- ♦ Income/profit from activities
- ♦ Production tool
- ♦ Compensation
- ♦ Jewellery

Besides, the people also consider a host of economic activities as "financial resource". Women mainly mention loans, ornaments, *khorposh* (subsistence from husband and compensatory subsistence after divorce), while men also mention their various income-generating activities (farming, fishing, shrimp farming, salt farming, etc.).

3.6 Processes

Ownership of or access to capital (assets) by households broadly determines their capability, scope and survival strategy. Together these resources provide a household with an infrastructure base on which its members operate. Households have an array of assets in their disposal that determines their overall status at a particular point in time. This status changes with a change in the household's endowment of assets. Sometimes they feel good when the stock of assets increases, and sometimes they are in a state of dismay when this stock declines. In their life cycle, people have some "good time" that reflects their state of *enhancement*, and there are "bad periods" which indicates a state of *deterioration*. Such a state of enhancement or of deterioration is directly related with the stock of assets. To have some insight about livelihoods of the people, it is necessary to understand why people feel good or bad and how changing stock or profile of household assets influences such changes. Responses in this regard have been summarized in Annex C.2. Most important findings are spelled out below.

3.6.1 Human capital

Women went to considerable length describing how illness and death had negatively impacted their human assets. A long list of sufferings, expenses and ultimate defeat was the result. Men too had a lot to say about how diseases negatively impacted their livelihoods. In addition the men and women mentioned children dropping out of school, often due to poverty, as a negative impact on their human assets.

3.6.2 Social-institutional capital

For women dowry related problems are one of the main reasons for a decline in their social/institutional assets while for men, stopping membership of (NGO) groups is a major disinvestment. Marriage of sons and daughters and the related connections are perceived as a way of improving this asset and

women mention dowry as one of their main assets. Men mention settling court cases as an important improvement in their social/institutional assets.

3.6.3 Natural capital

Women mention their homestead land and garden most often as their main natural asset with ponds taking the second place. The trend for these natural assets is perceived by women to be negative. Men overwhelmingly consider land as their main natural asset with ponds taking second spot. Men in general have a more positive perception about the trend in their natural assets. Common property resources (CPR) are not mentioned very often, but where they are the trend is negative.

According to women the best years for natural assets were when they received homestead land either through inheritance, government programs or purchase. For men the best years were related to those when they had the maximum amount of agricultural land and secondly ponds for fish culture. For both men and women the best years were also those when the price that they received for their produce was high. Worst years for natural assets were those when cyclones or storms damaged homes, crops and trees and flushed out fish from ponds. Both men and women report these disasters. Women also report conflicts over land in the family as reducing their natural assets, while men hardly ever report this as reasons for a decline.

3.6.4 Physical capital

In general men have a more positive perception of the trend in their physical assets then women. The best years for physical assets were those when households could improve their houses and invest in their own production tools such as nets, boats and rickshaws. House improvement tops the list for both men and women, and involves such things as moving from someone else's veranda to ones own straw shed, creating a separate room within a shed, repairing the house, fitting a tin roof, making brick walls and connecting house to the electricity grid. Less often households invest in ornaments, household furniture, cattle and poultry.

Cyclones and floods are mentioned again and again by both men and women as the main reason for a decline in their physical assets. Damage and destruction of their houses tops the list, closely followed by death of cattle and poultry. Women mention cattle and poultry disease as another cause of the decline in their physical assets.

3.6.5 Financial capital

Women have a rather negative perception of the trend in the ir financial assets while men have a slightly more positive impression on how their financial assets are developing. Women mainly take loans from NGOs. But some loans come from local moneylenders and banks. While loans are apparently badly needed, most of the respondents see them only as a temporary means. Their aim is to settle the loans and they mention fully repaying their loans as a sign of a positive development. Loans are taken for economic activities and mainly by men (even though women take the loan). Loans are also taken for emergencies such as medical treatment and house repair. Negative changes in household financial assets are caused by a number of events. "Business failure" is mentioned often by men, and behind such failure are mainly natural events such as cyclones, floods and animal diseases. Failure is sometimes caused by market events such as a drop in prices, closure of factories or discontinuation of loan programs by NGOs. The unexpected and high cost of medical treatment is mentioned quite often as a reason why the financial assets of the household have deteriorated. Women also refer to social expenses such as the cost of marriages, particularly of daughters, for their financial assets taking a negative turn.

3.7 Social stratification

How people define their situation? This has been grasped through their responses on their overall situation. Based on definition of their respective situation, they have been divided in five broad socio-economic strata. These are:

- $\diamond \quad \text{Very poor} \\$
- ♦ Poor
- ♦ Medium
- ♦ Above poverty
- ♦ Rich

Situations vary according to presence/absence of certain assets, processes, opportunities, etc. These are summarized below:

Very poor

- $\diamond \quad \text{No land} \quad$
- ♦ Too many dependents
- ♦ No money
- ♦ No employment during half of the year
- ♦ Disable
- \diamond Hand to mouth condition
- ♦ Depend on borrowing
- \diamond Live on daily labor
- \diamond No savings

Poor

- ♦ Insufficient income
- ♦ No asset
- ♦ Poor quality land
- ♦ Only one earning member
- ♦ Irregular income
- \diamond Poor housing condition
- ♦ Land sale for dowry payment
- \diamond Live on daily labor
- ♦ Uncertain crop production
- ♦ Depend on sharecropping
- \diamond No scope for fishing

Medium

- ♦ Sufficient income from land
- ♦ Small family
- ♦ Have land, shrimp project
- ♦ Sons are earning
- \diamond No debt
- \diamond Doing business and farming
- ♦ Work hard and earn sufficient money

Rich

- ♦ Sufficient income
- ♦ Sons earn sufficiently

- ♦ Sufficient savings
- \diamond Have land and property
- ♦ Have growing business
- ♦ UP membership for five years
- Own house, regular income
- ♦ Have big business

3.8 Perceptions on poverty

Women and men describe poverty mainly in economic terms, i.e. *koruinya kom khaoinya beshi* (few earner to feed many, high dependency ratio), living from *ani niee khai* (hand to mouth), dependence on *rother kamai* (daily labor) for survival and so forth. The most severe forms of poverty are those when economic hardship is aggravated by lack of household members, relatives or others who can provide the necessary safety net. A few describe poverty as "lack of hope for the future".

In the range from very poor to rich, women perceive their households to be closer towards the poorer side. Men's perception of their household poverty is more evenly spread across the range, with numbers tapering of from very poor to rich.

Farmers and traders consider themselves relatively well off, while fish processors, day laborers, salt farmers and fishers ring themselves mainly as very poor. People involved in services, industrial labor and shrimp farming consider themselves to be "medium" on the scale from very poor to rich. Responses on what makes the difference between the poor and the non-poor are summarized in Table 2

Parameter	Responses		
	Poor	Non-poor	
Land	No, poor quality	Yes, good quality	
Asset	No	Yes	
Income	Insufficient	Sufficient	
Occupation	Less diverse, day labor	Multiple	
Savings	No	Yes	
Debt	Yes	No	
Housing	Poor	Good	
Dependent	More	Less	

Table 2: Difference between the poor and the non-poor

3.9 Household characteristics and poverty

The average size of households is relatively bigger for non-poor compared to the poor. It is also observed that more members in poor households are to work to earn a livelihood resulting in a lower dependency ratio (ratio of dependents to earners) then the non-poor. This has been shown in Table 3 Discrepancy in data for male and female are due to their own definition of poverty. For example, one may consider him as "poor", but his spouse considers her a "very poor".

Table 3: Household characteristics

Stratum	Male		Female	
	Average size of household	Dependency ratio	Average size of household	Dependency ratio
Very poor	5.7	2.3	5.0	2.7
Poor	5.9	2.5	5.5	2.9
Medium	5.5	2.2	5.7	3.0
Above poverty	6.0	3.6	10.0	4.0
Rich	10.2	3.6	10.8	2.5

Table 4: Geographic distribution of main vulnerability issues

Zone	Most reported vulnerability issue				
	1	2	3		
		Male			
1	Cyclone	Cash	Health		
2	Cyclone	Cash, income	Domestic water		
3	Cyclone, employment	Cash, law & order	Erosion, housing, declining CPR		
4	Cyclone, employment	Salinity	Storm		
5	Declining CPR, domestic water	Law & order	Employment, health		
6	Drainage	Cash, debt	Domestic water, employment		
7	Emp loyment, law & order	Drainage	Domestic water		
8	Employment	Cyclone, domestic water, drainage	Health, sanitation		
		Female			
1	Cyclone	Health	Domestic water, cash		
2	Domestic water	Cyclone	Health		
3	Cyclone	Cash	Domestic water		
4	Cyclone	Domestic water	Employment		
5	Domestic water	Employment	Cyclone, salinity		
6	Sanitation	Cash	Domestic water		
7	Drainage	Heavy rainfall	Domestic water		
8	Employment, health, drainage, sanitation, domestic water	Salinity, rainfall	Declining CPR, housing, electricity		

4 VULNERABILITY CONTEXT

4.1 Vulnerability issues

Livelihoods are often affected and threatened by a host of incidents and processes. These together define the vulnerability context of the households. The context as perceived by the people may vary from household to household and also among members within a household, as different people are affected in different ways. Hence it is necessary to understand the "victim's perspective" to do an analysis of the vulnerability context.

Analysis of perceptions show that (domestic) water availability is the most prominent issue for women across the region, followed by flood, lack of health, lack of sanitation and lack of money/capital. However, men perceive in a different way. According to male perception, cyclone and declining natural resources are the most prominent issues across the region, followed by flood, drainage congestion and lack of money/capital (see Annex C.3).

4.2 Area-specific vulnerability

There is some element of regional differentiation of vulnerability issues. Some issues are more widespread than others. In zones 1 to 4, cyclone is the main vulnerability issue. In zones 5 to 8, availability of domestic water has been found as a major issue. In zones 7 and 8, drainage has been mentioned as a vulnerability issue, while health surfaced as an important issue in zones 1 and 8. In a summary Table (see Table 4), three issues mostly quoted by the respondents have been presented. Difference in male-female perceptions is quite evident. For details, see Annex C.4.

4.3 Occupation and vulnerability

Vulnerability perceptions vary among occupational groups. Among men, farmers mostly mention about (lack of) employment, fishers about declining resources, traders about law and order and daily laborers about cyclone, while their female counterparts consider salinity and (non-availability of) drinking water and (lack of) cash as main vulnerability issues. Table 5 summarizes responses based on two most important issues ranked by the respondents. Occupations with less than one respondent and vulnerability issue with less than two responses have not been incorporated in this Table. For details see Annex C.5.

4.4 Poverty and vulnerability

Perceptions about vulnerability context vary according to socio-economic condition of the people. For poorer men, (lack of) employment is a major vulnerability issue, while cyclone has been perceived as a major issue among the relatively rich. Women of all strata perceive (availability of) domestic water as a prominent issue, while women of richer households consider employment as an important issue. Poorer women also consider sanitation and health as important issues. Law and order has surfaced as another important issue among the richer households. Perceptions of different socio-economic strata in this regard have been summarized in Table 6 (see Annex C.4 for details).

4.5 Vulnerability and impact on households

Within a vulnerability context, households are affected in a various ways. Sometimes, an incident is experienced as a shock, such as, sudden fall in income because slat is washed away from the salt farm because of heavy rain, or all the cows died in a cyclone, or occupational mobility is restricted because the fishing boat is stolen. Sometimes, situation of the people worsens because of long-term trends, such as, lack of potable water due to increasing salinity, state of harassment because of increasing extortionist activities, deteriorating economic situation because of declining common property resources. The context and perception also vary between men and women. For example, women are concerned about issues like problem of widow ship or negative social attitude, while men talk about declining price of salt or lack of political stability (for details, see Annex C.6).

Main occupation	Main vulnerability issue				
	Male		Female		
	1	2	1	2	
Daily labor	Cyclone	Employment	Drinking water	Sanitation	
Farmer	Employment	Drainage	Salinity		
Housework			Drinking water	Cyclone	
Fisher	Declining resource	Employment	Drinking water		
Service Drinking water Low incor		Low income			
Trader	Law and order	Cash	Cash		
Salt farmer	Cyclone				
Fish dryer	Cash	Cyclone			
Industry labor Cash		Debt	Drinking water	Drainage	
Weaver			Cash	Drinking water	

Table 5:	Occupational	distribution	of vulnera	ability	issues

4.5.1 Shocks

The number one shock mentioned by both men and women is cyclone and severe storms. Drainage congestion, water logging and severe rainfall are also mentioned quite often. A variety of other shocks, such as illness, business failure and bank erosion affect a few households, but with severe consequences.

4.5.2 Fluctuations

Men and women have different perceptions of the main fluctuations. Domestic water availability tops the list for women while men mention employment as the most important fluctuation in their lives. Women also mention employment, while men mention water availability. Besides, men and women mention the fluctuation in the available capital/cash, while women mention lack of sanitation.

4.5.3 Trends

Women and men mention the negative trend in law and order as the main trend. Men and women also mention the trend towards the use of land for shrimp culture as well as the decline in natural fish resources. Women also notice a decline in the availability of natural fuel resources.

4.6 Coping measures

People live with problems. They innovate and practice measures in a given situation. In some cases, they adjust themselves with the situation by conceding. For example, in a deteriorating economic situation, they spend less. When the law and order worsens, they do not allow their children go out in the evening. In some other situations, they innovate new ideas and pursue different options. For example, if a business fails, they shift to another occupation. If there is no tube well in close proximity, they fetch water from a distance. If someone in the family is sick, they sell a cow or some gold ornaments to bear costs of medical expenses (Annex C.6).

Strata	Sex	Most quoted vulnerability issue		
		1	2	3
Very poor	М	Employment	Cyclone	Cash
	F	Domestic water	Sanitation, cyclone	Health
Poor	М	Employment	Cyclone, drainage	Cash, declining CPR
	F	Domestic water	Cyclone	Cash
Medium	М	Cyclone	Employment	Drainage
	F	Cash	Domestic water	Employment
Above poverty	М	Cyclone	Law & order	Cash, drainage
	F	Cyclone, employment, law& order, domestic water		
Rich	М	Cyclone	Domestic water	Cash, law & order, draught, drainage
	F	Employment, cash, domestic water, widow ship	Communication, social attitude, education, declining CPR, sanitation, salinity, large family size	

Table 6: Distribution of main vulnerability	y issues	by socio-ec	onomic strata
---	----------	-------------	---------------

4.7 Bottlenecks

Often adverse impact of incidents and processes cannot be overcome because of certain constraints. For example, lack of money/capital/savings frames the poverty context that reflects a vicious circle:

Low income - Low savings - Low investment - Low-income ----- Chronic poverty

Low income - Debt trap – Pauperization ----- Destitution

Besides, there are other constraints, which can be overcome with priority actions or investments. Distance of a cyclone shelter, or siltation of a drainage channel, or low intensity of deep tube wells for potable water are few examples in this respect (see Annex C.6). These also contribute to some vicious circle:

Low intensity of tube well – Lack of potable water – More disease – Ill health – Less work – Low income – Low nutrition – Less work ----- Pauperization

4.8 Recommendations for solution

People have problems. They live with problems. They seek solution to problems. They do have ideas how to confront and overcome problems. An analysis of their responses with respect to their recommendations shows what they need. Such recommendations include investments in physical infrastructures (such as, more tube wells, cyclone shelters and embankments), legal framework (stop over fishing, stop shrimp fry catch), good governance (active police department), social welfare policy (free medical facility, rehabilitation of old people), services (bank loan), social movement (end of male chauvinism, dowry), and so forth (see Annex C.6).

5 LIVELIHOOD STRATEGIES

5.1 Choice of activities

Based on assets and access to resources and opportunities, households decide what activities it will pursue for living. The composition of resources at the disposal of a household generally determines the choice of activities. However, there is clear delineation of activities between men and women in some respect. While both women and men perform certain activities, some activities are exclusive domain of men or women. For example, farming and day labor is common fields of activity (though there may be further delineation among different stages of farming and farming of different crops, and different types of labor). Working in a brick field, cattle business, fishing, crab collection, water transportation, etc. are considered as men's domain, while sewing, embroidery, child care, cooking, house cleaning, water fetching, poultry keeping, washing, etc. are women's job (for details, see Annex C.7).

5.2 Choices

Life stories of selected households provide a good understanding about livelihood choices (for details, see Annex D). Some of these are summarized below.

- Limited scope of choice due to lack of appropriate formal education.
- People prefer full time job.
- Government job is considered the most secured.
- Teaching is a respectable occupation.
- Fishing with own trawler/boat and net fetches a good income.
- Self-employment is a preferred option as it allows freedom of work and children can be taken care of simultaneously.
- Agriculture is a better option as it gives food security and status.
- Trading allows freedom as well as good income.
- Fish culture/fishing in own/shared pond, canal and river along with other activities is a good choice.

The people generally say, "The poor do not have too many options." If there is enough opportunity the *first choice* of men and women irrespective of level of education is a *full time employment specifically a government job*, as it brings regular and secured income as well as enhances social status. The main constraint in this regard is *ghush* (bribe) which one needs to pay to obtain a job. *Ghush* is almost mandatory to get a job in a government school or office, which a poor family cannot afford. There is an alternative of *ghush*, that is *Mama* or *Khalu* (a relative in a position of power and authority) who can help to get a job.

5.3 Activities

Men spend most of their time on cash earning activities, and relatively little time on other activities. Women who work outside the home remain responsible for most of the household tasks and work long hours. Most women mention that they spend 10 to 15 hours on household chores such as fuel (wood, cow dung) and water collection, child rearing, house cleaning, house repair, etc.

While works of men are generally "cash earning", women's works are "cost saving" to a great extent. In some areas, women are extensively involved in cash earning activities outside their homestead, such as, collection of shrimp fry from river, earth work, collection of fire wood, etc.

Agriculture, fishing, weaving, pottery, etc., are hereditary occupations. Rigidity in occupational pattern has been is diminishing.

Because of poverty, low rate of return, competition and demand diversification, people are increasingly taking up multiple activities for livelihood. Individuals with single occupation are rare.

5.4 Migration

People tend to explore possibilities elsewhere. Among the surveyed individuals 28 out of 95 men and 7 out of 101 women resorted to seasonal migration in one year preceding the survey. There is seasonal out-migration for employment. While men manly migrate for economic activities, women stay away from home mainly for social reasons. Among those who migrate for a season or a part there of, are mostly day laborers and farmers. People irrespective of their socio-economic background tend to migrate (Annex C.8).

5.5 Income

With respect to household income, responses may be broadly categorized as follows:

- \diamond Not enough
- ♦ Sufficient

People do not depend on a single profession, as their current income is not enough for the family expenditure. Even it is not enough though they are doing different types of work in a year. In few cases the current income is enough but husband is reluctant to provide money for family expenditure. As men earn cash, they enjoy more power and status in the household, while "house work" with no monetary return largely goes unnoticed. Homestead based agricultural activities are perceived as "house work". "*Kichhu korena*" (doing nothing) or *kamai korena* (do not earn) are common phrases of men about women involved in household based activities and chores.

5.6 Disposal of income

Income is used for consumption, social payments and investments. Investments are quite high, while expenses for social payments are low. Recurring expenses for economic activities (variable capital) are often considered as investments by the respondents. Consumption expenses decline inversely with the socio-economic status of the households. This trend is reverse for social payments (see Table 7).

5.7 Consumption

The major portion of the income goes to consumption. They give first priority for buying food for the family. They spend money for many other common needs and activities like, house reconstruction/repairing, cloths, fuel i.e. firewood or Kerosene, children's education, fishing net, boat making, boat renting, labor cost for agriculture or salt farming, sanitary latrine, medical treatment for wife/husband/son/daughter, tube well repairing, house rent (only in urban area), conveyance (who travel every day from home to long distance work place), etc.

The usual practice is three meals a day. Some households take one meal a day in some months, particularly in the months of *Ashar* (Jun-Jul) and *Sravan* (Jul-Aug). Among those who take two meals a day, there are more women then men.

Stratum	Respondent	Use of income (%)		
		Consumption	Social payment	Investment
Very poor	Male	63	4	33
	Female	69	7	24
Poor	Male	52	5	43
	Female	59	9	32
Medium	Male	55	5	40
	Female	46	8	46
Above	Male	44	9	47
poverty	Female	20	10	70
Rich	Male	36	7	57
	Female*			

Table 7: Disposal of income

*No female in "rich" category"

5.8 Social payment

People spend money on various occasions. Some of these are considered obligatory from religious point of view and often they have to borrow for this. Buying new clothes for children, rich food on special occasions like *eid* and *puja* and inviting relatives on those occasions are common practices.

They also spend money on items which they consider socially binding, as well as prestigious, and sometimes mandatory, like donation to poor people, contribution for road repairing, contribution for bridge repairing, contribution for the *Union Parishad*, helping neighbors/ relatives, donation to clubs, donation to committees, contribution to *samities*, donation to educational institutions, fees for night guard, etc. They also spend for giving gift to others on the occasion of *puja*, marriage, *eid*, *mukhe bhat* (feeding a bay first time with rice), *khatna* (circumcision), birthday, *chollisha* (ritual observed on 40th day after death of a family member), and so forth.

They often spend money, which they consider essential, such as, dowry payment for younger sister or daughter, cost for marriage ceremony of son or daughter, cost for *khatna* of son or brother, court cases, land tax and contribution for funerals. They have to spend money under compulsion like *chanda* (forced contribution) to political party and for the *mastan* (terrorist), *ghush* (bribe) to some officials and *dalali* (commission) for *tadbir* (lobbying) and trading.

Women tend to spend more for "social payments" then men.

5.9 Investment

Spending money for investment is extensive. Spending on health and education is largely considered as investment. Investment is positively correlated with income. Households in higher socio-economic categories invest more. For details, see Annex C.9.

5.10 Outcome

The outcome of the livelihood activities is summarized in their sense of overall well being. On a fivetier scale, from very poor, to poor, to medium, to above poverty and rich, women consider their households to be relatively poorer than men.

About four-fifths of women have reported about illness during the last year, compared to about one half of the men. Women have been ill on average for 20 days while men who were ill were so on average 46 days. About one-tenth of the men who report illness are chronically ill, reporting illness over a third of the time during the last year.

About half of the male respondents feel better off. The majority of women respondents feel that their situation has worsened. In many households men feel better off, while their spouse feel the opposite. This means that improvements in the household conditions do not necessarily trickle down to women.

6 VISION FOR FUTURE

Both men and women, but particularly women, have much to say about their hopes and plans for the future. Concerning natural and physical assets, women focus on developments in and around the house and homestead, and men focus more on activities outside the homestead. Nevertheless women too have quite a bit to say about what the household can do to increase its income earning capacity. On human assets men and women highlight education of their children, both sons and daughters, as the first priority. Medical treatment also features high on the list. Concerning social and institutional assets both men and women highlight marriages of their daughters while men also plan to develop ties through other means. Women want to maintain and develop their membership of NGO groups, mainly to retain access to credit. Savings are high on the list when it comes to developing financial assets.

The main bottleneck that men and women identify as they aim to materialize their dreams is lack of cash or capital. If only they had more cash they believe they could work their way out of poverty and solve most of the other problems they mention.

When asked what solutions they can implement themselves, the interviewees have a variety of responses. Some indicate that they can save by cutting household expenditure and suffering hardship in the process. Others indicate that they may try to work harder to earn and save more. Many women and even more men have their hopes pinned on their sons, and in a few cases on their daughters to find a job and supplement the household income. Many men and women expressed that they will take a loan to make their dreams come true. A limited number of women and men indicate that there is nothing more that they can do themselves. Only with outside help do they expect to be able to improve their situation.

Outside help is needed in many areas such as infrastructure, roads, electrification, skill training and employment creation. However, both men and women overwhelmingly mention that they need the government or NGOs to provide more means so that they can improve their livelihoods. They also point out that the credit system needs to become more flexible to reflect the repayment possibilities. Furthermore people say the interest rate needs to be lowered.

ANNEX A: LIVELIHOOD SYSTEMS IN COASTAL DEVELOPMENT

By John Soussan, March 2002 (for PDO-ICZM)

Livelihood Systems in Coastal Development

1. Introduction

This paper has been prepared to provide a conceptual framework for the analysis of coastal livelihoods and the process of community consultation to be conducted within the Integrated Coastal Zone Management Programme of the Government of Bangladesh, a programme that is jointly supported by the Netherlands and DFID. The paper briefly presents an overview of a conceptual framework for understanding livelihood systems in coastal areas of Bangladesh. It is based on a generic model of livelihoods (Soussan *et al* 2000) and the core concepts presented here are discussed in more detail there and in the key references listed at the end of this paper.

The concept of sustainable livelihoods is increasingly being accepted as providing both a basis for understanding the nature of poverty and for identifying the types of strategies that can reduce poverty in an effective and sustainable manner. It is an approach that is flexible and dynamic, and in particular that provides a basis for understanding the relationship between poor communities, their local environment and external socio-economic, environmental and institutional forces.

In this, it reflects the now accepted understanding that poverty itself is a complex, multi-dimensional experience that includes both material and non-material aspects of life. Any effective strategy to target the needs and potentials of the poor needs to reflect this multi-dimensional character of poverty. Carney (1998) presented a definition of livelihoods that is now widely accepted:

"A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is 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, while not undermining the natural resource base" (Carney 1998, page 4).

2. The basic concepts

Rennie & Singh (1996) argue that "predominantly the poor of the world depend directly on natural resources, through cultivation, herding, collecting or hunting for their livelihoods. Therefore, for the livelihoods to be sustainable, the natural resources must be sustained" (page 9). This is certainly true where, as is the case for many rural communities, access to ecosystems is vital to the operation of the livelihoods of the poor. A few key points can be made that help to illustrate how this approach helps in the development of activities that focus on the relationships between water, poverty and sustainable ecosystems management.

- People draw on a set of *capital assets* as a basis for their livelihoods. Carney (1998) identifies five: human, natural, financial, physical and social. Livelihoods are built from a series of choices over the use of these assets. For common property resources in particular, a key issue is the systems of entitlements through which people, and especially the poor, gain access to these assets.
- Based on the choices made, members of the household will undertake a series of *livelihood activities*: growing a crop, fishing in a lake, working for someone else or making pots. Some activities may be dominant but it is rare for a household, and especially for poor rural households, to rely exclusively on one and most combine complex sets of activities in their livelihoods. It should be noted that a livelihood approach also includes activities such as collecting fuel wood or

water that are usually called "reproductive" activities. These are typically an important part of the daily routine for women in particular and are of key importance in both livelihoods and ecosystems management terms.

- These activities will generate *"income"* for the household: goods, services and cash, which is then allocated in four main directions: re-circulated as *inputs* into livelihood activities; *'social payment'*: taxes, interest on loans, etc; *invested*' to maintain or enhance the livelihood assets base; or *consumed*: food, housing, clothes and all the other goods and services that contribute to the material quality of life of the household.
- Many *local and external factors* influence livelihoods, including markets, the physical environment and the social and political environment. These features are themselves inherently dynamic and livelihoods are *vulnerable* to the shocks and trends in these factors that are beyond their immediate control. The impact of these external shocks and trends will vary from household to household. Some are more sensitive to their influence, whilst others are better able to absorb their impact or respond to the opportunities they may offer. The character of these external forces represents the *vulnerability context* within which the livelihood systems of different households develop, whilst the ability of households to cope is their *resilience* in the light of these vulnerabilities.

These different dimensions of livelihoods are reflected in the model of livelihoods dynamics presented here. It is intended that this model should be used as the basis for the development of livelihoods-based activities in the coastal zone of Bangladesh. The model itself (Figure 1) has been developed over several years based upon substantial programmes of field research in different environments around the world. It has proved to be robust and adaptable in a number of settings. The version presented here has been adapted to reflect some of the specific features of coastal Bangladesh.

3. Vulnerabilities and Resilience

The importance of **vulnerabilities** as a key dimension of coastal poverty means that this aspect of the model in particular is emphasised. For poor people, vulnerability is both a condition and a determinant of poverty, and refers to the ability of people to avoid withstand or recover from the harmful impacts of factors that disrupt their lives and that are beyond their immediate control. This includes both shocks (sudden changes such as natural disasters, war or collapsing market prices) and trends (gradual environmental degradation, oppressive political systems or deteriorating terms of trade). In relation to coastal development in Bangladesh, a wide range of vulnerabilities were identified in the first donor Concept Paper (Soussan *et al* 1999):

- The threat of **cyclones** and **storm surges** is a constant feature of life, with devastating events such as the 1970 and 1991 cyclones and smaller storms almost every year.
- Deterioration and the declining viability of many distinctive and threatened **coastal ecosystems**, including the Sundarbans and other mangroves, coastal wetlands and marshes and off-shore marine habitats that are key spawning grounds for many commercially important fish species.
- Widespread **poverty**, limited livelihoods opportunities (especially outside agriculture) and poorly developed **economic linkages**, including poor access to markets, that are even more severe that in other parts of rural Bangladesh.

- Poor levels of **service provision** and very poorly-developed **institutional structure** (with both government and non-government institutions poorly represented in many coastal communities) that make the **isolation** of many coastal areas worse.
- Highly **unequal social structures**, with a small powerful elite dominating the mass of people, allied to high levels of **conflict** and poor **law and order**.
- The long-term effects of **climate change**, with predicted rises in sea levels, possible increases in the frequency of major storms and changes to rainfall patterns over the whole Ganges-Brahmaputra catchment.
- Active processes of **land erosion and accretion** in the Meghna Estuary, combined with geological and tectonic processes that are causing land to sink.
- Changing patterns of **land use**, both in the coastal zone (including the growth of shrimp and salt production) and over the catchment as a whole that are affecting the coast's morphology and water resources characteristics.
- Widespread **pollution and resource degradation**, including 'hotspots' such as the coast north of Chittagong as well as more widespread processes.
- Poor access to many forms of **infrastructure & technologies** and many examples of technical interventions that are poorly adapted to the characteristics of coastal areas. In addition, infrastructure that has been built has even more severe operations and maintenance problems than in many other parts of the country.
- Surface and sub-surface **salinisation**, including saline intrusion into freshwater aquifers some distance from the coast.
- Poor **resource management**, including the unsustainable exploitation of fish resources and poor ground and surface water management (including drainage problems), the clearance of mangroves and other forests and soil fertility management.

These vulnerabilities are each individually significant in the ways they affect the livelihoods of coastal communities. Their significance does, however, vary greatly from locality to locality, meaning that some form of zonation of the coast is essential if the impact of these vulnerabilities is truly to be understood. Also important is the ways in which vulnerabilities interact with each other, with most coastal households, and especially the poor in coastal areas, facing **multiple vulnerabilities** that compound each other in terms of both the impact of specific events and the capability of coastal households to recover from these events when they do strike. Understanding the nature and implications of the ways that different sets of vulnerabilities interact and how that these sets of vulnerabilities vary by geographical location are key issues for the whole process of coastal development and should be central to the development of coastal policies and programmes.

For example, the poor infrastructure and remoteness of many coastal localities means that the immediate impact of a major cyclone is likely to be more severe and relief efforts are hampered. Subsequently, when the survivors are rebuilding their livelihoods in the post-disaster period, poor access to markets, credit and other services, institutional weaknesses and the deterioration of the coastal resource base means that the recovery process is severely hampered. Understanding these

vulnerabilities and their interactions with each other is consequently a key to sustainable livelihoods improvements in coastal areas.

These vulnerabilities affect different households very differently. In general, the more affluent a household is, and in particular the more assets it possesses, the more **resilient** it is to disruption in its livelihoods base from these shocks and trends. Indeed, in a livelihoods context this is almost tautologous: vulnerability is both a condition of and a determinant of poverty. People, of course, are not passive in the face of these risks, but the poorer the asset base of a household the more they may have to forego potentially profitable but risky opportunities. The poor are typically 'risk minimisers' rather than 'profit maximisers'. This is not because they do not understand the difference: it is an inevitable response to unenviable threat.

Rennie and Singh (1995) categorise the responses of such threats as either adaptive strategies (where a household consciously adopts a process of change in response to long-term trends) or coping strategies (short-term responses to immediate shocks and stresses). In these, the household will seek to deploy their different assets to best effect within their often limited range of choices. This set of choices is again conditioned by the wider context within which they live, and in particular by the extent to which they can control the key decisions that affect their lives. This is (or should be) why participation is widely advocated: it is about giving the most vulnerable greater choices to reduce the risks they face and increase their ability to best use the assets they possess.

4. The Sustainable Livelihood Model

The livelihoods model presented here gives an analytical structure within which these interrelationships can be understood. The goal of the model (Figure 1) is to provide a framework for tracing the inter-connections between the different aspects of people's livelihoods and the factors that influence them. It is based on a few key points:

- The concept of livelihoods is **dynamic**, recognising that the conditions and composition of people's livelihoods changes, sometimes rapidly, over time.
- Livelihoods are **complex**, with households in the developing world undertaking a wide range of activities: people are not just farmers, or labourers, or factory workers, or fisherfolk: *'rural families increasingly come to resemble miniature highly diversified conglomerates'* (Cain & McNicoll 1988, quoted in Ellis 1998).
- Livelihoods are influenced by a wide range of **external forces**, social, economic, political, legal, environmental and institutional both within and outside the locality in which a household lives, that are beyond the control of the family.
- People making conscious **choices** through deliberate strategies on the way that they can best deploy whatever assets they possess to maximise the opportunities and minimise the risks they face. In livelihoods analysis, the poor are seen as active strategists rather than passive victims or recipients, and the household is the main unit in which these choices are made.

These basic concepts can be traced through the flows shown in Figure 1. The figure is based around a core sub-model that represents the livelihood dynamics of a household (though it could also be used to represent the livelihood of individual or larger social groupings that share fundamental similarities).

This sub-model starts with the *entitlements* and *access* they possess to the resource base in their locality (with all types of resource, natural and human, material and non-material, taken into account). These in turn define the *capitals, or livelihood assets*, available to the household. Five livelihood assets that can be deployed by the household in their livelihoods are represented by in pentagon: *financial, social, natural, physical and human*. Taken together, these capital assets represent the capabilities and assets, the "factors of production" that the household can deploy. A key aspect of a livelihoods approach is to understand how these assets change over time, and in particular how increases or reductions in them affects the livelihoods choices available to the household.

Taken together, these livelihood assets represent a potential, a set of possibilities for the household to secure a livelihood. But they do not automatically define that livelihood, for the extent to which their potential is realised will depend on decisions on what assets to utilise when; decision that together constitute the *livelihood strategy* of the household. There are always difficult choices to be made here: for example, what use of the assets will provide the best returns? What risks are involved in particular decisions? Which and what quantity of assets should be held in reserve for the future? What should be invested to increase future assets?

The choices made in the strategy will in turn define the *livelihood activities* of the household: which activities are undertaken by whom and when. Land, labour, material inputs, social networks and all of the other assets are used in different combinations to grow crops, raise livestock, gather common property resources, earn wages, make things, trade, provide services and all of the other multitude of different activities that the different members of the household engage in. These together are their livelihood – the things that people do on a day-to-day basis to make a living.

These activities produce a flow of '*income*': the range of cash, goods and services that are the reward from, and the rationale for, undertaking the activities chosen. This income is not just cash (though this is typically an important component of income). It also includes goods, such as crops used for subsistence purposes or fuelwood or foods gathered from common property resources and used by the household, and services such as cleaning, child care and transportation.

This income is in turn allocated through a second key set of decisions: the *income strategy*. The income can be allocated to saving or investments that enhance the value of the assets, to pay for inputs that goes into production, to repaying loans or social payments (taxes etc) or, finally, to consumption that is part of *the outcome* – that is, the total set of goods and services that constitute the material fabric of people's lives.

This central core of the model reflects the internal dynamics of a livelihood system, but this process does not operate in isolation from influences that condition the flows through the livelihood, the choices available and the overall outcomes of the livelihood. The first factor is the *local community*: the social groupings and community-level institutions (formal and informal) in which the household lives.

The second conditioning factor is the *external institutional context*, the legal, political, social, economic and institutional environment: those factors, in others words, that link people and places into regional, national and global systems. This includes the nature and operation of government, the structure and strength of civil society, the operation of markets and so on.

The *wider natural environment* is also extremely important in the functioning of livelihoods. This can be through the character and variability of production conditions: the level and timing of rainfall,

resource flows within an ecosystem. It can reflect extreme events such as cyclones, earthquakes or droughts.

These external factors are 'filtered' through the *vulnerability context* that has already been referred to. This is the trends and variability in those factors that affect livelihood processes. Most are not different to the local and external context described above: rather they reflect the dynamics of those contexts. As such, the vulnerability context describes processes that can materially disrupt different aspects of the livelihood process.

Finally, the point that these forces affect different households differently has already been made. Some are more sensitive to the effects of the vulnerability context, others more resilient. This can be represented as a *resilience 'filter'*, through which the flows of influence from the vulnerability context pass to define the specific impact of external forces on the livelihood system.

This model allows one to 'map' the consequences of change, including changes brought about through external interventions. An example can illustrate this, based on participatory mobilisation to create community-based institutions to manage coastal mangrove belts as common property resources. The points of intervention and impact of such a programme can be 'mapped' on the livelihoods model.

- Such initiatives are based on change to the **external policy and legal context**, with changes to forest policies that give communities tenure and/or access rights. It can include provisions for changed access to markets for forest products.
- The approach also seeks to change the **local social and institutional context**, both through raising awareness and understanding and by creating new local institutions (mangrove forest user groups or management committees).
- This changes the **entitlements and access** of individual households to the mangroves. The effects on this will vary from household to household, depending on existing dependence on the mangroves and their potential for undertaking new livelihood activities.
- The combination of better access to the resource base and new institutions can have a positive impact on the forest **resource base**, with improvements to mangrove condition observable where successful community-based management has been developed.
- This usually has a positive effect on the **natural and social livelihood assets** of the households if the process is both egalitarian and effective.
- This in turn means that mangrove-based **livelihood activities** such as fuelwood gathering or crustacean collection will be more productive and/or sustainable (and may take less time, with benefits for other livelihood activities).
- The sustainable **income** will be improved, with more secure flows of gathered mangrove products. In some cases, there is a potential for increased cash income through the sale of these products. This may accrue as income to individual households or to the community, allowing them to invest local facilities such as water schemes, nurseries or schools.

• All of these factors together reduce the household's **vulnerability** to declining mangrove forests, including critically their role in limiting cyclone and storm surge threats and in reducing land erosion (or encouraging accretion).

As such, the effects of changes to the legal framework and the organisation of community-based groups can be traced through the model to analyse cause and effect. The details of the effects on households or stakeholder groupings can similarly be mapped, to reflect variations in needs and participation. Similarly, secondary benefits such as reduced vulnerabilities or improved social cohesion can be identified and their effects mapped. Overall, the model provides an effective framework for analysis of coastal livelihood dynamics, and in particular the nature and effect of vulnerabilities and the effectiveness of different forms of intervention upon coastal livelihoods.

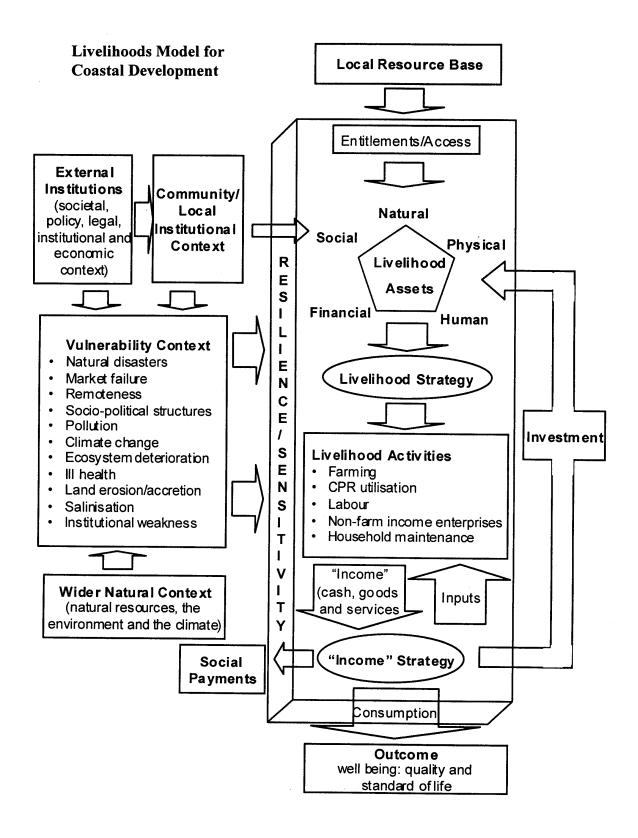


Figure 3: The sustainable livelihoods model

Key Livelihood References

Ashley, C. & Carney, D. (1999) Sustainable Livelihoods: Lessons from Early Experience DFID, London.

Carney, D. (Ed. 1998) Sustainable Rural Livelihoods DFID, London.

Chambers, R. & Conway G. (1992) *Sustainable Rural Livelihoods: Practical Concepts for the 21st Century* IDS Discussion Paper 276, Institute of Development Studies, University of Sussex.

Davies, S. (1996) Adaptable Livelihoods Macmillan, London.

Ellis, F. (1998) *Livelihood Diversification and Sustainable Rural Livelihoods* in Carney, D. (Ed. 1998) *Sustainable Rural Livelihoods* DFID, London

Hussein, K. & Nelson, J. (1998) *Sustainable Livelihoods and Livelihood Diversification* IDS Working Paper 69, Institute of Development Studies, University of Sussex.

Rennie, J.K. & Singh, N. (1996) *Participatory Research for Sustainable Livelihoods* International Institute for Sustainable Development, Winnipeg.

Scoones, I. (1998) *Sustainable Rural Livelihoods: a Framework for Analysis* IDS Working Paper 72, Institute of Development Studies, University of Sussex.

Soussan, J. et al (1999) Approaches to Integrated Coastal Zone Management in Bangladesh World Bank, Dhaka.

Soussan, J. et al (2000) Understanding Livelihoods: A Model of Livelihood Processes & Influences, PRP Working Paper no. 1, School of Geography, University of Leeds.

Soussan, J. (2001) Coastal Development & Livelihoods in Bangladesh, DFID Bangladesh.

ANNEX B: METHODOLOGY AND APPROACH

Table of Contents

Annex B.1: Main types of vulnerabilities per sub-zone	41
Annex B.2: Population per sub-zone	
Annex B.3: Percentage of HHs to be interviewed per zone	
Annex B.4: Percentage distribution of main occupations per zone	43
Annex B.5: Number of households interviewed	43
Annex B.6: Field administration of perception survey	
Annex B.7: Location of PDSCL survey	45
Annex B.8: Validation workshop	46
Annex B.9: PDSCL survey checklist	47

Main issue				7	Lone				
	1	2	3	4	5	6	7	8	9
	Islands	Chittagong Coast	Coastal Char	Old land lower Ganges	Sundarban	Old land Meghna basin	Old land upper Ganges	Urban	Marine
1. Cyclones	X	X	Х					Х	Х
2. Floods			Х	Х		Х	Х		
3. Bank erosion	Х		Х			Х			
4. Settlement on new land			Х						
5. Water supply and san.	Х	Х	Х	Х	Х	X	Х	X	
6. Salinity	Х		Х	Х	Х		Х		
7. Shrimp -land conflict		Х			Х		Х		
8. Drainage			Х			Х	Х		
9. Over fishing resources	Х	Х	Х	Х	Х	Х	Х		Х
10. Law and order	X		Х		X				Х
11. Fuel/energy	Х		Х		Х				
12. Pollution		X			X			X	Х
13. Urbanization/industry		Х						Х	
14. Migration	X	X	Х			X			
Total number of issues	8	7	11	4	7	6	6	4	4

Zone	1	2	3	4	5	6	7	8	9
Zone Name	Islands	Chittagong Coast	Coastal Char	Old land lower Ganges	Sundarban	Old land Meghna hasin	Old land upper Ganges	Urban	Marine
Pop '01	2.8	4.4	1.6	7.5	0.9	5.5	3.5	4.4	?
± %	9	14	5	24	3	18	12	15	-

Annex B.2: Population per sub-zone

As the marine zone (9) has no population, three marine fishing dependent households will be selected from adjacent zones.

Annex B.3: Percentage of HHs to be interviewed per zone

Zone Name	1	2	3	4	5	6	7	8	9
	Islands	Chittagong Coast	Coastal Char	Old land lower Ganges	Sundarban	Old land Meghna basin	Old land upper Ganges	Urban	Marine
Total number of issues	8	7	11	4	7	6	6	4	4
Percentage of population	9	14	5	12	3	18	12	15	(1)
Weight (Issues x pop. = 538)	72	98	55	48	21	108	72	60	4
% of HHs to interview	13	19+1	10	9	4	20	13	11	(-1)

				Main occu	pations			
Zone	Daily labor	Farming	Fishing	Fish- drying	Services	Ind. labor	Trading	Salt farm
1	10	40	20	10			10	10
2	10	20	10	10	10	10	20	10
3	20	50	10	10			10	
4	10	50	20		10		10	
5	10	10	40	10	10		20	
6	10	50	10	10		10	10	
7	20	40	20			10	10	
8	30		10		20	30	10	
9	10		80				10	

Annex B.4: Percentage distribution of main occupations per zone

Annex B.5: Number of households interviewed

					Ma	ain occupat	tions				
Zone	% /# HH	Daily labor	Agri.	Fishing	Fish- drying	Services	Industrial labor	Shrimp farming	Trading	Salt farm	Others
1	13	2	3	3	1			1	1	1	1 (potter)
2	20	3	2	3	2	3			3	3	1 (disable)
3	10	3	4	2					1		
4	9	1	4	2		1			1		
5	5	1		1		1		1			1 (bawali)
6	21	4	9	4			2		2		
7	13	2	4	2			1	2	2		
8	11	2		2		2	4				1 (fish processin g labor)
Total	102	18	26	19	3	7	7	4	10	4	4

N.B. There are ten female-headed households

Zone	Survey area (upazila, district)	Survey period		No of HH	Pers	sons iewed	Facilitating organization
		From	То		М	F	
1	Moheshkhali, Cox's Bazar	23 Jul	01 Aug	13	12	13	RIC
2	Chakaria/ Pekua, Cox's Bazar	08 Jul	18 Jul	20	18	20	SARPV
3	Noakhali Sadar, Noakhali	08 Jun	17 Jun	10	9	10	CDSP, Shagarika
4	Kalapara, Patuakhali	27 May	02 Jun	9	9	9	PBAEP, CODEC
5	Shyamnagar, Satkhira	21 May	24 May	5	4	4	SBCP, Shushilan
6	Lakshmipur, Lakshmipur	18 Jun	28 Jun	21	19	21	CDSP, NRDS
7	Dumuria, Khulna	06 May	19 May	13	13	13	CEGIS
8	Khulna-urban	16 May	20 May	3	3	3	BRAC
	Chittagong-urban	04 Aug	09 Aug	8	7	8	BRAC, YPSA
Total				102	94	101	

Annex B.6: Field administration of perception survey

Zone	Zone Name		S	Survey area	
		District	Upazila/Thana	Union/ward	Village/neighborhood
1	Islands	Cox's Bazar	Maheshkhali	Choto Maheshkhali	Choto Maheshkhali
				Maheshkhali Pourashava	Gorokhghata
				Boro Maheshkhali	Boro Kulalpara
2	Chittagong	Cox's Bazar	Pekua	Mognama	Mognama
	Coast		Chakaria	Harbang	Harbang
				Badarkhali	Manikpara
3	Coastal Char	Noakhali	Noakhali Sadar / Char Jabbar	Char Bata	Char Majid
4	Old land lower Ganges	Patuakhali	Kalapara	Nilganj	Roshnabad, Amirabad, Nachnapara
5	Sundarban	Satkhira	Shyamnagar	Gabura	Khalishabunia
6	Old land Meghna basin	Lakshmipur	Lakshmipur Sadar	15 No. Mandari	Dakhin Mandari, Gandharbbapur
7	Old land upper Ganges	Khulna	Dumuria	Gutudia	Mirzapur
8	Urban: Khulna	Khulna	Kotwali	Ward - Masterpara	Tutpara
9	Urban: Chittagong	Chittagong	Khulshi	Ward - 9	Safia Colony, Bishaw Bank Colony
			Sitakunda	4 No. Muradpur	Guliakhali
				Bhatiari	Jahanabad
			Pachlaish	7 No. Ward	Hadu Majipara

Annex B.7: Location of PDSCL survey

Location	Date		No.	of participants	Remarks		
		Respo	ondent	Staff of	Staff of	In Khulna urban area	
		М	F	facilitating PDO organization		and in Shyamnagar, workshops were jointly	
Dumuria	19 May	13	13	1	4	held for male and female participants.	
Khulna urban	20 May	3	3	1	3	Workshops could not	
Shyamnagar	23 may	4	4	4	2	be held in Chittagong urban area and in	
Kalapara	1 Jun	9	9	6	4	Chakaria/Pekua. In	
Noakhali Sadar	17 Jun	9	10	3	2	other areas, separate workshops were	
Lakshmipur Sadar	28 Jun	9	20	3	2	arranged for male and	
Maheshkhali	7 Aug	18	10	4	4	female respondents.	

Annex B.9: PDSCL survey checklist

Perceptions of the Direct Stakeholders on Coastal Livelihoods

1 BASIC FACTS OF THE HOUSEHOLD

ITEM	DATA Da	nte of ir	ntervi	ew:/	/02	2	CON	IMEN	TS
Name of person interviewed									
Father/husband's name									
Age									
Village / Para	V		Р						
Upazila									
District									
Birthplace (Union/Village)	U		V						
Years in this district/village	D		V						
Rel. with other interviewee	Husb./Wife/Mot	her/Fat	her/So	on/Dau	gther/0	Other:			
Age of other income earning mal	e HH members								
Age of other income earning fem	ale HH members								
Age of dependent male HH mem	Age of dependent male HH members								
Age of dependent female HH me	embers								

2 PERCEPTIONS ON SITUATION OF HOUSEHOLD AND POVERTY

What is the situation of your	Very poor	Poor	Average	Above poverty	Rich
HH ?					
Why do you describe it so?					
How would you describe poverty ?					
Do you know of a household in this area that has grown out of poverty? If so, how did they do it?					
Do you know of a household in this area that has fallen into worse poverty? If so, how did it happen?					

3 TRENDS IN LIVELIHOOD ASSETS (after independence in 1971, starting with interviewee's memory recall from the year 19___)

ASSE	TS/ OURCES	Best Year	Why best?	Worst Year	Why worst?	Overall trend
	URCES					
Natural						/ - / 0 / +/ ++
Nat						/-/0/+/++
						/-/0/+/++
cal						/-/0/+/++
Physical						/-/0/+/++
Ы						/-/0/+/++
u						/-/0/+/++
Human						/-/0/+/++
H						/-/0/+/++
bit.						/-/0/+/++
Social/Instit.						/-/0/+/++
ocial						/-/0/+/++
Sc						
ial						/-/0/+/++
Financial						/-/0/+/++
Fiı						/-/0/+/++
What	are your 3 r	nost imp	ortant local resources?		·	
			ese be improved?			

4 LIVELIHOOD ACTIVITIES (in the Bengali year 1408 (14 April 2001 – 13 April 2002)

Activity	Impact/outcome

5 OCCUPATIONAL MIX, INCOME AND NON-CASH ACTIVITIES

Main occupation								Ot	her inco	ome so	urce/act	iviti	es
Cash and kind sources of income	Daly Labor	Farming	Fishing	Fish Drying	Services	Industrial labor	Trading	Salt Farming	Remittances				
Income distribution (% of total income per year)													
Other activities	Home Gardening	House Maintenance	Fishing (own cons.)	Water fetching	Fuel Wood coll.	Cooking	Washing, clothes,	Livestock Rearing	Social activities	House Cleaning	Child Rearing		
Hours per day													

6 USE OF INCOME AND INVESTMENT/DISINVESTMENT STRATEGY (in the Bengali year 1408 (14 April 2001 – 13 April 2002)

	Consumption	ı S	Social Payment	Investments		Natural	Physical	Human	Social	Financial
Use of total income (%)					d disinvestment distribution (%)					
		Desc	ribe use, reduction,	disinvestment		Descri	be increase,	investmer	ıt	
Natural										
Physical										
Human										
Social/ Institutional										
Financial										
Describe formation information information in the second s										

7 RELEVANT AND IMPORTANCE OF SHOCKS, FLUCTUATIONS AND TRENDS (after 1389 (April 1981))

	Types	Rank	Types	Rank	Types	Rank	Other types	Rank
Shocks	Cyclones		Floods and drainage cong.		Bank erosion			
Fluctuations	Water availability		Salinity		Employment			
Trends	Decline in resources (Water/Land/Fish/Fuel/		Law and order		Land use (shrimps)			

Rank from 1 (most relevant) downwards (less relevant)

8 IMPACT AND DETAILS OF RELEVANT VULNERABILITIES (after 1399 (April 1981))

Rank (Table 7)	Vulnerability	Trend	Main Impact on HH	Main coping measures	Main bottlenecks to reducing negative impact	Recommended Solutions
1		/ - / 0 / +/ ++				
2		/ - / 0 / +/ ++				
3		/ - / 0 / +/ ++				
4		/ - / 0 / +/ ++				
5		/ - / 0 / +/ ++				
6		/ - / 0 / +/ ++				
7		/ - / 0 / +/ ++				
8		/ - / 0 / +/ ++				
9		/ - / 0 / +/ ++				
10		/-/0/+/++				

9 PRESENT OUTCOMES (in the Bengali year 1408 (14 April 2001 – 13 April 2002)

Present well-being	Ba	Ja	As	Sr	Bh	An	Ka	Au	Po	Ma	Fa	Ch	
Average no of meals per day in that month $(1/2/3)$													
No of days that the inter- viewed was ill (no work)													
No of days that the interviewee's partner was ill (no work)													
Days out-migration of the interviewee													
Reasons for out- migration								Perce	•	of ove - / 0 /			ng

10 TARGET/IDEAL OUTCOMES (in next 5 years)

	Describe what you hope will happen or you will achieve in the following areas:
Natural	
Physical	
Human	
Social/institutional	
Financial	

11 MAIN BOTTLENECKS AND SOLUTIONS TO ACHIEVE IDEAL OUTCOMES

What are the main bottlenecks?	
What solutions can you implement?	
Which solutions need outside help?	

12 ANY OTHER RELEVANT POINTS

ANNEX C: PDSCL SURVEY DATA

Table of Contents

Annex C.1: Household assets	57
Annex C.2: Enhancement and deterioration in asset endowment	
Annex C.2.1: Human capital	58
Annex C.2.2: Social/institutional capital	61
Annex C.2.3: Natural capital	63
Annex C.2.4: Physical capital	65
Annex C.2.5: Financial capital	68
Annex C.3: Vulnerability issues	70
Annex C.3.1: Vulnerability issues: male	70
Annex C.3.2: Vulnerability issues: female	71
Annex C.4: Vulnerabilities issues by socio-economic strata	72
Annex C.4.1 Over view of vulnerability issues	72
Annex C.4.2 : Vulnerability issues, Zone 1	73
Annex C.4 3: Vulnerability issues, Zone 2	74
Annex C.4.4: Vulnerability issues, Zone 3	75
Annex C.4.5: Vulnerability issues, Zone 4	76
Annex C.4.6: Vulnerability issues, Zone 5	77
Annex C.4.7: Vulnerability issues, Zone 6	78
Annex C.4.8: Vulnerability issues, Zone 7	79
Annex C.4.9: Vulnerability issues, Zone 8	80
Annex C.5: Occupations and vulnerabilities	81
Annex C.6: Vulnerability, impact, coping and recommendations	82
Annex C.7: Activities performed by men and women	87
Annex C.8 Seasonal migrations	88
Annex C.9: Areas of investment	
Annex C.9.1 Summery men and women	
Annex C.9.2: Investments by men	90
Annex C.9.3: Investments by women	91

Annex	C.1:	Household	assets
-------	------	-----------	--------

HH			Asset		
situation	Natural	Physical	Human	Social / Institutional	Financial
Very poor	 Pond Land Homestead Homestead garden Tree Fish Honey Crab Canal Shrimp Shrimp fry 	 House Tube-well Cattle Donga Furniture Fishing net Fishing boat Van Road Poultry 	 Health Son Family Service Training Relatives Daughters Education Children 	 NGO Marriage Relation with neighbors Nuclear family CBO Relief 	 Farming Service in brick field Loan Savings Fishing <i>Gher</i> Small business <i>Shutki</i> business Ornament
Poor	 Beel land Land Pond Gher Homestead garden Homestead Trees Fish River Soil 	 Cattle Sewing machine Poultry House Furniture Bedding Latrine Fishing boat Fishing net Shop Sampan 	 Health Son Education Daughter Training Family Wife 	 NGO Marriage Leadership Relation with neighbors Club CBO 	 Loan Small business Savings Service Livestock rearing Farming Fishing Salt farming Pottery Ornament
Medium	 Land Pond <i>Khas</i> land Homestead garden <i>Charland</i> Homestead <i>Gher</i> land Medicinal plant Water courses Fish Crab Trees 	 House Cattle Embankment Poultry Sewing machine Embroidery machine Van Latrine Tube-well Fishing net Trawler Borshi Electricity 	 Health Son Education Daughter Relatives Family Wife Singing 	 Marriage NGO CBO Training Nuclear family Volunteer organization Club CBA 	 Savings Loan Farming Remittances Barber Service Shop Khorposh Business Cattle rearing Gher Life insurance Salt farming Ornament
Above poverty	 Land Bagda gher Pond Fish Tree Homestead garden 	 Cattle Poultry House Tube-well Trawler 	HealthSonEducationMother	 Marriage Samity NGO Relation with neighbors Local committee 	 Loan Farming Business Service Shrimp farm Shrimp business
Rich	 Land Pond Homestead garden <i>Gher</i> 	 House Poultry Cattle Fridge Brick built house Trawler 	 Health Son Daughter Wife Training 	 Marriage Library establishment Union Parishad CBO Political party 	 Loan Shrimp farm Service Salt business Fish business Shop keeping Farming Ornament

Annex C.2: Enhancement and deterioration in asset endowment

Annex C.2.1: Human capital

A. Responses on enhancement

А	I	Respondents		
Asset	Male	Female		
Wife	Healthy			
	Got a job as textile worker			
	Job in a garments factory			
Son	Passed SSC	Sent to India for better schooling		
	Got a job	Schooling started		
	Went abroad for work	Only son born		
	Job in the army	Son recovered from disease		
	Admitted in the university			
	Sent abroad			
	Born			
	Involved in fishing			
Daughter	Got a job	Got a job		
	Passed SSC	Passed SSC		
	Schooling	Appeared in SSC		
	-	Appeared in BA exam		
		Daughter treated for rickets by NGO		
Children	Study in school	Second child born		
		First childbirth without any		
		complication		
Education	Passed HSC	Passed SSC		
		Brother-in-law passed SSC		
Training	Poultry farming	•		
<u> </u>	Salt farming by BSCIC			
	Fish culture			
Health	No disease	In good health because of birth		
	Good condition	control		
		Recovered from TB		
		Had gal bladder operation in Dhaka		
		Cured from disease		

B. Responses on deterioration Asset	Male	Female
Wife	Sick	i officio
-	First wife died	
	Had an accident	
Husband		Died after prolonged illness
		Suffered accident
		Died of liver syrosis
		Became fully blind Died of stroke
		Psychic case
Son	Dropped out from college because of	Sold jewelry for education
501	poverty	Drop out from HSC
	One son died	Drop out due to poverty
	Two sons died	First son was murdered by miscreants
	Had an accident	Sick for long time
	Eldest son dropped out from school	Dropped out to earn
	Two sons are unemployed	Dropped out, not willing to continue education
	Died of disease Failed in SSC	
Daughter	One daughter died	Newborn son died of pneumonia Daughter failed second time in SSC
Zuugiitei	Two daughters born; expected son	Drop out from school due to poverty
	Dropped out from school	Drowned and died
	Abandoned by husband	Died in hospital
	Died of disease	Sick for long time
		Died due to lack of medication
		Sold land to pay dowry
Children		Newborn baby died due to
		complications at birth
Other family members	Two brothers died in cyclone	Father died in cyclone, grown up in
outer family memoers	Motherdied	poverty
	Brother had an accident	Death of father-in-law caused
	Mother sick, spent a lot of money	dislocation in the household
	Father died who was the only earning	Death of father made them destitute
	member	Father-in-law was murdered by
		miscreants Father diad in avalance
Education		Father died in cyclone Eldest son dropped out of school for
Education		father's sickness
Training	Have no training	Tautor 5 Stekness
Health	Spent money for father	Spent all money to treat blood
	Brother sick	dysentery
	Has TB	Husband's eye treatment, went to
	Severely ill	India
		Suffered from skin disease
		Borrowed money for husband's
		treatment Loan for treatment of children
		Still birth caused ill health
		Sold all jewelry for mother-in-law's
		treatment
		Husband sick for long time and could
		not eam
		Suffering and no medication
		Severely sick for a month
		Daughter-in-law had a surgery for breast infection
		Spent a lot of money for son's
		treatment
		Suffered from typhoid
		Visited the doctor thrice for non-stop
		bleeding
		Suffered from stomach pain and
		Suffered from stomach pain and spent a lot of money Spent money for husband's treatment

B. Responses on deterioration

PDO-ICZM	Perceptions of Direct Stakeholders on Coastal Livelihoods; September 2002		
Asset	Male	Female	
		Loan from money lender for treatment No income as husband was sick Skin disease due to saline water Went to India for treating typhoid of son Outbreak of skin disease due to flood Daughter suffering from ro cket Husband sick for two months Husband forced her to undergo ligation Gynecological complication Death of baby at the time of birth	

Annex C.2.2: Social/institutional capital

A. Responses on enhancement	
-----------------------------	--

Asset	Male	Female
Membership in CBO	Red Crescent Society Fishermen's cooperative Shagarika ASA Grameen Bank Shushilan Jubo Unnayan Parishad	Grameen Bank BRAC ASA NRDS Nari Progoti Sangha Red Crescent Society Shagarika SARPV Caritas BRDB ASA RIC YPSA Rakhaine Mohila Samity SHAKTI
Benefits from CBO menbership		Relief Poultry feed Training in cyclone preparedness Training in sewing Sewing machine Poultry training Training on polio Training on health education Training on awareness Training on business management Training in boutique Field visit on affo restation VGD wheat
Membership in local functional organization	Madrassa committee Mosque committee	
	School committee	
Other forums	Local club	
Membership in UP	Member	
Trade union	Member	
Political Party	General Secretary Union BNP	
Salish	Member	
Relationship with neighbors	Good	

PDO-ICZM

B. Responses on deterioration

Asset	Male	Female
Membership in CBO		Left due to irregularity
		Left after four years due to financial
		crisis
		Closed savings account for not being
		able to continue installment
Benefits from CBO membership		
Membership in local functional		
organization		
Other forums		
Membership in UP		
Trade union		
Political Party		
Salish		
Relationship with neighbors		

Annex C.2.3: Natural capital

A. Responses on enhancemen	ıt
----------------------------	----

Asset	Male	Female
Water course	Opening	
Tree	Plantation Coconut trees planted Trees are matured	
Wetland	Good catch of crab	
Pond	Excavation Re-excavation Lease in Fish culture Good harvest	Excavation Sharecropping Good harvest Good price for fish, shrimp Sufficient fish for consumption Fish-duck culture
Land	Ownership Inheritance Purchase Release from mortgage Lease in Donation Khas land Good harvest Loan repaid and investment made Grow two crops	Purchase Purchase gher Gift from father Good harvest Increased consumption of food Sale of vegetables Fallow land cultivation Good harvest from bagda gher Allocated by CDSP Good price for output (salt) Produce three cops a year Proper maintenance of gher brings good cash
Homestead	Purchase Allocation in CV	Purchase in CV Purchase Homestead from government Continue stay at father-in-law's house Allocated by father-in-law Vegetable cultivation Sale of vegetables to neighbors Good harvest of vegetables Increased consumption of vegetables

Asset	Male	Female
Water course	Captured by influentials	
	Declining fry catching	
	Flow reduction	
Tree	Damage by cyclone	
	Sold	
Pond	Poor harvest	Fish loss due to saline water intrusion
	Low profit	Fish loss due to flood
	Filled with water hyacinth	Poor harvest
	Fish loss due to flood	Fish loss due to disease
		Could not release fry due to lack of capital
		Fish loss due to cyclone
		Loss of access due to fragmentation of family
Land	Mortgage	Sale by husband
Lund	Leased out	Sale of land for constructing house
	Sale	Sale of land for medical treatment (childbirth)
	Single crop	Land taken away by influentials
	Taken away by influentials	Damaged by cyclone (rice, salt)
	Crop loss	Crop damage by heavy rainfall
	Poor harvest	Crop loss due to storm
	Erosion	Declining lease of land
		Crop loss due to salinity
		Crop loss for drainage congestion
		Crop loss due to lack of irrigation
		Sale for dowry payment
		Crop damage due to flood
		Crop damage by pest
		Extended family turned to nuclear family
		Return of sharecropped land
		No production because of feud with brother-in-law
Homestead	Damaged by cyclone	Damaged by cyclone
		Damage by flood
		Damage by storm surge
		Vegetables do not grow due to soil salinity
		Erosion
		Vegetable garden affected by storm

B. Responses on deterioration

Annex C.2.4: Physical capital

A.	Res	ponses	on	enhancement
	100	ponses	on	cimuneciment

Asset	Male	Female
Trawler	Purchase	
	Possess	
Boat	Purchase	Purchase
	Rented for honey collection	Purchase with loan from NGO
	Purchase for fishing	
Net	Purchase	Purchase own net for shrimp fry collection
	Own net	Purchase by husband
		Purchase with loan
		Purchase with loan from NGO
		Made and sold and earned profit
Hook	Purchase for fishing	· ·
Poultry	Keeping	Keeping
5		Gift from brother-in-law
		Sufficient for consumption
		Sale of egg
Cattle	For plowing and milk	For plowing and milk
	Number increased	Purchase with dowry
		Sale of milk
		Number increased
		Constructed cow shed
		Keep goat under sharing arrangement
		Keep cow under sharing arrangement
		Sufficient cow dung for use as fuel
		Matured goats are ready for sale
		Took under sharing arrangement for
		plowing
House	Improved	Shifted to new house
	Restructured	Rented better house
	Repaired	Brick structure
	Constructed	Repaired
	Tin-roofed	Renovated
	Renovated with tin	Tin-roofed
	Brick construction	Constructed gher house
	Furniture procured	Procured furniture
		Housing credit from NGO
		Tin-made house
		Received building materials from CDSP
		Construction of strong house
		Constructed two storied building
		Paved floor with loan from NGO
		Rebuilt roof
		Built own house
		Built house with help from NGO
		-
Furniture		Gift from neighbor
Household utilities		Got a refrigerator from father at the time of
		marriage
Handloom	Purchase	
Shop	Constructed one	
Rickshaw van	Purchase	Husband made one
Sewing machine		Gift from brother
C		Purchase with loan from NGO
Jewelry	Wife has some	Gold from p arents as dowry
-		Gift from husband
		Gift from father at the time of marriage
		Gift from mother at the time of marriage
		Gift from brothers at the time of marriage
		Bought in Malaysia
		Gift from father as dowry
Tube well	Installed	Installed deep tube well
	mounted	instance deep tube well

PDO-ICZM	Perceptions of Direct Stak	Perceptions of Direct Stakeholders on Coastal Livelihoods; September 200	
Asset	Male	Female	
		Gift from elder brother to reduce her sufferings	
Latrine	Sanitary latrine installed	Ring-slab latrine installed	
Electricity	Connected		
Road	Repaired		
Embankment	Repaired		

Male Female Asset Trawler Sold Damaged by cyclone Stolen by miscreants Boat Sold Sunk Lost Broken in accident Rented boat sunk Net Torn Stolen by miscreants Damaged by cyclone Died of unknown disease Poultry Lost in cyclone Number declined Died of diarrhea Sold to overcome financial crisis Died in storm Died in flood Died of salinity Sold to repay NGO credit Cattle Died of disease Sold due to fodder crisis Number declined Sold to lease in land No milk Number decreased Died due to flood All died Died of disease Died due to flood Sold for purchase of land Number declined due to household fragmentation Discontinued keeping on sharing basis due to lack of money Sold to pay for husband's medical treatment Sold for daughter's marriage Sold goats due to difficulty of rearing Sold to repay loan Sold to invest for fish business Sold for fodder crisis Sold to invest for fish culture No milk due to death of calf Sold for house building House Damaged by cyclone Live in others' house Damaged by flood Hardship in rent payment Cannot repair Damaged by cyclone Rent increased Damaged by high tide Difficulty in paying rent Damaged by nor'wester Living in only one room Damaged by heavy rain Damaged by flash flood No furniture, sleep on the floor Furniture Bed Suffer from cold as there is no bed, quilt Handloom Damaged by cyclone Rented out for lack of space Sewing machine Sold Embroidery machine Sold for going to Malaysia Jewelry Lost in cyclone Sold to repay husband's loan Sold to build house Sold for husband's medical treatment Sold Mortgaged out and not able to recover Tube well Salinity occurred Damaged Damaged by flood Latrine Damaged by flood Damaged by cyclone

B. Responses on deterioration

Annex C.2.5: Financial capital

A. Responses on enhancement

Asset	Male	Female
Savings	Maximum	Monthly saving, 100 taka Weekly saving, 50 taka Weekly saving, 10 taka Weekly saving, 5 taka Weekly saving, 4 taka Savings increased
Insurance	Life insurance policy matured	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Credit	Loan from Krishi Bank Repaid loan Loan from NGO No debt Minimum debt Half of the loan repaid	Money lending No debt Loan from NGO Loan from Krishi bank Private loan Repaid loan Loan from Grameen Bank Loan from Grameen Bank Loan from samity Loan from relative Loan from Madrassa Teachers' Association Repaid interest on loan Repaying loan Dadon for fishing Loan from sister
Job	Good salary Started working Got promotion Job in Saudi Arabia	Got a job Work as daily labor Daughter got a job
Cattle	15 cows Leased in goat	
Gher	Maximum profit	
Income/profit from activities	Shrimp gher Salt farming Maximum farm yield Fish drying Betel leaf business Shop keeping Rice production Pottery Fish business Betel leaf farming Extra income from sale of <i>iftar</i> Boat repairing	Trading Land sale Helped son to start business Son started grocery shop Husband earns good money Bought tailoring shop
Compensation		Khorposh from first husband
Production tool		Bought fishing net

	Terceptions of Direct Stukenolider	s on Coastal Livelinooas; September
B. Responses on deterioration		
Asset	Male	Female
Savings	No savings	Spent all for daughter's marriage Spent all for husband's treatment Spent for son's marriage Spent for own treatment W ithdrew savings
Insurance	Had no insurance	w luidrew savings
Insurance Credit	Had no insurance Could not get loan Loan taken for mother's treatment High debt High interest Loan taken to cover losses	Private loan Private loan for daughter's marriage Loan from local club Loan for sister-in-law's dowry Husband took loan Loan for husband's medical treatment Loan from NGO Loan from Mohajan for son's treatment NGO stopped giving loan Private loan to survive in the rainy season Cheated by another woman who took away her money Could not repay Loan from relatives and neighbors Loan for mother-in-law's treatment Trapped in loan repayment system Loan from NGO to repay private loan Loan with high interest to buy boat and net Taken loan on five occasions for different purposes Loan taken for daughter-in-law's treatment
Job	Quit job Quit business	Husband lost job Left job to reduce communication gap with husband Lost job with NGO Husband retrenched from job
Cattle	Five cows died Chalan (money receipt)	
Income/profit from activities	Gher failed Minimum profit Quit fish business for lack of capital Net loss Huge loss in shrimp Minimum production in agriculture Loss in fish business Loss due to fall in price of salt No profit	Loss in husband's fish drying business No profit in agriculture Low income from business
Jewelry		Mortgaged out Mortgage out by husband for shrimp gher Mortgaged out for daughter's treatment

Annex C.3: Vulnerability issues

Vulnerability issue		Zone									
	1	2	3	4	5	6	7	8			
Cyclone	х	Х	Х	Х	Х	Х	Х	Х			
Storm			Х	х		Х					
Social attitude											
Bank erosion	х		Х	Х	Х			Х			
Rainfall		Х				х		Х			
Flood		х	Х	Х		Х					
Drainage congestion		х	Х	х		х	х	Х			
Lack of money/capital	х	х	Х	Х		Х		Х			
Lack of land							х				
Lack of health		Х			Х	Х	Х	Х			
Livestock/poultry disease											
Widow ship											
Debt	Х					х					
Sanitation	Х	х				х		Х			
Housing		х	Х								
Ligation											
Irrigation						х					
Siltation											
Employment	Х	Х	Х	х		х	х	Х			
Lack of electricity				х							
Domestic water availability		Х	Х			х	х	Х			
Salinity				х		х		Х			
Dowry		Х				х					
Declining natural resources	Х	х	х	х	х	х	х	Х			
Law and order		Х	Х		Х	х	х				
Lack of education											
Lack of food											
Draught						Х					
Pest	х	х				х					
Falling salt price	Х										
Ageing		х									
Political instability				Х							
Education				х							
Land use							х				
Lack of medical facilities	х	Х									
Lack of transportation facilities	х				х						
Lack of agricultural equipment				х							
Insufficient income						х					
Corruption in local administration							х				
Decline in income	Х										
High dependency ration	Х		х			х					
Land tenure			Х								
Absence of influential kin			Х	х							
Absence of school				х							
Lack of help from rich				х							
Government ban on fishing				х							
Accident								Х			
Lack of embankment	Х										
Loss in business						Х	Х				

Vulnerability issue				Zo	one			
	1	2	3	4	5	6	7	8
Cyclone	Х	Х	Х	Х	Х			
Storm		Х			Х	Х	х	Х
Social attitude								
Bank erosion			Х	Х	Х			
Heavy rainfall						Х	Х	Х
Flood		х		Х	х	Х	х	Х
Drainage congestion		Х			Х	Х	х	Х
Lack of money/capital		Х	Х	Х	Х	Х		Х
Lack of land						Х		
Lack of health	Х	х	Х	Х	х	Х		Х
Livestock/poultry disease	Х		Х			Х		
Widow ship	Х							
Debt	Х					х		
Sanitation	Х	х	Х		х	Х	Х	Х
Housing	Х	х				х		х
Ligation		х						
Irrigation							х	
Siltation							Х	
Employment		х	х	Х		х		х
Lack of electricity								Х
Domestic water availability	Х	х	х	Х	х	х	х	х
Salinity	Х	х		Х	х		Х	Х
Dowry						Х		
Declining natural resources		х		Х	х	Х	х	
Law and order		х	Х		х	Х		Х
Lack of education		х						Х
Lack of food		х						
Large family size	Х	х		Х		х		
Lack of medical facilities	Х	х	Х			Х		
Lack of mother and child health care	Х	х				х		
Less wage				Х		х		х
Crop loss				1		х	Х	
Poor road condition	Х					Х		

Annex C.3.2: Vulnerability issues: female

Annex C.4: Vulnerabilities issues by socio-economic strata

Issue	Distribution of vulnerabilities									
	Very	poor	Po	oor	Med	lium	Ab	ove	Ri	ch
							pov	erty		
	Mal	Fem	Mal	Fem	Mal	Fem	Mal	Fem	Mal	Fem
Total Number of respondents	31	25	21	27	26	42	8	1	9	6
Land erosion		1	2	2	1	5	1	1		
Cyclone	14	12	6	14	14	15	7	1	5	2
Employment	19	3	11	5	11	8	1			1
Communication problem		2			2	1	1		1	
Lack of medical facilities		2				1	1			
Lack of cash	13	1	5	12	6	17	2		2	2
Conservativeness						1				
Poor housing	1	4	1			4			1	
Lack of health	3	8	4	6	5	14			1	1
Superstitions						1				
Lack of equipments			1		1	1				
Law and order	5	3	3	1	6	9	3	1	2	
Water quality						1				
Lack of education facilities	1		1	5		3			1	1
Decline in resource	6	3	5	2	5	4				1
Lack of sanitation	2	12	3	10	1	8			1	1
Decline in income			2		1				1	
Drinking water availability	7	18	4	15	5	16	1	1	4	2
Irrigation water availability	1			2	2	2				
Heavy rainfall	3	3		9		5			2	
Drought			1							
Physical assault				1						
Loss in business	2		2	2	1	2	1		1	
Salinity	1	3	2	2	4	2	1			1
Widow ship				2						2
Flood		3			1	2	2		2	
Drainage congestion	8	2	6	4	9	9	1			
Pest infestation	1		1				1		1	
Debt	2		3		5					
Insufficient income	4	1	5		4		1			
Dowry		1	1		1					
Identity crisis					1					
Lack of food				1						
Large family size		1	1	1						1
Accident	2	1	1	1						
Seasonal storm	2	3	2	2	1	5				
Lack of land	1	1		2	2	5				
Relation with influential	1				1					
Lack of electricity		1				2				
High tide				1						
Government ban	1		1							

Annex C.4.1	: Overview of vulnera	bility issues
-------------	-----------------------	---------------

Annex C.4.2 : V	/ulnerability	issues, Z	one 1
-----------------	---------------	-----------	-------

Issue				Distrib	oution of	vulnera	bilities			
	Very	poor	Po	oor	Med	lium	Ab	ove	Ri	ch
								erty		
	Mal	Fem	Mal	Fem	Mal	Fem	Mal	Fem	Mal	Fem
Total Number of respondents	4	1	2	4	3	5	2	0	1	3
Land erosion							1			
Cyclone	4	1		4	2	3	2		1	
Employment	2		2				1			
Communication problem					1		1			
Lack of medical facilities							1			
Lack of cash	3		1	2	1	3				1
Conservativeness						1				
Poor housing						1				
Lack of health	2	1		2	1	3				1
Superstitions						1				
Lack of equipments						1				
Law and order						2				
Water quality						1				
Lack of education facilities						1				1
Decline in resource	1		1		1					
Lack of sanitation				2	1					
Decline in income			2		1					
Drinking water availability		1		3						1
Irrigation water availability	1									
Heavy rainfall				1						
Drought										
Physical assault				1						
Loss in business	1		2	1						
Salinity				1						1
Widow ship				2						2
Flood										
Drainage congestion				1						
Pest infestation	1								1	
Debt	1									
Insufficient income	1									
Dowry	1				1					
Identity crisis	1									
Lack of food										
Large family size										
Accident										
Seasonal s torm										
Lack of land		1								

Annex C.4	3: Vulne	ability issue	s, Zone 2
-----------	----------	---------------	-----------

Issue				Distri	bution of	vulnerab	oilities			
	Very	poor	Po	oor	Med	lium	Above	poverty	Ri	ch
	Mal	Fem	Mal	Fem	Mal	Fem	Mal	Fem	Mal	Fem
Total no. of respondents	6	6	4	4	3	7	0	0	6	3
Land erosion						5				
Cyclone	4	6	4	4	3				4	2
Employment	4		3		1	2				1
Communication problem										
Lack of medical facilities		1								
Lack of cash	5		1	2		3			2	1
Conservativeness										
Poor housing	1	3				1				
Lack of health		3		2	1	4			1	
Superstitions										
lack equipments										
Law and order						2			2	
Water quality										
Lack of education facilities										
Decline in resource	3		2							1
Lack of sanitation		4	1	3		2			1	1
Decline in income									1	
Drinking water availability	2	6	1	2	1	4			2	1
Irrigation water availability										
Heavy rainfall									2	
Drought										
Physical assault										
Loss in business					1				1	
Salinity										
Widow ship										
Flood					1	2				
Drainage congestion										
Pest infestation										
Debt										
Insufficient income	2	1	3		3					
Dowry					1					
Identity crisis					1					
Lack of food				1						
Large family size										1
Accident	1									
Seasonal storm										
Lack of land						2				

Issue	Very	poor	Po	or	Med	lium	Above	poverty	Ri	Rich		
	Mal	Fem	Mal	Fem	Mal	Fem	Mal	Fem	Mal	Fem		
Total no. of												
respondents	0	2	3	3	3	5	3	0	0	0		
Land erosion		1	1									
Cyclone		2	1	3	3	5	3					
Employment		1	3	2	3		1					
Communication problem												
Lack of medical												
facilities						1						
Lack of cash		1	1	3	3	4	1					
Conservativeness												
Poor housing			1									
Lack of health		1										
Superstitions		1										
lack equipments												
Law and order			2	1	2	2	1					
Water quality												
Lack of education												
facilities						1						
Decline in resource			1									
Lack of sanitation						1						
Decline in income												
Drinking water												
availability		2				3						
Irrigation water												
availability												
Heavy rainfall												
Drought												
Physical assault												
Loss in business												
Salinity												
Widow ship												
Flood												
Drainage congestion					3							
Pest infestation												
Debt					1							
Insufficient income							1					
Dowry												
Identity crisis												
Lack of food												
Large family size			1									
Accident												
Seasonal storm			1			1						
Lack of land						1						

Annex C.4.4: Vulnerability issues, Zone 3

Mai Ferm Ma	Issue	Very	poor	Po	or	Med	lium	Ab	ove	Ri	ch
Total no. of respondents 2 0 2 3 5 6 0 0 0 Land erosion 1									erty		
Landerosion I 1 1 I <t< td=""><td></td><td></td><td>Fem</td><td></td><td>Fem</td><td></td><td>Fem</td><td>Mal</td><td>Fem</td><td>Mal</td><td>Fem</td></t<>			Fem		Fem		Fem	Mal	Fem	Mal	Fem
Cyclone 1 1 1 2 3 4 6 1 1 Employment 1 1 2 3 2 1 1 Communication problem 1 1 1 1 1 1 1 Lack of medical facilities 1 1 1 1 1 1 1 Conservativeness 1		2	0	2	3	5	6	0	0	0	0
Employment 1 1 2 3 2 I Communication problem I				1	-						
Communication problemImage: space of the spa	-	1			3		6				
Lack of medical facilitiesImage: space of the		1		1	2	3	2				
Lack of cash111 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td><td></td><td></td><td></td><td></td></th<>							1				
ConservativenessImage: state of the state of											
Poor housingImage: state of healthImage: state of health <td>Lack of cash</td> <td>1</td> <td></td> <td></td> <td></td> <td>1</td> <td>1</td> <td></td> <td></td> <td></td> <td></td>	Lack of cash	1				1	1				
Lack of healthImage: state of the althImage: state of the alth <td>Conservativeness</td> <td></td>	Conservativeness										
SupersitionsImage: supersitionsImage: supersitionsImage: supersitionsImage: supersitionsImage: supersitionsImage: supersitionslack equipmentsImage: supersitionsImage: supersitionsImage: supersitionsImage: supersitionsImage: supersitionsWater qualityImage: supersitionsImage: supersitionsImage: supersitionsImage: supersitionsImage: supersitionsLack of education facilitiesImage: supersitionsImage: supersitionsImage: supersitionsImage: supersitionsImage: supersitionsLack of sanitationImage: supersitionsImage: supersitionsImage: supersitionsImage: supersitionsImage: supersitionsImage: supersitionsDecline in incomeImage: supersitionsImage: supersitionsImage: supersitionsImage: supersitionsImage: supersitionsImage: supersitionsImage: supersitionsDroughtImage: supersitionsImage: supe	Poor housing										
lack equipmentsIII	Lack of health						1				
Law and orderImage: state of equation facilitiesImage: state of equation fac	Superstitions										
Water qualityImage: space of the space of th	lack equipments			1		1					
Lack of education facilitiesImage: sourceImage: source	Law and order										
Decline in resourceIII<	Water quality										
Lack of sanitationImage: sanitationImage: sanitationImage: sanitationImage: sanitationImage: sanitationImage: sanitationDecline in incomeImage: sanitationImage: sanitationImage: sanitationImage: sanitationImage: sanitationImage: sanitationDroughtImage: sanitationImage: sanitationImage: sanitationImage: sanitationImage: sanitationImage: sanitationDroughtImage: sanitationImage: sanitationImage: sanitationImage: sanitationImage: sanitationImage: sanitationDownghtImage: sanitationImage: sanitationImage: sanitationImage: sanitationImage: sanitationImage: sanitationDownghtImage: sanitationImage: sanitationImage: sanitationImage: sanitationImage: sanitationImage: sanitationDebtImage: sanitationImage: sanitationImage: sanitationImage: sanitationImage: sanitationImage: sanitationDownyImage: sanitationImage: sanitationImage: sanitationImage: sanitationImage: sanitationImage: sanitationImage: sanitationIma	Lack of education facilities										
Decline in incomeImage: constraint of the second secon	Decline in resource			1	1		1				
Drinking water availability5Irrigation water availability22Heavy rainfall2Drought </td <td>Lack of sanitation</td> <td></td>	Lack of sanitation										
Drinking water availability5Irrigation water availability22Heavy rainfall2Drought </td <td>Decline in income</td> <td></td>	Decline in income										
Irrigation water availability220Heavy rainfall0000Drought0000Physical assault020Loss in business020Salinity1132Widow ship1132Flood0000Drainage congestion111Pest infestation000Debt000Insufficient income000Dowry0000Identity crisis000Lack of food000Lack of fond110Lack of land020Relation with influential011							5				
Heavy rainfallImage: start of the start of th					2	2					
DroughtImage: sequence of the sequenc											
Physical assaultImage: constraint of the system											
Loss in businessImage: Constraint of the second	_										
Widow shipImage on the shift of	-						2				
Widow shipImage on the shift of	Salinity			1	1	3	2				
FloodImage congestionImage congestion											
Pest infestationImage: second sec											
Pest infestationImage: second sec	Drainage congestion				1	1					
Insufficient incomeImage: Constraint of the systemImage: Constraint of the systemIm											
Insufficient incomeImage: Constraint of the second sec	Debt										
DowryImage: Constraint of the systemImage: Constrain											
Identity crisisImage: Seasonal stormImage: Seasonal storm											
Lack of foodImage: Seasonal stormImage: Seasonal storeImage: Seasonal store <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>											
Large family sizeImage family sizeImage family sizeImage family sizeAccidentImage family sizeImage family sizeImage family sizeSeasonal storm1Image family sizeImage family sizeLack of landImage family sizeImage family sizeImage family sizeRelation with influentialImage family sizeImage family sizeImage family size											
AccidentImage: Constraint of the second stormImage: Constraint of the second stormImage: Constraint of the second storeImage: Constraint of the second storeSeasonal storm11111Image: Constraint of the second storeImage: Constraint of the second store <td< td=""><td></td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>		1									
Seasonal storm11100Lack of land2200Relation with influential1100		1									
Lack of land 2 Relation with influential 1		1		1		1					
Relation with influential 1						2					
High tide 1		1			1						
Government ban 1 1	-	1		1							

Annex C.4.5: Vulnerability issues, Zone 4

•	5	poor	Poor Mol Fam				Ab pov	ove erty	Ri	Rich	
	Mal	Fem	Mal	Fem	Mal	Fem	Mal	Fem	Mal	Fem	
Total no. of											
respondents	1	2	0	1	1	0	0	1	2	0	
Land erosion				1				1			
Cyclone		2			1			1			
Employment	1	1									
Communication problem									1		
Lack of medical facilities											
Lack of cash											
Conservativeness											
Poor housing									1		
Lack of health	1										
Superstitions											
lack equipments											
Law and order	1				1			1			
Water quality											
Lack of education											
facilities				1					1		
Decline in resource	1	1			1						
Lack of sanitation		1									
Decline in income											
Drinking water											
availability	1	2		1				1	2		
Irrigation water											
availability											
Heavy rainfall											
Drought											
Physical assault											
Loss in business											
Salinity		2									
Widow ship											
Flood				1					1		
Drainage congestion											
Pest infestation											
Debt											
Insufficient income											
Dowry											
Identity crisis											
Lack of food											
Large family size											
Accident											
Seasonal storm											
Lack of land											
Relation with influential											
Lack of electricity											
High tide											
Government ban											

Annex C.4.6: Vulnerability issues, Zone 5

Issue	Very	poor	Po	or	Med	lium	Above	poverty	Ri	ch
	Mal	Fem	Mal	Fem	Mal	Fem	Mal	Fem	Mal	Fem
Total no. of										
respondents	7	7	5	7	4	7	3	0	0	0
Land erosion										
Cyclone	3	1				1	2			
Employment	5		1		1	1				
Communication problem		2								
Lack of medical facilities										
Lack of cash	3		2	5		5	1			
Conservativeness										
Poor housing		1								
Lack of health		2	3	1		3				
Superstitions										
lack equipments										
Law and order	2	1	1			1	2			
Water quality										
Lack of education										
facilities			1	4						
Decline in resource		1								
Lack of sanitation	1	5	1	5		2				
Decline in income										
Drinking water										
availability	1	1	1	5	2	1	1			
Irrigation water availability										
Heavy rainfall	1					1				
Drought			1	5						
Physical assault										
Loss in business							1			
Salinity			1				1			
Widow ship										
Flood		3					3			
Drainage congestion	5		4		3	3				
Pest infestation							1			
Debt	1		3		2					
Insufficient income	2									
Dowry		1	1							
Identity crisis										
Lack of food										
Large family size		1								
Accident		1	1							
Seasonal storm	1	2				2				
Lack of land						1				
Relation with influential										
Lack of electricity										
High tide										
Government ban										

Annex C.4.7: Vulnerability issues, Zone 6

Issue	Very	poor	Po	oor	Mec	lium		ove erty	Ri	ich
	Mal	Fem	Mal	Fem	Mal	Fem	Mal	Fem	Mal	Fem
Total no. of respondents	6	5	3	4	4	4	0	0	0	0
Land erosion										
Cyclone	1									
Employment	1	1	1		3					<u> </u>
Communication problem										
Lack of medical facilities										
Lack of cash	1									
Conservativeness										
Poor housing										
Lack of health				1	2					
Superstitions										
lack equipments										
Law and order	2	1			3	1				
Water quality										
Lack of education facilities										
Decline in resource				1	2	1				
Lack of sanitation										
Decline in income										
Drinking water availability	2		1	4						
Irrigation water availability						2				
Heavy rainfall				2		3				
Drought										
Physical assault										
Loss in business	1			1						
Salinity										
Widow ship										
Flood										
Drainage congestion	2	1	1	2	1	3				
Pest infestation										<u> </u>
Debt										<u> </u>
Insufficient income										
Dowry										
Identity crisis										
Lack of food										
Large family size										
Accident										
Seasonal storm	1	1		2		2				
Lack of land	1									
Relation with influential	1									
Lack of electricity	1									
High tide										
Government ban										<u> </u>

Annex C.4.8: Vulnerability issues, Zone 7

Issue	Very	poor	Po	00ľ	Mec	lium		ove erty	Ri	ch
	Mal	Fem	Mal	Fem	Mal	Fem	Mal	Fem	Mal	Fem
Total no. of										
respondents	5	2	2	1	3	8	0	0	0	0
Land erosion					1					
Cyclone	1		1		1					
Employment	5			1		3				
Communication problem					1					
Lack of medical facilities		1								
Lack of cash					1	1				
Conservativeness										
Poor housing						2				
Lack of health		1	1		1	3				
Superstitions										
lack equipments										
Law and order						1				
Water quality										
Lack of education										
facilities	1					1				
Decline in resource	1				1	2				
Lack of sanitation	1	1	1			3				
Decline in income										
Drinking water										
availability	1	1	1		1	3				
Irrigation water										
availability										
Heavy rainfall	2	1		1		1				
Drought										
Physical assault										
Loss in business										
Salinity	1	1			1	1				
Widow ship										
Flood										
Drainage congestion	1	1	1		1	3				
Pest infestation										
Debt					2					
Insufficient income			2		1					
Dowry										
Identity crisis	1									
Lack of food										
Large family size	1									
Accident	1									
Seasonal storm	1									
Lack of land	1					1				
Relation with influential										
Lack of electricity						2				
High tide	İ									
Government ban										

Annex C.4.9: Vulnerability issues, Zone 8

Annex C.5: Occupations and vulnerabilities

Vulnerabilities	Daily labor		Farmer		House work		Fisher		Service		Trader		Salt farmer		Shrimp farmer		Fish dryer		Industrial	lauor er	Potter		Weaver		Bawali (forest wood	woou collector)
Sex	Μ	F	Μ	F	Μ	F	М	F	Μ	F	М	F	М	F	Μ	F	Μ	F	Μ	F	М	F	М	F	Μ	F
Total no. of respondents	13	11	28	3	0	78	19	2	6	1	12	3	4		2		3		3	3	1	1		2	1	
Land erosion						5	2		1				1						1							
Cyclone	10	4	10	1		40	8	1	3		8	1	3		1		3		1			1				
Employment	9	3	13	1		8	12	1		1	3	1	1		1		3							1	1	
Communication problem		1				3	1			1					1											
Lack of medical facilities			1												1											
Lack of cash	4	4	8			20	4				4	2	1				3		2		1	1		2		
Conservativeness						1																				
Poor housing	3			1		6	1																			
Lack of health		4	1			27	4			1	1	1			1		1		1		1	1			1	
Superstitions						1																				
Lack of equipments			1																					1		
Law and order	1	1	5	1		6	9		1	1	4															
Water quality						4																				
Lack of education facilities		1				3																				
Decline in resource	1	2	1			11	13	1		1	1	1					2		1							
Lack of sanitation		6				22	4	1			2	1							1							
Decline in income							2				1										1					
Drinking water availability	2	7	6	1		41	4	2	5		2	1			1					2				2		
Irrigation water availability			3			2																				
Heavy rainfall	1	3	1	1		11					2									1						
Drought							1																			
Physical assault																										
Loss in business	1		3			3					3										1			1		\square
Salinity	2	1	5	2		5		1	1											1						
Widow ship						2																				\square
Flood	2	1	5	1		4					1															
Drainage congestion		1	11	1			3		1	1	3		1						1	2						\square
Pestinfestation			4																							\square
Debt			4						1										2							\square
Insufficient income	5					-	4		4		1		1		1		2									\square
Dowry			4			3			1																	\square
Identity crisis																										\square
Lack of food	<u> </u>	——	——					<u> </u>						—							——				l	\square
Large family size	1																									\square
Accident	1	<u> </u>				2		<u> </u>	1														l			\square
Seasonal storm	2	2					3																		⊢──┘	\square
Lack of land	1	1				8						1														\square
Relation with influential	2							1				-														\vdash
Lack of electricity							1	1				1													┙	\square
High tide								1																		\square
Government ban							2																			

Issue	Main impact on the HH	Main coping measures	Main bottlenecks to reduce negative impact	Recommended solutions
Domestic water avail	lability		-	
Male	Long water fetching time Water born disease	Collect water from madrassa Collect from another tube well Use pond water Spend more time	Lack of water supply facilities Lack of money to install tube well Not many deep tube well	Extend WASA Government can install tube well Install deep tube well
Female	Conflict in water fetching Crisis in domestic use Problem of bathing, cleaning and drinking water	Water fetching from far Use of pond water Use of pond water by purifying Use of dirty water Quickly finish domestic tasks	No own tube well	Install tube well Tube well for the community Loan for tube well
Surface water availa				
Male	Golda gher is affected Less crop production Expensive irrigation of high land	Harvest all golda Single cropping	Sholmari regulator is a problem	To let water through Sholmari regulator
Female	Less crop Loss in gher Less production	Depend on rainfall Installation of shallow tube well	Water logging Financial problem	Clear water hyacinth LLP/boring installation Canal irrigation system
Employment condition				
Male	Seasonal income Less income Can't earn regularly Less health expenditure	Borrow goods from shop Spouse's (wife) income Borrow money Save money for lean period	Depend on day labor Dependency on agriculture Increased competition Fixed income Women are discriminated No quota for plain land Rakhaines	Job diversification Government's involvement Employment opportunity
Female	No work no pay No maternity leave No holiday Less income Less wage	Private tuition Do different types of work	No patronage for getting job	Job facility
Bank erosion Male	Land lost in sea Salt lost	Buy new land Shift to new place Change profession from farming to industrial labor	Weak embankment No embankment	Construct new embankment
Female	Lost land Gradual decline of homestead	Shifting Protection with bamboo, brick, mud	No prevention Lack of money	Land settlement Local govt. initiative
Lack of money/capita				
Male	Less HH expenditure Can't expand business Can't do business regularly	Borrow money Less family expenditure Rickshaw pulling Depend on spouse	Irregular employment Low return from existing activity Can't save due to	Government can give loan and training Loan

Annex C.6: Vulnerability, impact, coping and recommendations

Issue	Main impact on the HH	Main coping measures	Main bottlenecks to reduce negative impact	Recommended solutions
	Standard of living falling	(wife) when sick Seek son's help Help from neighbors Depend on daily labor	insufficient income No capital Lack of help from rich Old age	
Female Lack of health	Live on chronic deficit Cris is in the rainy season Less number of meals Starvation Has to pay half of income to repay loan	Borrow money Live on wage in the form of meal Loan from mohajan with high interest rate Depend on son's income Sharecropping	None to help No own land	Loan from NGO Loan to do livestock and poultry farming Increase income to buy land Resort to day labor
Male	Can't go for fishing	Borrow money	Can't afford	Consult a doctor
Female	Less income Can't concentrate on anything Can't perform all household tasks Low income Still birth Can't look after children	Borrow money from neighbors Pray Engaged maid Live in crisis Depend on eldest daughter Kids look after	treatment Lack of money Husband died Less interval between child birth Birth of too many children	once a month Free medical service from Govt./NGO If son arranges treatment Further treatment Proper medication Family planning injection Further medical check-up Free medical service for all
Flood				
Male	House damaged Normal life disrupted Furniture damaged Homestead garden damaged Crop damaged Low agricultural production House inundated	Got relief Live on cot Use raft Take shelter in high place Repair house Sell tree Borrow money	Poor drainage condition Excessive rainfall Poor design of road Siltation of river and canal Upstream flow Low land No water outlet	Excavate canal Improve drainage Construct sluice gate Change river course Make embankment Re-excavate canal Government help for rehabilitation
Female	House inundated No work No cooking Loss of fis h No income Sanitation problem Intrusion of saline water in the house Difficulty in child care	Live on water Borrow money Live on macha (bamboo platform) Keep children inside home	Water logged area Siltation of water body No drainage canal Siltation of chhara (hill stream)	Remove drainage congestion Excavation of canal Excavation of chhara (hill stream) Government initiative
Drainage congestion	Crop dament 1	On an in1 (Look of1 (C	Strict gamme
Male	Crop damaged	Opening sluice gate	Lack of regulation of opening sluice gate Operator not always available	Strict government control Strict control
Female	Reduced income Difficult to collect cow dung	Depend on poultry Walk a long distance	No initiative Gate of Sholmari regulator	Clear water hyacinth
Debt	Low living stard-rd	Use part of ir	Insufficient	Cout should -i
Male	Low living standard	Use part of income to repay lo an	Insufficient savings	Govt. should give interest free loan

Issue	Main impact on the HH	Main coping measures	Main bottlenecks to reduce negative impact	Recommended solutions
		Renting out house (room) Remittance from son		
Dowry				
Male	Had to spend a huge amount	Borrow money Use savings	Dowry system Social and cultural system	Social movement Abolish dowry system
Female	Land sold	Live on daily labor	Lack of land	Son's marriage to get some cash
Cyclone Male	House damaged	Shelter in a building	Weak house	Construct
	Tree damaged Betel leaf field damaged Furniture damaged Total loss of salt Lost all assets Social status degraded Homestead damaged Boat damaged Fishing trawler damaged Shrimp gher damaged Pond fish died of saline water intrusion Bridge broken Relatives died Livestock died Standing crop lost Boundary wall damaged	Help from NGO Shelter in a high place Repair house Reestablish betel leaf field Sell tree Borrow money to start salt farming Help from neighbors Help from relatives Help from the government Help from NGO Start small scale fish business Trees replanted Fish culture in pond Shelter on the roof Shelter on trees Use savings	Inadequate shelter Proximity to sea Lack of savings Lack of help Poor housing conditions Lack of embankment People do not believe in warning	embankment Proper warning system Plant more trees Construct brick house Strengthen relief and rehabilitation program of the government Give loan Increase government's efficiency Build cyclone shelter Build tin -shed house Improve cyclone warning system
Female	House damaged Loss of poultry Loss of plants Drinking water crisis Loss of livestock House inundated with saline water	Borrow money Low cost repair Plantation Use cyclone shelter Rebuild house Go to neighbor's house	No other earning member No assistance received Poor house condition Poor warning Cyclone shelter far away Proximity to sea Weak embankment	Financial assistance from the authority Fund for house repairing Rehabilitation fund for the elderly Loan for housing Financial assistance from NGO Fund for the poor Sufficient water in the cyclone shelter Build strong house Proper warning Fund for rehabilitation Proper miking More cyclone shelter Proper embankment Awareness building program
Relation with nei	*	Have to tolerate	Lowincome	Have own land
Male Law and order	Rude behavior	Have to tolerate	Low income	nave own land
Male	Free movement hampered Goods stolen from shop Harassment by extortionists	Do not sleep at home Borrow money to offset loss	Inactive police	Active police department Appoint more night guard

Perceptions of Direct Stakeholders on Coastal Livelihoods; September 2002

Issue	Main impact on the HH	Main coping measures	Main bottlenecks to reduce negative impact	Recommended solutions
Female	Cannot stay outside home in the evening Harassment by extortionists and musclemen Drug abuse Daughter dropped out from school Live in anxiety with two young daughters	Early marriage of daughter Do not allow daughters to go out	Lack of police supervision Unemployment	Improve law and order Community awareness Daughters' marriage
Poor housing				
Female	House damaged	Low cost repair Minor repair Live with difficulties Fund from NGO	Lack of money	Government assistance
Heavy rainfall				
Male	Suffered loss as salt was washed away	Borrow money for investment in next year		Brick-built house for salt storage
Female	Disruption in daily life Can't cook House inundated Can't work Sanitation problem House damaged No income Ni fishing Husband's physical discomfort Can't go out for work	Borrow money Stay at home Less meal Don't go out Depend on husband's wage Dry clothes inside the house Use neighbor's toilet	Poor housing Work place is far away	Repair house Strong house Housing loan Financial support from Govt./NGO
Livestock/poultry d	isease		•	•
Female	Death Can't earn extra cash	Depend on shared cow Minimum no. of birds	Lack of knowledge on disease	Training by NGO
	nt female sterilization)		-	-
Female	Will never have any child Poor mental state	Satisfied with son		No ligation by force
Lack of sanitation		TT 1 1		
Female	Difficulties in wet season Stomach upset Difficulty in everyday life Severe problem during period Can't maintain basic hygiene Feel ashamed when son-in-law visits	Use hole Goes to other places Use open space Use katcha latrine	No fund Lack of money to install slab latrine	NGO assistance for ring-slab latrine Govt./NGO support Pucca latrine
Look of alastsisity	Health crisis due to environmental pollution Increased medical expenses			
Lack of electricity Female	Health crisis due to environmental pollution Increased medical	Finish cooking	Lack of cash	Government action

Issue	Main impact on the	Main coping	Main bottlenecks to	Recommended
	НН	measures	reduce negative impact	solutions
Male	Culturally influenced by the majority community Less religious function	Live under pressure of the majority community	Impact	Improve economic condition Change of attitude of the majority community
Female	Can't share own ideas with others Can't do anything alone	Keep busy with household work Try to make people understand reality	Veil culture Lack of education Illiteracy Religious superstition Lack of awareness	Govt./NGO initiative for awareness building Public awareness building activities
Salinity				
Male	Low agricultural production One cop per year	Do agriculture in rainy season Fetch water from distance Use gypsum fertilizer	Surface water salinity Saline water intrusion	Construct embankment Sluice gate
Female	Utensils, clothes remain oily, difficult to wash Skin problem Problem of cooking Drinking water crisis Disruption in fish cultivation and duck farming	Use pond water Water collection from other place Husband fetch water	Not enough deep tube well No own tube well River bank erosion Saline water intrusion through canal in the dry season	Common tube well for the community Tube well installation Canal re -excavation
Declining fish resource			-	-
Male	Less catch and less income Loss in fish business	Stopped fish business Sold trawler	Over fishing Current net Trawling Jatka fishing	Stop over fishing
Female	No fish Fish crisis in beel area	Less fish in meal Fish purchase	Over fishing Water logging	Stop over fishing Restrict fish fry collection Clear water hyacinth Release new species Re-excavate pond
Land use			•	
Male	Mono crop	Only rice cultivation	No cash to invest in golda farming	Loan and boring
Draught		T • .•		D (())
Male	Crop damaged	Irrigation		Better irrigation
Ageing Male	Cannot work hard	Take help from son		
Pest		Take nerp from soft	1	<u> </u>
Male	Crop damage		Lack of pesticide	Training Awareness Easily available pesticide
Widow ship	NT	D		
Female	No access to husband's resources	Prayer	Eldest son refused to give her any property	

Men and Women	Women	Men
Betel leaf farming	Bara-ghosha (spice grinding)	Bamboo selling
Cow selling	Block printing	Betel leaf business
Day labor	Cheli (firewood) making	Boat maintenance
Earth work	Child care	Cattle business
Egg selling	Cloth selling	Contractor
Farming	Cooking	Crab collection
Fish cultivation	Cow dung collection	Fish business
Fish drying	Darua (fuel) collection	Fish processing labor
Industrial labor	Embroidery	Fish selling
Milk selling	Firewood selling	Fishing
Net making	Fuel making using cow dung	Green coconut selling
Net repairing	Garments work	Honey collection
Pottery	Handicraft making	Marin e fishing
Praying	Harvesting (crop)	Rickshaw pulling
Private tuition	Helping mother and son	Salt business
Service	House cleaning	Salt farming
Shrimp fry collection	Household work	Shopping
Small business	House maintenance	Shrimp farming
Small scale trading	Husband care	Shutki (dry fish) business
Social activities	Husking (paddy)	Traditional healing
Teaching children	Kantha making	Van driving
Trading	Livestock rearing	Water transportation
Vegetable gardening	Maid servant	Wood sawing
	Mat making	Work in brick field
	Muri (puffed rice) business	
	Poultry keeping	
	Rice grinding	
	Rice parboiling	
	Sewing	
	Tailoring	
	Vegetable selling	
	Washing	
	Water fetching	
	Weaving	
	Weeding	
	Yarn dying	

Annex C.7: Activities performed by men and women

Zone	Main Occupation	Sex	Household stratum	No. of days away	Cause of migration
1	Housework	Female	Rich	45	Due to delivery went to father's house
1	Shrimp Farming	Male	Above Poverty	24	Business purpose
1	Marine Fishing	Male	Medium	36	Daily labor
1	Potter	Male	Poor	70	Sell pottery
1	Marine fishing	Male	Poor	190	Marine fishing
1	Daily labor	Male	Very poor	15	Went to Chittagong for medication
1	Fish drier	Male	Very poor	106	Sell shutki
2	Daily labor	Male	Medium	40	Daily labor
2	Service	Male	Medium	250	Posting at another place
2	Business	Male	Rich	90	Business purpose
2	Business	Male	Rich	91	Business purpose
3	Farming	Male	Medium	15	For daily labor
3	Daily Labor	Male	Above poverty	30	Went to Chittagong for job
3	Farming	Male	Medium	71	Daily labor
3	Daily labor	Male	Poor	60	Went to Chittagong for daily labor
4	Farming	Male	Poor	25	To attend in court
4	Daily labor	Male	Very Poor	20	Daily labor
5	Housewife	Female	Poor	20	For husband's eye treatment in India
5	Daily labor	Female	Very Poor	4	To do husking in Munshiganj
5	Fishing	Male	Medium	168	For fishing and honey collection
5	Service	Male	Rich	13	For collection of exam paper from board.
5	Bawali	Male	Very Poor	30	Honey collection
6	Housewife	Female	Poor	90	Went to father's house to treatment her husband
6	Housewife	Female	Very Poor	15	Went to see relatives
6	Farming	Male	Above poverty	100	For cattle business
6	Farming	Male	Above poverty	96	For cattle business
6	Farming	Male	Medium	48	Sawing wood
6	Fishing	Male	Poor	30	
6	Daily labor	Male	Very poor	10	Visit relative's house
6	Daily labor	Male	Very Poor	50	Went to Chittagong for doing agriculture labor
6	Fishing	Male	Very Poor	120	Fishing
7	Daily labor	Female	Poor	30	To collect "Bon" (grass) for shrimp gher.
7	Daily labor	Male	Medium	15	Daily labor
7	Daily labor	Male	Very Poor	30	For transportation of goods
8	Industrial labor	Female	Medium	90	Arrange function at relatives house and take rest after accident

Annex C.8 Seasonal migrations

Annex C.9: Areas of investment

Annex C.9.1 Summery men and women

HH	Investment				
situation	Natural	Physical	Human	Social / Institutional	Financial
Very poor	 Plantation Homestead vegetation Land lease in Shift in land use Rented land 	 House repair Fodder/poultry feed Raw material for mat, net weaving <i>Poshani</i> goat and cow Furniture purchased Clothing 	 Medication cost Educational expenses 	 Samity membership Dowry/marriage expenses Court case expenses 	 Farming Savings Loan repay Fish drying <i>Gher</i> Fishing Small business
Poor	 Plantation Homestead vegetation Fish culture Land/ pond lease Pond re -excavation Rented land Land lease in Homestead gardening Plantation 	 Fodder purchase House repair/renovation <i>Poshani</i> cow and poultry purchase Raw material for mat, net weaving, block printing, sewing Agricultural equipments Repair of boat and net, tube well 	 Educational cost Medication fee Educational expenses Medication cost 	 Continue samity, club membership Marriage expenses Social network Marriage expenses Continuation of samity membership New samity membership Out migration 	 Weekly fee for samity membership Investment in shared cropping, fish farming Small business Marine fishing Loan repay Weekly deposit in groups, bank Continued DPS Business investment Farming e.g. shrimp, fish, agriculture, salt Court case expenses
Above	• Land lease in	 HH furniture Boat purchase House repair 	 Medication cost 	• Samity membership	 Land leased out Farming e.g. agri., fish
poverty	PlantationPond excavation	• Brought cattle	• Educational cost	 Social network Marriage expenses 	 Loan repay Business
Rich	 Land purchase and leased in Fish/shrimp culture 	 Cattle purchase House repair/extension/construction 	 Educational cost Medication cost 	 Political activity expenses Marriage expenses Samity membership 	 Business investment e. g salt, agri., fish Contractor Trade Gher

Annex C.9.2: Investments by men

HH			Investment		
situation	Natural	Physical	Human	Social / Institutional	Financial
Very poor	 Plantation Vegetation Land lease in Shift in land use Rented land 	 Bought van House repair / expansion Cattle purchase Livestock and poultry rearing 	 Medication cost Educational expenses 	 Samity membership Dowry/marriage expenses Court case expenses Informal institutional expenses, e.g., membership fee for shalish - bichar 	 Farming – salt and rice Loan repay Fish drying Fishing Small business
Poor	 Plantation Fish culture Land and pond lease in 	 House repair Net, boat repair Net purchase House maintenance Agricultural equipment for shared cropping 	 Educational cost Medication fee 	 Continue samity, red crescent and club membership Marriage expenses Social network 	 Loan repay Investment in shrimp gher, pottery, grocery shop, shared cropping, betel leaf business Small business, e.g., tea stall Rented rickshaw Marine fis hing Monthly installment for CBO Training expenses
Medium	 Land purchase Rented land Land lease in Homestead gardening Plantation Pond excavation Fish culture Kabla (Land registration fees) 	 House repair/renovation House maintenance House rent Cattle purchase Rented cow Agricultural equipments Repair and maintenance of boat, net and tube well HH furniture Boat purchase 	 Educational expenses Medication cost 	 Marriage expenses Out migration Court case expenses 	 Loan repay Business investment Small trading Farming e.g. shrimp, fish, rice, rabi, salt Court case expenses Land leased out Investment in wife's business
Above poverty	 Land lease in Plantation Pond excavation Fish culture 	 House repair / expansion / construction Brick built house Brought cattle 	 Medication cost Educational cost 	 CBO membership Informal institutional expenses, e.g., shalish - bichar Marriage expenses 	 Farming, e.g., salt, rice and shrimp Loan repay Business, e.g., cattle, contractor
Rich	 Land purchase and leased in Fish/shrimp culture 	 Cattle purchase House repair/extension/construction 	 Educational cost Medication cost 	 Political activity expenses Marriage expenses Group membership 	 Business investment e. g salt, agri., fish Contractor Bagda gher Trade

PDO-ICZM

Annex C.9.3: Investments by women

HH	Investment									
situation	tuation Natural Physical		Human		Social / Institutional		Financial			
Very poor	0 0	Plantation Block land and homestead vegetation	0 0 0 0 0 0 0 0 0 0 0	Minor house repair Fodder Poultry medicine Raw material for mat, net weaving <i>Poshani</i> goat and cow Poultry purchase Furn iture purchase Donga purchase Clothing Repair of common tube-well Don making for crab collection Net purchase	0 0	Medication cost Educational expenses	0 0 0	Samity membership Dowry/marriage expenses Court case expenses	0 0 0 0 0 0 0	Farming Weekly deposit in groups Monthly deposit in savings account Loan repay Fish drying <i>Gher</i> Fishing Small business
Poor	0 0 0	Homestead vegetation Pond re – excavation Release fish fry		House repair Shared cattle Raw material for net, mat weaving, handicrafts Fodder, poultry feed Agricultural equipment Livestock medicine	0	Educational cost Medication fee	0	Continue <i>samity</i> , club membership Marriage expenses Social network	0000	Weekly deposit in groups Investment in shared cropping, fish farming Betel leaf farming Puffed rice business
Medium	0000	Rented land Homestead gardening Plantation Release fish fry		Fodder purchase House repair <i>Poshani</i> cow Poultry purchase Raw material for mat, net weaving, block printing, sewing, handicrafts Agricultural equipments Tube-well repair Poultry medication	0	Educational expenses Medication cost	0 0 0	Marriage expenses Continuation of <i>samity</i> membership New <i>samity</i> membership Out migration	0000 0	Loan repay Weekly deposit in groups, bank Continued DPS Business investment, e.g., cosmetics Farming
Above poverty Rich	0 0 0	Land lease in Plantation Pond excavation	0	House repair Brought cattle	0	Medication cost Educational cost	0	<i>Samity</i> membership Marriage expenses	0	Farming e.g. rice, fish Loan repay

PDO-ICZM

ANNEX D: LIFE STORIES

Table of Contents

	Glossary of Terms	95
1.	STORY OF DOLA AND KRISHNA (ZONE 8: KHULNA-URBAN)	99
	1.1 Story of Dola Chatterjee	99
	1.2 Story of Krishna Chatterjee	100
2	STORY OF HARABALA AND SHARNADA (ZONE 3: COASTAL CHAR, NOAKHALI)	102
	2.1 Story of Harabala	102
	2.2 Story of Shanoda	103
3	STORY OF RABEYA AND NURUL HAQUE (ZONE 1: ISLAND, MOHESHKHALI)	104
	3.1 Story of Rabeya	104
	3.2 Story of Nurul Haque	105
4	STORY OF SABEKUN NAHAR AND SAMI UDDIN (ZONE 2: CHITTAGONG COAST, CHAKARIA)107
	4.1 Story of Sabekun Nahar	107
	4.2 Story of Sami Uddin	109
5	STORY OF SALEHA AND HABIBUR (ZONE 8: URBAN-CHITTAGONG)	111
	5.1 Story of Saleha	111
	5.2 Story of Habibur	112
6	STORY OF SAYERA AND ABU SAYED (ZONE 6: OLD LAND MEGHNA BASIN, LAKSHMIPUR).	113
	6.1 Story of Sayera	113
	6.2 Story of Abu Sayed	114
7	STORY OF HONUFA AND DULAL (ZONE 4: OLD LAND LOWER GANGES BASIN, KALAPARA)	115
	7.1 Story of Honufa	115
	7.2 Story of Dulal Gazi	116
8	KOHINUR: STORY OF A FEMALE-HEADED HOUSEHOLD	118
9	STORY OF SATTAR	119
10	NILIMA: STORY OF A FEMALE-HEADED HOUSEHOLD	121
11	STORY OF SUBHASH MANDAL	122

Glossary of Terms

Adorsha gram	Ideal village
Agrahayan	Bangla month from mid-November to mid-December
Akal	Famine
Allah	The God
Andolon	Movement
Ari	Weighing unit, $13 \text{ kg} = 1 \text{ Ari}$
Arotder	Stock provider
Ashar	Bangla month from mid-June to mid-July
Bagh	Tiger
Baishakh	Bangla month from mid-April to mid-May
Bandh	Embankment
Bari	House
Bawali	Wood cutter
Bhadra	Bangla month from mid-August to mid-September
Bheri	Dyke
Bhobishyat	Future
Bodli labor	Daily labor
Bodoilla	Day laborer
Boli	Wrestler
Bonna	Flood
Borka	Women's outfit, sort of veil
Bosot bari	Homestead
Chaitra	Bangla month from Mid-March to mid-April
Char	Newly accreted land from the river bed
Chhapra	Shanty
Chingri gher	Shrimp field
Dada	Paternal grand father
Dakter	Medical practitioner
Dal bhat	Pulses and rice
Dala	Low tide
Dalali	Commission
Daria	Sea
Dena	Loan
Den-mohor	Money paid to the bride by the bride-groom in a Muslim marriage
Dukhi	Ill-fated
Dumber mangsho	Meat of lamb
Gachira	Laborer engaged in felling trees and sawing wood

Gamchha	Sort of towel
Genjee	Banyan
Ghat	Jetty
Gher	Shrimp/fish field
Ghush	Bribe
Girostee	Agriculture
Gon	Full moon
Gram dakter	Village doctor
Guchcha gram	Clustered village
Jaistha	Bangla month from mid-May to mid-June
Jaladassu	Dacoit of river
Jamai	Son-in-law
Jati kam	Ascribed occupation
Jhar tufan	Storms
Jhara-fuka	
	Blessing from a religious man
Jogailla Kabin-nama	Helper of a mason
	The deed of marriage contract under Muslim law Unit of land
Kani Kartik	
Kartik	Bangla month from mid-October to mid-November
Katha	Unit of land
Khal	Canal
Khalu	Maternal aunt's husband
Khas land	Leased land
Khata kalam	Paper-pen
Khupri	Hut
Kismat	Fate
Kistee	Installment
Kiyamat	Judgment day
Kora	Unit of land
Krishi bank	Agriculture bank
Lakh	Hundred thousand Taka
Lobon chashi	Salt farmer
Lungi	Men's outfit
Madrassa	Religious school for Muslims
Magh	Bangla month from mid-February to mid-March
Mohajon	Money lender
Malik	Owner
Mama	Maternal uncle
Mastan	Muscleman

Mistree	Carpenter
Mond	Weighing unit, 1 mond=40 kg
Nana	Maternal grand father
Nanar bari	Maternal grand father's house
Noubahini	Navy
Nuner dalal	Broker of salt
Pahari dhal	Flash flood
Paribarik adalat	Family court
Poush	Bangla month from mid-December to mid-January
Puran bari	Old house
Quran	Holy book of the Muslims
Qurbani	Sacrifice of cattle
Rakto bomi	Vomiting blood
Raster manush	Urchin
Sagorika	Name of an NGO
Samity	Cooperative society, group
Saree	Women's outfit
Swadheen kaj	Free work
Shaheed	Martyr
Shalish	Traditional court for mediation
Shantrashi	Terrorist
Shishu and malaria	Eucalyptus
Shushilon	Name of an NGO
Shutki	Dry fish
Sravan	Bangla month from mid-July to mid-August
Sundar	Beautiful
Taka	Bangladesh currency
Takawala	Rich
Tika	Vaccination
Tufan	Cyclone
Van samity	Society of rickshaw van operators.
Zaminder	Land lord
Zoba	High tide

1. STORY OF DOLA AND KRISHNA (ZONE 8: KHULNA-URBAN)

1.1 Story of Dola Chatterjee

Dola Chatterjee is 30 years old. Krishna Chatterjee is her husband who is 45 years old. She was born in Bagerhat at the site of the *Bhairab River*. Dola is a daughter of a *Shaheed* (martyred) Freedom Fighter of 1971. At that time she was only one year old. But her family did not get any financial support from the government though the freedom fighters' families are supposed to get grant from the government. Many times they submitted application forms to concerned offices through the local UP chairman or Freedom Fighters association. But they never get any financial support. She thinks that they were allocated financial support from the government as her father's name was listed as freedom fighter. But the local authorities deprived them, as they were Hindu and they had no strong backup or guardian who could defend them.

Her father had no land except homestead that made her mother's life difficult to live alone. As her mother was a young widow who had to face many problems living in a village with two daughters. Dola's uncle was the only person who extended support for this family. But he could not take full responsibility, as he had no land. So he was acting mainly as guardian of the family to protect from outside adversity. As a result Dola had to struggle from childhood. But she was determined to be educated and she managed to pass SSC examination with the financial support from the neighbors and relatives. She started earning some money as a private tutor since she was a student of class-VI. Afterwards she could not continue her study due to financial crisis. Her mother was looking for a suitable man for her marriage. It was almost difficult to live in a village as a young Hindu girl due to unavoidable disturbance by the notorious boys and terrorists. The situation worsened when they lost their house due to cyclone and had to stay in the veranda of a neighbor's house. It happened few times when she was young but she could not remember the years. Their house was in a *char* land that was affected by cyclone and heavy rainfall.

Her mother was able to arrange her marriage. But she had to spend a lot of money, as she had to give dowry to comply with Hindu tradition. She had to take loan. She repaid the loan by selling part of her homestead. After marriage her daughter moved to her in-law's house, an extended family, which had no agriculture land except homestead. The life was not smooth but comparatively better as her husband is an educated man. He is HSC pass. By this time she had a boy and a girl that made her happy. Suddenly her parents-in-law died. Her brothers-in-law did not agree to stay together. They sold the homestead and migrated to West Bengal. It became almost impossible for them to live as a single family on a very small piece of land and no relatives. She believes that relatives are assets in a sense that they provide mental and financial support when needed.

Finally she and her husband had to move to Khulna city. They sold their piece of land to start some work or business. Unfortunately she got sick with severe blood dysentery along with diarrhea. They spent all their cash, as there was no source of income. After few days of her recovery, two children were affected by blood dysentery. In this situation she started working as private tutor. But it was not enough. Her students live in a slum where people cannot pay for their children's education due to poverty. Her husband got a job in a fisheries company. But he does not get salary regularly. Most of the time he is paid is partly. So they have to struggle. As a result they cannot provide their children with sufficient food, clothes and education. They don not have a house of their own and live in a rented house.

They do not have access to the drinking water. Her husband collects it from a long distance in the early morning. They do not have a sanitary latrine. They have fuel crisis almost year round.

She wants to get rid of this situation. But she does not see any prospect for a better life. She feels frustrated. Once she became member of a NGO and got a loan from them when she was in the village. She deposited 160 taka to a village level *samity* of ASA and applied for loan. But she did not get a loan due to the assumption of the NGO field staff that she might migrate to India. Even she did not get back her money that she had deposited. In the city, she tried to get a loan from the NGO. But she had a similar experience.

She Is Worried About Her Daughter's Security, As She Has Grown Up. She Often Faces Problems When She Walks In The Road In The Evening. Her Children Are The Main Assets In Her Life. If She And Her Husband Get Any Suitable Job Then They May Be Able To Improve Their Life Style. She Considers That Their Education Will Enhance Their Social Status.

She Cannot Provide Any Financial Support To The Poor Neighbors. But She Helps Them By Teaching Or Reading Their Prescriptions And Helping To Take Right Medicine. This Way She Tries To Do Some Social Work That Gives Her Satisfaction. She Thinks That A Proper Job Would Be The Best Option For Her Family Welfare.

1.2 Story of Krishna Chatterjee

Krishna Chatterjee is from Dharpur village of Rupsa upazila, Khulna. He came to Khulna city about 10 years back. First he stayed in a grocery shop for two years, where he worked. Then he moved into a slum in Master Para. He brought his family from the village and he is living at the present place for last eight years. He changed his residence three times during this period, because of increasing house rent. Some time he could not pay the house rent for two to three months. Then the house owner served him with a notice to vacate the house. So, Krishna had to look for another house. He is staying in the present house for last five years.

Krishna has one son and one daughter going to a primary school. His wife is a private house tutor and earns some income.

Education: I have studied up to Higher Secondary from a college adjacent to my village home. I have not tried seriously for a job. I worked with my other four brothers as daily laborer, because my father had no cropland. My father was also a day laborer, and my grand father too. Now, my age for entering a government job is over.

Land: My father had only *bosot bari* (homestead) with an area of five *katha*. My father and other brothers had sold that land and migrated to India. I did not join them.

I came to Khulna: I came to Khulna town to find a work to survive. I got work in a grocery shop. The shop owner permitted me to stay in the shop. So I had a place to sleep. I worked there for five years. In the mean time I brought my family from my in-law's house to Khulna. I hired a hut in Master Para. I had then one son and one daughter. My earning was 1000 taka per month, which was not enough.

I got a work in a fish-processing factory: I got a work, through a contractor, in a sea-fish processing factory in Lobonsora. I thought my new work would fetch a higher income, a regular income, a fulltime job and other job benefits. But it is a work on a daily basis: 'no work, no pay'. I go to work early morning and work till the evening. I work very hard, but wage is not enough. The contractor decides rate of payment. If he wants he may pay little higher or less. There is no work if there is not enough supply of fish to the factory. It depends on harvesting fish from the *Gher* (shrimp field). However, I can earn about 1300 taka per month. But, sometime there is no work. My work depends on the wish of the contractor. If he does not want me, I do not have work and income on that day. I go to work at 6 o' clock in the morning till 6 in the evening. Many days I work without lunch. I became very ill for that

reason. Some time I cannot go to work because of illness and I don't have any income for those days. Rather I have to spend money for medicine. Because I must be okay for going to work.

I need a job for regular income: I need at least 3000 taka per month to live – three meals a day just *dal bhat* (pulses and rice), rent of small house, clothes for my children. Look, my son came to this office only wearing a *genjee* (banyan), because he has only shirt, which is his school dress. I want to pay at least tuition fee for my children's schooling. If I would have a regular job that would give me regular income then I would have no problem – I could pay house rent regularly, I could go to doctor if I am ill, I could send my children to a good school. If I can earn 100 taka daily then I can manage all of these needs myself.

Medical treatment: If I am ill I cannot go to a doctor, because I have no money. Some time I buy medicine from the medicine shop by consulting them. Once I had very strong stomach pain. I went to a medicine shop after ten days, because I had no money. I suffered for 20 days. My wife was very ill. She had diarrhea. I went to medicine shop and bought medicine for my wife. I never went to any hospital. I do not know about government hospital's service system. But my wife went to hospital when our second child was born.

Outside help: I don't get any support from any office or anybody else. I do not have any person to help me in any crisis except a grocery shop from which I can buy food on credit. I do not find any organization to borrow money, because I do not have ability to pay back the money. Moreover I do not have anything valuable that I can sell to pay back the loan. But I wish the government will create such opportunity from which we would get financial support easily. Government can build 'colony' for the slum people like *guchchha gram* (clustered village). We can pay the price to the government by in installment. Even the government can make it free for us. This will be a great help for us.

Children's Education: My children are growing. I know I need to think about them. I will need more money as long as my children would be growing. But I have no ability to increase my income. I will have to look for better work. Only then I can think about that. But I am not sure about it. I wish my children would be well educated so that they can make their living better. I do not know whether girls' education is free up to college level. If it is free, I will send my daughter to a government school. My son was going to a pre-cadet school. But I have to pay 60 taka tuition fee, which is beyond my ability. So I stopped. Now he is going to another private school. I know education in government school is not good.

Experience of cyclone: I never experienced cyclone since I have been living in Khulna town. But I can remember about cyclone while I was in my village. Our house was flown away. We took shelter in other's house. If there is any storm or cyclone in future we will take shelter in a school building.

Savings and debt: I do not have any savings. It is not possible for me to save, because I do not have enough income. Rather I owe 600 taka to the grocery shop and I could not pay house for last four months – 500 taka per month. Every time I think, okay I will be able to pay the house rent full in the next month, but I could not manage it. If I would get chance to work 'over time' and work for more than 20 days then I will have some extra income. If my wife could earn extra from doing more 'tuition work' then we will be able to pay all these dues. If I fail to pay the dues to the house owner and the grocery shop, then they will not spare me.

2 STORY OF HARABALA AND SHARNADA (ZONE 3: COASTAL CHAR, NOAKHALI)

2.1 Story of Harabala

Harabala is wife of Shanoda Kumar Jaladas. She has a son and seven daughters. She already arranged marriage for her five daughters and the son. Two more daughters are still unmarried and dowry is a big problem for their marriage. As they lost her all lands and house by river erosion, now they live in a clustered village. CDSP has provided them a house with 8 decimal (0.08 acre) of land and a common pond for 30 families. The project also provided a common hand tube well for and one sanitary latrine for each family. Now they are in a better position. Before coming here they lived in a village where a benign person allowed them to stay in his land. She lost her parents when she was child. She lived with her maternal uncles. They arranged marriage for her and from then she started her new life dwelling with poverty. Though she worked for whole day while she was child staying with her uncles and aunts, she could not realize the realities of life at that time.

Her husband or son has no personal boat. So they have to rent a boat for fishing. Normally they go for fishing for a minimum of ten days. Her husband has became older. He does not go to the river/sea any more. Only her son goes. But it is not remunerative, though he continues it as a hereditary occupation. One of the main problems is *santrashi* (terrorist, pirate) who snatches fish or money from them. If they resist, their life become insecure. They have no other skill. So they have to do fishing. In the cluster village, young women are not secured either. So her husband has to stay at home all the time as they have two young daughters and one daughter-in-law. So he does some irregular work that is not enough for the family.

She is a member of a NGO named Shagarika. She has scope to take loan from them though it is with high interest. As a member of NGO she has some savings, which is very small compared to her need. She realized that the people in power keep all facilities for their own use, which are provided for poor by the government or the donor. They were hopeful to get some financial assistance from CDSP but they did not get any support yet. During and after flood they have many other problems like fuel, food, water and shelter. They have a link road but that stay waterlogged for the whole monsoon. They do not have any support from NGO or government agencies during or immediately after the flood.

Her husband and son have very limited income. She also works here and there for earth cutting. Most of the time her husband works with the women's group as leader for earth cutting. The *chingri gher* (shrimp farm) owner provides earthwork. The *Gher* also brings problem for them as it is located just behind their homestead and they have no drainage channel. So during monsoon they have problem. They also have problem with cyclone every year but they can go and stay in the cyclone shelter that is nearby and have adequate facilities for men and women. But they have to worry for their son who fishes in the river. Only God can save him.

She also works as a birth attendant and has lot of experience of solving complications of young mothers. There is no medical facility around. So she has to tackle the situation herself. Only few families can bring the patient to the town for better treatment. But from this work she cannot earn money as people consider it as a social work. She cannot even ask them to pay because she knows they are poor.

They cannot sleep at night, as they have to worry for their daughter and daughter-in-law. Any time a *santrashi* may come and attack them. Some incident already happened in other villages. During a religious festival, such incidents increase.

They have some vacant space at the front of their house where they can cultivate vegetables. They have fish in the pond. By selling fish they earn some money. But that is only once or twice a year. She expects everything from CDSP.

She was very happy for her interview because this is first time in her life that somebody heard her for a longer time and what she wanted to express her feelings. People from the NGO or CDSP come and stay for few minutes and do not want to listen to them. Every official seems very busy and has no time to hear from poor people. She wants to get some support from any other source and she requested to provide those directly, and not through the Chairman.

2.2 Story of Shanoda

Shanoda Kumar Jaladas is 60. Their Union Parishad Chairman rehabilitated him in this guchchha gram. Shanoda came to this *Guchchha Gram* along with other eight families of his kinship group. He got a plot of homestead, which was registered in his name, and a tin-roof house. He has seven daughters, five are married, two are school-going, one goes in class III and another in class II, and a son. Son has dropped out after class VI and now works with his father in fishing.

Shanoda never went to school because his father died when he was a young boy. His mother raised them with much hardship. They were two brothers and two sisters. His mother is still alive.

Living

There are six members in my family – my mother, wife, one son, two daughters and myself. If I catch fish from around – pond, neighboring river - then I can earn about 70-80 taka daily. We go to river for 7-10 ten days, 6-7 persons together including my son. I can earn 1000-1200 taka from each going. We share the catch. The boat owner gets one share for boat, one and a half shares for engine of the boat, one share for the fishing net and one share goes to each fisher. Fish is available during the months of *Baishakh, Joishtha and Ashar* (mid-April to mid-July). I have stopped going to the river since 4-5 years because I am now old. But my son goes to river. There is a big problem for the fishermen in the river. *Jaladassu* (dacoit of river) often attacks and robs everything from the fishers. I was robbed once. My son was victimized three times.

When there is less fish in the river, during *Kartik*, *Agrahayan*, *Poush* and *Magh* (mid-October to mid-February), we do not go to the river for fishing. In the past I bought fish from other fishers and sold it in the market. But it is no more possible for me to do it because so many *Muslims* are now in fish business. Their advantage is that they have food at home, as they are farmers as well. Fish business is their second source of income. We are the traditional fishers and we cannot stay in the competition. If we bargain for price of certain amount of fish, the new fishers come and buy it offering a higher price. The situation is the same in river fishing. Many farmers are there catching fish in the river. The farmers are doubly benefited from this project. They got land as farmer, and they are also fishing. If we were given land we would be benefited too. We could also grow crop as well as we could do fishing.

Other source of income

We grow vegetables at our homestead, which we consume. Some time we sell some. My wife has two ducks and six chickens. Some lay eggs from which we can also earn little income. There is a big pond in which we all the 30 families cultivate fish jointly and we share the income among these families. My son works in Chittagong for four months of the year and he sends 400-500 taka monthly. We make fishing net as per order from which we can earn 200-300 taka a month.

Asset

I have planted about 60/70 saplings in my homestead. If I sell these trees after ten years, I hope, I will be able to earn a good amount of money. I have been a member of *Samity* (male group) and my wife is

a member of another (women's group). We have saved 12000 taka. But this money is lying with *Shagarika* (a local NGO). We wanted to withdraw this money but *Shagarika* is not giving our money back. We do not know the reasons.

Experience of cyclone

In the cyclone of 1970 I lost my two years old son. My house was totally washed away. All of ten goats were killed. Nothing was left. We survived on government relief. I collected *khudi-khadi* (stick, bamboo pillar, etc) from around, from different persons and built a *khupri* (hut). Later, government helped us to build a house. There was no cyclone shelter at that time. But here, there is a cyclone shelter. If there is any cyclone warning, we go to the cyclone shelter. There is a *bheri* (dyke) protecting us from flooding. But, no one except God can say what will happen. If our house is washed away by the cyclonic surge, then we shall expect that the government shall help us to rebuild our house. If the government does not help then we shall make a shed any way, and we shall live in it. But we have a hope that we elected a UP Chairman who would help us if we are affected by the cyclone.

Liabilities

I have a *dena* (loan) of about 8000 taka. I borrowed 20000 taka from a *mohajan* (private moneylender) and 5000 from one of my *jamai* (son-in-law) for the marriage of one daughter. I have paid back 14000 taka to the *mohajan* and 3000 to *jamai*. I have bought foodstuff on credit from a shop. I am paying back these loans slowly.

Medical treatment

If we are ill then we buy medicine from a medicine shop. Some time we go to a *dakter* (medical practitioner). We pay him 30-40 taka and he gives us medicine. There is no government hospital in this area. If we are seriously then, we expect God to help. Otherwise we shall die.

Future

I have two more daughters for whom I have to arrange marriage. I shall have to borrow money for this. May be I shall be able to repay this loan. But I may not be able to leave anything for my son. I shall tell him, "my father left nothing for us. I am also leaving nothing for you". If we get some cropland from the government then we shall be able to grow crops for food.

3 STORY OF RABEYA AND NURUL HAQUE (ZONE 1: ISLAND, MOHESHKHALI)

3.1 Story of Rabeya

Rabeya Khatun is 50 years old. She had lost her first husband when she had two young sons. He was a marine fisher. She moved to her parents' house with two sons. Her parents had a big family. But her father was kind and her brothers were very nice to her. They were thinking about her future, as she was a young widow. They motivated her for second marriage. She had a condition that the person willing to marry her must accept her two sons. One of her brother's friends married her and adopted the sons as his own. He married three times before but had no children. He divorced them before he married Rabeya.

Though she considers her best time with her first husband, she is also happy with her second (present) husband. Specially, when she see that he is so kind with her sons. She also had given birth three more sons and then she noticed that her husband did some discrimination between her previous sons and the sons born here. As a mother she could not tolerate this behavior but she never showed any reaction.

She explained how they suffered by the cyclone of 1991 and how their house and all other assets were damaged. They took shelter in her parents' house, which was a better house. She could remember that

how strong the cyclone was. She blamed that they did not get any warning by the government or any other organization. So they could not move to a safer place in time and lost everything. She knew that many people died and she saw many dead bodies floating in the water. That was a biggest disaster she had ever experienced. She said, "we did not have a radio and we were not informed about signal (cautionary signal for cyclone warning). Still we do not have a radio or any other means to know weather forecast. Government should supply radio to the villagers. We have to go a long distance to see the flag, which is the only signal we can see about weather. I have to wear *borka* (women's outfit covering body and face) many times to go and see the flag, as other male members of the family leave in the early morning for work and return in the evening."

With assistance from the government they built a new house and returned from her parents' house after four months of the 1991 cyclone. Her eldest son took the main responsibility for all sorts of arrangements to start a new life. He was very thoughtful and took care of everything. He had a regular income and he always tried to make them happy by spending all his money. He became a marine fisher like his father. He was associated with a big group of 50 members with a big boat. They all worked for a *mohajan* (proprietor, owner of boat and gear) and stayed for a long period in the sea. It was a regular source of income for her family though her present husband has dry fish business from the beginning. He was involved in fish drying and selling *shutki* (dry fish) in the local market or to the *aratder* (wholesaler).

They arranged wedding for the eldest son and the bride was living with Rabeya. She had two grand sons with whom she spends good time. But such a state of happiness did not last long. Her eldest son was killed by a dacoit while he was in the sea for fishing. (She was crying for about 15 minutes when she narrated that tragic incident that happened about five years back). The dacoits killed four of them and then they phoned the boat owner to pay them four *lakh* (hundred thousand) taka as ransom for the boat. Rabeya did not see her son's dead body and that was her tragedy. They got only 5000 taka as compensation from the boat owner. They had to spend the money for the police as there was a case filed by the river police.

Rabeya says that she is a *dukhi* (distressed) woman. She also lost her fourth son (second one of present husband) who suffered from cold and fever for a long time and died due to poor treatment. She is upset because she thinks that if she could bring him to a good doctor he might survive. Due to poverty she lost all the best assets of her life. She explained that if she had money then her husband and the eldest son could do some business in the land instead of fishing in the sea.

Her other two sons are also marine fishers. So she is worried all the time. Her husband buys fish from the seaside and makes *shutki*. He is very skilled in this trade. But she does maximum work for dry fish processing. Actually she does everything except buying fish and selling *shutki*. She never gets the money or is never consulted how to spend the money.

She noticed that her husband has become reluctant for providing family expenditure. She suggested her son to be separate from them and have some savings for future. She repeatedly mentioned that her husband is not taking care of her any more. This is becoming intolerable for her.

3.2 Story of Nurul Haque

Nurul Haque Sowdagar (60) lives in Charpara Adarsha Gram in Moheshkhali Island. The government built this *Adarsha Gram* (ideal village) in 1993. Nurul Haque got a house with 30 decimal homestead land in this *Adarsha Gram* as a victim of 1991 cyclone.

His grandfather had land, boat and fishing net. He was a rich man. But after he died, Nurul's father and his two brothers were separated from each other and shared their parents' asset. Then Nurul's father settled with his in-laws.

PDO-ICZM

My family

My father (Kala Mia) died of paralysis at 52 years age. I had two mothers. My first mother died after giving birth of six children. Then my father married again. I am one of five children of my (second) mother. My *dada* (grand father, paternal) died at the age of 70, had two wives and they had four children. My *nana* (grand father, maternal) died at the age of 80, had three wives and eight children.

My second son, who was 18, died suddenly. Once at night, he complained that he had a stomach pain and he vomited for 2-3 times and collapsed. My eldest son never went to school, and my youngest son, who studied up to class III, goes to the sea for fishing. My eldest son is married for five months. His wife studied up to class V.

Living

Until I was married I did not do anything for earning an income, because my father took care of everything. My father lived in my *nanar bari* (my maternal grand parents' house). My *mama* (maternal uncle) was a rich man. They helped my father a lot. I got everything what I needed. I was married when I was 26. I started working after I was married. First, I started with fishing. But after a short period, I started doing fish business; buying fish from the fishers and supplying it to the mohajans in Cox's Bazar, Chiringa, Pekua Bazar, and in Chittagong. I was earning good income. Then I started doing *shutki* business, which I found more profitable and easier. I became almost a rich man. I could lend money to others. I could buy beef twice a week for a brief period, because I earned good income. But, I could not afford that any more, even for in a month, because of the tornado1997. I am no more in position to manage capital of ten-twenty thousand taka to do *shutki* business, which could provide me with a good income. If I could invest ten thousand taka then I could earn 1000-1200 taka in a week. What I am doing now is I buy *shutki* from the *mohajan* paying partly, or on credit.

I never have done any other work for earning, because I know only one trade, *shutki* business. *Bhadra* (mid-August to mid-September) through *Chaitra* (mid-March to mid-April) is the best season for *shutki* business. Rest four months of the year is dull. Still I do it in a small way, being home based.

I need to manage three kg of rice for two meals a day for my five-members family. I have to buy four *sarees* (women's outfit) each year for my wife. My daughter-in-law also needs the same. We need three *Lungi* (men's outfit) for each of my two sons and myself, then at least two *gamchha* (sort of towel) and a pair of shirts for each of the three male members in the family. I have to buy everything except water. I bought a tube well and one latrine. I felt strongly that I must have a latrine at home for my wife. We may go to seashore or here and there. But it is not possible for my wife.

My two sons go to the sea as laborer in other's fishing boat. They go to river in the early morning and return at noontime. My eldest son earns 20 taka and the youngest one earns ten taka daily for this work. I do not want my sons to go to the sea. *Daria* (sea) is very dangerous, dacoit, *tufan* (storm). I have a plan to start a grocery shop in which my sons will be working. My plan is to start this business in next 2-3 months. I think this is possible for me. I shall be able to buy goods from the *mohajan* on credit. I have good relationship with the *mohajans*.

Cyclone 1991

My house was totally damaged by the cyclone of 1991. More than 100 trees, 102 chicken and 10 goats were killed. We took shelter in upazila office. We stayed there for one night. When we came back home, there was nothing left. We then made a small shed using polythene sheet. We lived on *relief*: rice, *pulses*, potato, etc., for five days.

I rebuilt my house collecting bamboo and other materials from different sources. I borrowed some money from a rich man who was very kind. I started my *shutki* business again with the help of a *mohajan*. I could buy fish on credit, paying half or a little portion, and paying the rest amount after

selling the *shutki*. Gradually, I could recover from the loss that I suffered in the cyclone. Again I became almost rich.

Tornado 1997

I had a stock of *shutki*, worth 200,000 taka, in which a *mohajan* invested 56,000 taka. The rest I borrowed. The Tornado of 1997 ruined the total stock. I became almost a mad, because of this heavy loss. My house was blown away, and I got nothing of my house back. Our life was saved, because we took shelter in upazila office. The Red Crescent Society made us aware about the cyclone signal. If it is *signal five*, the Red Crescent hoists the flag and they also make *miking* (announcement using loudspeakers). Their staff visits house to house and asks the people to go to the cyclone shelter and other safe places. People go to cyclone shelter and to upazila buildings. We take our family members, cattle and chicken to safe places. We keep valuable things under ground. If there is foodstuff at home we take it with us when we go to a safe place.

The tornado of 1997 made me a poorest man again. I had to rebuild my house with help from *mohajan* and relatives. Again I have started again my *shutki* business. Until now I have not been able to recover from the loss.

But, I paid back *mohajan's* loan, and all other loans. I worked very hard to repay all my loans. Now I am very happy. But I cannot forget the loss; two *lakh* taka.

If I had a strong house, my stock of *shutki* might have been saved. Or if there were a storage, a small warehouse in the market, I could store my *shutki*. Government can build warehouse in the market place, which will be of great help for *Shutki* traders.

Medical treatment

We go to the government hospital but we are to pay the doctor, 40 taka each time. He writes only prescription. He never gives medicine. If I say, "I am poor, I do not have money or I have only 15 taka," then he says, "take a part of the prescription, buy only that part of the prescribed medicines, and die." I do not understand why the people do not protest this. Because, the doctors are paid by the government. But this doctor is taking money from us.

Once my wife was very ill. I took her to Cox's Bazar for treatment. She is fine now.

Government help

Goriber jonne kono sarker nai (there is no Government for the poor). If the MP allocates wheat for us, his local leaders just eat it; they never give it to us. There is a pond for common use, but it is not deep. Water is already polluted. Government can excavate it deeper where we can cultivate fish collectively. We could use the pond water for bathing. We demanded for the re-excavation but until now nothing happened.

We wish the government shall build another cyclone shelter in our area, which is very essential. Government must build one warehouse in our market so that we can store *shutki*.

4 STORY OF SABEKUN NAHAR AND SAMI UDDIN (ZONE 2: CHITTAGONG COAST, CHAKARIA)

4.1 Story of Sabekun Nahar

Sabekun Nahar is about 50 years old. She had experienced natural disaster several times. The cyclone of 1991 was very hard-hitting. She said, "there was no warning by the government or any other agencies. So we had no idea what was happening. We were doing regular work and suddenly the

weather became bad and we tried to contact neighbors. But everybody was busy to save their assets. My husband was in the mosque and I could not understand what to do. I saw water entering my house and all the chicken, goats, cows going away. I just thought of protecting my children. My husband came back and brought us in a safer place. After few days when water receded, we came back home and saw that there was no tree, no house. We saw some damaged things and those were cracked in a way that we could not use them any more. It was difficult to survive though we got some housing assistance from the government. We have cyclone every year and severe cyclone and flood every 3-4 or 5-6 years. I consider the second most severe cyclone that hit in 1997."

She has three sons and three daughters. All of them are grown up now. Their main source of income is salt farming. They start the salt farming in Agrahavan (mid-November to mid-December) and that continues for about five months. "Salt farming is very profitable," she said. "Total cycle for salt farming is five months, while we can harvest salt only for three months. We take loan from *mohajan* for the expenses and we repay in April. We do not store salt, as we have no facilities. We sell salt every week. At the end of the season we can repay the *mohajan* and in average we get about 4000 taka as profit. We lease in some land to cultivate rice. We are many in the family. So my husband has to work as a day laborer. But he never allows me to do work as laborer. I am always busy for housework and children. Though we are not rich but we have a social status. As a Muslim woman, we cannot go out even with borka. So my husband (until my sons grew up) was the only earning member of the family. As a result we had problems for providing sufficient food for all. We give priority for rice and vegetables or shutki. We do not buy meat or fish as we are poor. My husband goes to the hill for cutting bamboo to sell and earn money for family. Once he had malaria from the hills. He felt bad and we tried to do some treatment locally. But he became seriously ill and I brought him to the hospital, and the doctor noticed that my husband was a patient of tetanus. They told us that if we were one hour late then he might have died."

My parents had many children. So we are not brought up in a wealthy environment. My father was died before my wedding. My relatives considered me an adult and became serious to arrange my wedding within forty days of my father's death. There is a belief that if older people in the family die then within one year no marriage or such type of festival can take place. If it is essential then it has to be within forty days. So my maternal uncle decided to arrange my wedding with his son, as there was no other suitable proposal. Suddenly my paternal uncle decided to arrange my wedding with his son and finally it was arranged. So I did not get sufficient ornaments from the groom's side, as they are my relatives. There was no dowry system at that time; so we did not pay them either. I did not need to move from my parents' house as they were living in the same *bari* (homestead). During my childhood I had no scope to go to the school, as it was considered bad for *Muslim* girls. So I went to a *maktab* (religious school) to learn religious norms and to read *Quran*. Now I see that those who go to schools have more status. In our case, it was the opposite.

I do not know how to read and write. But I learned to put signature. I am a member of SPRAV (a NGO) and I have 1500taka savings. I took loan from the NGO thrice. Once I bought a sewing machine for my son and he now works as a tailor. Next time I used the loan for salt farming. Recently I used the loan for rice cultivation. My husband spends money for all purposes and I never spend cash for myself. But my husband always discusses with me and he tells me in details how he spends money. He always consults with me about how to spend money or what to do for future. We have a tube well; so we have no problem for water. We also have a sanitary latrine though it is far away from the house and I have difficulties to use it at night.

We are living in an area where we have many problems like cyclone, flood and lack of regular work. But we like the area very much. The weather is good, people are friendly, neighbors and relatives are sincere, and it is our own home. Many people left the area after the cyclone of 1991. They went to the hills and to the town. We do not want to move.

I do not think about my future, because I believe that my sons will look after my husband and me. We are not bad people and we did not do injustice to them; so they will not forget us. They must take all responsibilities of us when we become old. I enjoyed the discussion with you. Many people do not want to hear us. I have no hurry and you did not hamper my work. My daughter-in-laws do all the house works.

4.2 Story of Sami Uddin

Maulovi Sami Uddin (55) is from Purba Manik Para of Darbeshkata village of Chakaria. His father was a famous *boli* (wrestler). Sami Uddin studied up to grade 4 in *Madrassa*. He married when he was 18. His wife, Sabekun, was also 18.

Their first daughter was born after four years. After two and a half years, a son was born. Then a twin (girl) was born but died after three days. After this, two more sons and two daughters were born. So, Sami Uddin has now three daughters and three sons.

Eldest son works in a Garments factory in Chittagong. He has a family of two children his wife. They live in his village home. He sends money to his parents. Sami Uddin's second son is a tailor in Chiringa Bazar. He lives in Chakaria with his family of two children and wife. He does not send any money to his parents. The third son, studied up to class VIII, works in a garments factory in Chittagong. He gives 500 taka to his parents per month.

Sami Uddin's youngest daughters are going to school, one is in class VII and one is in class V.

Sami Uddin has built his house on plot of 15 Kora, which he inherited. This is his only land property.

Living

I need two kg of rice daily for my family. I am to spend at least 1200 taka a year for clothing for the family members. I am a *lobon chashi* (salt farmer), but I have no land of my own. I take land from the *zaminder* (land lord) through a *dalal* (broker) for salt farming. The conditions of getting land from *zaminder* are: (i) I have to give 4000 taka or 100 *mond* (about 4000 kg) salt to the *zaminder* per *Kani* (0.40 acre), and (ii) 20-30 taka *dalali* (commission) per *mond* to the broker. The rest amount of the harvest is mine.

It takes five months to process salt. *Poush* (mid-December to mid-January) to *Baishakh* (mid-April to mid-May) is the salt season. It needs one permanent laborer per *kani* for the whole period. I have to pay 100 taka per day to one laborer. I can produce 100-120 *monds* salt per *kani*. I have to first give the salt to the *zaminder* as per condition. Then I sell the salt in the market at 80 taka per *mond*, the black salt, and the white salt at 120 taka. I can manage 3-5 *kani* a season for salt farming.

Paddy cultivation

I can manage 3-4 *kani* a season to cultivate paddy on a sharecropping basis. I take cropland from the *zaminder* for which I have to give 30 *ari* (one ari=3 kg) paddy to the *zaminder* per *kani* per season. Or I can take cropland on *lagiat* (contract), paying 2000 taka per *kani* in advance for one season. I have to borrow money from the local moneylender for cultivation. If I borrow 100 taka, I have to refund this loan in paddy, three *ari* for 100 taka. I can manage three months' subsistence with the income from paddy cultivation on sharecropping.

Day labor

Some times I can sell labor for earth work, transplanting and harvesting on a daily basis, in my village and in neighboring areas and I can earn 100 taka a day. During the month of *Ashar*, *Sravan* and *Bhadra* (mid-June to mid-September) I go to Patia, Anowara and Satkania together with a group of laborers from our area to work in transplantation and harvesting. We go for 10-15 days. I can earn 100 taka a day from this work. The employer gives us three meals and a place to sleep. I manage food for the family for this period from the savings from earlier income or I borrow money, which I refund after I return from the work.

Experience of cyclone

I had three cows, two goats and twenty chickens, which were killed in the Cyclone of 1991. Ten shishu and malaria (eucalyptus) trees died in the cyclone. The coconut trees do not produce enough coconut anymore. My house was washed away. However, I have built my house again with mud wall and roof with paddy straw.

CARE gave us blanket, rice, lentil, cooking oil and wheat for two months. I worked in the reconstruction work of the *Moheshkhali Bundh* (Moheshkhali Dyke) for a period of one year after the cyclone. All together I earned about 15 thousand taka, which was enough to maintain my family for that period.

We took shelter in neighbor's house, which was a two-storied building with RCC pillar and bamboo wall. Many other people took shelter in that house from the neighborhood.

There was a *pahari dhal* (flood caused by hill stream) in our area one week ago, which damaged my latrine.

If cyclone occurs again

If cyclone occurs again, *Allah bnachabe* (God will save us). NGO and government must help us. Otherwise there will be *kiamat*, (doomsday) and we all will die. But if there is scope we will try to survive. We will take shelter in the neighboring buildings; houses were built by the SARPV. We will not go to the cyclone shelter that is located in one and a half kilometer far from our village. Number of thieves and dacoits has increased in our area. They give 1-2 kg rice or wheat, but they abuse our women, girls. There is no toilet in the cyclone shelter. *Jaigai no kulai* (very small space) in the cyclone shelter. If we do not listen to the crooks and do not please them, then we do not have any place there.

Medical treatment

I do not go to the doctor, because I have no money. Once I had *dhonustonker* (tetanus). My eldest brother, who is a *nooner dalal* (broker of salt field), took me to a doctor for treatment. If it was one hour late, I would have died. Once my eldest son was suffering from skin disease. I took him to the *khristan haspatal* (Christian hospital) following the advice of other people.

Help from outside

- The government should build more of cyclone shelters in our area.
- Government should install more deep tube wells.
- If there is a source then I shall borrow money to buy land.

5 STORY OF SALEHA AND HABIBUR (ZONE 8: URBAN-CHITTAGONG)

5.1 Story of Saleha

Saleha Khatun is about 32 years old. She is from Sitakunda and now lives in Chittagong city. She is a day laborer and works in a factory. She has to work in shifts and now her turn is night shift. There is no problem to work at night, as her husband is also a labor of the same factory. So he understands her situation. All other neighbors also know that she works in a factory. So she does not face any problem for that. The factory owner prefers to employ female workers as they work sincerely and can be paid less. They never go for strike and are not involved in any political work. It is also easy to recruit They can be hired and fired any time.

I was the only earning member in my parents' family as I was their eldest child. I used to go to the hill to cut wood and sell in the market. I got married when I was 16, with a rich fisherman. But I noticed that he wants to marry again and again. He had his first wife with many children. I also had a son. Though I was his wife but I had to stay with my parents and I had to work for them. He was reluctant to provide expenses for me and my son. I was upset with him. So I wanted divorce and filed a case against him in the *paribarik adalat* (family court). He went to a local leader who arranged a *shalish* (mediation) in the village. The verdict was that I would get 20,000 taka as *denmohor* (emolument), though an amount of 60000 taka was written in the *kabinnama* (contract document for marriage). I sacrificed the money in order to have my son. Because he gave me the condition that "if you want son I will pay you only 20000, and if you want all the money then you will not get son." So I have a feeling that I bought my son from him at 40,000 taka. I also put a condition that he would never come to claim my son and he agreed. My son is 12 years old and he (former husband) never came to see him (son). I used the money to arrange wedding for my two sisters. I also spent some money for my son and brother as well.

I am married again. But my present husband also has a wife and some children. But they live in their village home and I live with my husband in a rented house close to the factory we work. My son, named Liton, lives with my parents. He goes to a NGO school. I do not want any more child. I want to take care of my son and my husband wants to take care of his children. We share the family expenditure and I send some money for my son and parents. He spends most of his income for his first wife and children. We have no problem for this as we agreed earlier for this arrangement.

I am not willing to continue schooling of my son after this year. Now he can read and count numbers. I shall enroll him in a mechanical workshop where he can learn automobile repair. He can earn money from it and he can even take care of me when needed. But if I send him to high school what he can do after passing? Many MSC passed people are unemployed and no opportunity is available for them. So why should I take risk?

The 1991 cyclone was disastrous. We lost everything. Then I, as the only earning member, had to manage regular food for everybody. We got some assistance from government for housing. I have heard that many people died but we did not lose any close relative. I had an accident in the factory. My *saree* was caught in the machine. Suddenly I felt pain at my neck. It was a serious injury and I had to stay in hospital for two weeks. Company gave some money, but not in full amount. Because I was not on duty. I started one hour earlier than my shift starts. I wanted to do more work, but company never see the point.

I am not a member of the NGO. But I took loan from a NGO where my sister is a member. I took 5000 taka and I already repaid much of it. I am not member because NGO wants weekly savings. I get monthly wages. As we are not solvent we cannot keep cash in hand for giving *kistee* (loan repayment in installment). I do not like to be a member of NGO *samity* because I do not want to deposit my savings

to them. If I can save money I can keep it with me for my emergency. I will not get it from NGO during my need.

We have to pay rent for the house. We have to buy food, clothes, and spend for children's education. I have to send money to my parents. Last few months I did not send money, because my two brothers are now grown up and started earning. So they must take the responsibility of their own family.

5.2 Story of Habibur

Habibur Rahman (40) lives in a small house of 10x13 feet, paying 400 taka monthly rent, in Chhafia Colony, Chittagong. He came to Chittagong city from his village 19 years back for employment. Habibur Rahman studied up to primary school. He inherited three *katha* homestead.

Asset

My grandfather had a large amount of land. He died when my father was only six years old. Then my grandmother married again. *Zaminder* occupied maximum land of my grand father. Brothers of my grand mother occupied some lands. Still my father had some lands but those were acquired by the government from which my father got very little compensation. He ultimately became landless.

Living

I need at least 100 taka per day for food for my family. I have to spend 500 taka for children's private tuition fees and another 200 taka for *khata-kolom* (paper and pen) per month. I earn 4000 taka per month. I am a permanent employee in a textile mill. If the government pay scale would have been implemented in our mill, my monthly salary would have been higher than this. The Union has been trying to negotiate with the owners, through *andolan* (movement) but they are not yet successful. The Union leaders are working against the laborers, because they are getting salary as per the government pay scale. There are 1100 permanent and 600 casual laborers in this mill. My wife is a casual laborer in this mill. She earns 1500-2000 taka a month. I get bonus twice a year, each time 2500 taka.

Court case

Though we are poor we are living a peaceful life. We thee brothers were in a joint family. We worked collectively for growing crops in our father's land and on sharecropping system. But at certain point the government had acquired our land. Then got separated. After this, my uncle started giving us serious trouble to occupy our homestead. He filed three false cases against my two brothers and me, one after another. Last year, following the advice of our lawyer, my wife sued my uncle. Then he was in trouble. He went to our union Chairman and negotiated with us through the Chairman and some lawyers last month. We had to spend two and a half *lakh* taka all together for these court cases. We three brothers shared the expenses.

We had some savings, which was raised for our younger sister's marriage. But we spent it for the court cases. We had to sell almost all the trees to manage money for the court cases. I had to spend money from my salary too. It was terrible for me.

Medical treatment

Few years' back my wife had an accident while she was working in the mill. She had a serious injury. She was in a government hospital for 20 days. Then she came back home but she was under special treatment. Her contractor had borne some expenses. I had to spend 4000-5000 taka for her treatment.

Normally, if any one of us is ill, we go to a private doctor. Because, if we go to government hospital we are to pay *ghush* to the hospital doctor and he just writes a slip (prescription). We are to buy the medicine. It is rather better to go to a private doctor.

PDO-ICZM

Experience of cyclone

Cyclone of 1991 had damaged my village house totally, but no one died in the family. Our homestead is little bit high and it was not inundated. I had to spend 20000 taka to repair the house. I took 7500 taka loan from my *malik* (employer). I managed the rest by selling trees.

I received relief from *Union Parishad* twice, 5 kg rice and one *saree* each time. I heard that some people received tin (C.I. sheet) as relief paying 500-1000 taka *ghush*. But I shall not pay *ghush*.

I repaid the office loan by monthly installment. I paid 500 taka every month. I started working in this factory 20 years back. Then my wage was 2700 taka. I could also earn 400-500 taka per month working overtime. But the *malik* stopped overtime system and introduced *bodli labor* (casual labor) system to get workers at a cheaper rate. *Malik* has not yet implemented the government pay scale in our mill. He says, "This is a private mill." Despite agitation by the union, nothing happened.

Flood preparedness

Floods come in this area with *pahari dhal*. If there is heavy rain, then *pahari dhal* overflows. It inundates croplands and sometimes houses. Cyclone surge does not hit this area. Even then, we go to cyclone shelter following the signals.

Benefits after retirement

The problem is that the *malik* pays retirement benefits in installment, 5000 taka monthly. But our demand is that he must pay it at a time so that we can invest this money in business. Union is trying to negotiate with the *malik*. My plan is to start a grocery shop from which I can earn 200 taka daily. I shall also engage my son in this business. Working in textile mill has a health risk. I am planning to go on retirement, but I am looking forward to see a good result of the union's negotiation with the *malik*. After retirement, I shall get *provident fund* and *gratuity*. My plan is to invest this money in business.

6 STORY OF SAYERA AND ABU SAYED (ZONE 6: OLD LAND MEGHNA BASIN, LAKSHMIPUR)

6.1 Story of Sayera

Sayera Banu is about 50 years old. She has four sons and one daughter. She said "I have sent my sons to the school and my oldest son studied up to SSC, but failed to pass the exam. We could not spend money to arrange jobs for them. So they are unemployed. There is a saying: An old man can marry a young girl if he has money. *Allah* has all the resource and He can give it to somebody or nothing to someone.

My husband is the only earning member and it is difficult for him to manage everything for the family. So we are always in deficit. My husband has no regular work. So we do not have any regular income. We have no good house. But we stay here because I have no cash to repair it. Should I steal money to repair this house? No I should not do that. So I have to live here. I have no quarrel here with anybody. I now pray to God to keep my children well. My dream is that when they will be adult and have income I shall arrange wedding for them.

When I was with my husband's extended family I was tortured by his sister and parents, and even by him. He never gave me any money and nor care for children's extra need. I was totally ignored by him and he never discussed anything with me regarding family or his income. We had to live in a poor house and that was very small. After having a long struggle he finally bought a piece of land from his uncle which is far away from the previous house and that was not a residential area. So I was worried. But I agreed to live there to get rid of their torture and to arrange better facilities for the children. We

were able to build a house and from then we live in our own house. But the land has not been registered yet.

One of my sons is learning tailoring work in Dhaka. He cannot send money yet but he will do when he will have regular earning. I have no gold ornament. I never get anything good for me since I was born. I had to sell my inherited land to arrange marriage for my daughter. We gave 4000 taka as dowry in addition to all other things. She now has four children. But she is not happy. Her husband married again because she is dark and he wants a *sundar* (beautiful, fair complexion) bride.

We have borrowed13000 taka from *Krishi Bank*. During flood, our house was inundated and there was no work. So my husband had to take loan. We actually survived with this money immediately after flood. We did not get any support from the government or any other agency. I am not a member of any NGO. So I could not take loan. But my husband did it for us. We also had to take loan from *mohajan*. I have some chickens and ducks from which we get eggs and meat for family consumption and guest entertainment. I have to keep those mainly for my son-in-law. But I cannot keep poultry because of wild birds and animals.

I was happy when I was young. At that time I had no tension. But after marriage I have never been happy due to poverty. I lost my ten years old daughter who died about 12 years ago. She was sick for about fifteen days. She had fever and *rokto bomi* (vomiting blood). We could not bring her to doctor or buy medicine for her.

I have never been involved with any *samity*. If I become a member of any Samity I have to deposit money every week. But where from I will get money? I am afraid of *kistee* (repayment in installment). So I never take any loan from any *samity*. If I need any money I take it from my sister-in-law (wife of husband's brother). She helps. When my sons will get job, I will be in a better position and I am waiting for that.

6.2 Story of Abu Sayed

Abu Sayed was born in 1948. His grandfather was a landlord but he had lost his land by river erosion. Abu Sayed's father was landless. Abu Sayed has three brothers and four sisters. He learned special skill of tree plantation.

Living

I have no cropland but I grow paddy as a sharecropper. I can manage food for three-four months of a year from this income. I work as a *bodoilla* (day laborer) from which I can earn 50-60 taka a day. But this work is very seasonal.

Some time I go to other places to work as *mistree* (mason) for some days and then I can bring 500-1000 taka. Some time I work as *gachhira* (dressing coconut trees) from which I can also earn some money. In fact I have no regular work. But I must do something to earn an income. Otherwise I have to starve.

Children

I have three sons and one daughter. Eldest son is about 25 years. He studied up to class X. Once he went to Dhaka and worked as *jogailla* (helper of a mason). He became ill and came back home. He is reluctant to work as a day laborer, because *shikhito hoia bodoilla deete shorom lagey* (feels shy to work as a day laborer, as he is educated). I have spent 3500 taka for his medical treatment. Some time he feels fine, sometimes he is sick again. He is sick for last three years.

Second son is going to high school in class IX. Third son is having a training in tailoring in Dhaka.

Daughter is the eldest and she was married about 14 years back. I had to pay 5000-6000 taka dowry for her. I had to spend 12000 taka for her marriage, which I managed selling six decimal land for 6000 taka and also borrowed from *mohajan* and the neighbors.

But in our time there was no dowry system.

Loan

I have a loan of 13000 taka with bank and another 1200 taka with some individuals. I had less *dena* (loan) before, but it increased after 1998 flood. Crops in my land were totally damaged by the flood. Following year, there was draught. We have to depend on rain for irrigation. Rainfall depends on *Allahr huqum* (order of God). We have nothing to do. I have a small pond in which I put some fish fry spending 600 taka. But I do not see any fish in my pond now.

My house was also totally damaged by the flood of 1998. I had to spend a good amount of money to rebuild my house, which was also a reason of increasing my debt.

Two years back, I had to spend 6000-7000 taka for making official records for my homestead. I managed some money selling threes.

Drinking water

I have installed a tube well in my house. I bought it for 1600 taka on credit, but I have paid it back already. There is a latrine in my house. I do not have money to buy ring and slab.

Medical treatment

I was seriously ill ten years ago. I was in bed for six months. I took medicine from one doctor, then another doctor and so on. I also took *jhara-fuka* (blessing from. a religious man). I was cured. My father and daughter helped me for my medical treatment.

I never went to a hospital, because I am a poor man.

Future

I wish I will be able to buy cropland and then I will be able to do *girostee* (farming). I am a son of a farmer. How come I do not do *girostee*?

I have also plan to buy cattle.

Government should set up mills and factories in our area to create jobs for our children.

7 STORY OF HONUFA AND DULAL (ZONE 4: OLD LAND LOWER GANGES BASIN, KALAPARA)

7.1 Story of Honufa

Honufa is only 17 years old. She had an early marriage. Her husband is now 25 years old and he is a fisher. When he goes to catch fish, he normally stays 15 days to 3 months period in the river/sea. He comes for a period of 10 to 15 days and lives with family. She feels relieved when her husband returns from fishing.

Honufa is a member of *Grameen Bank*. She takes loan every year, which she spends mainly for buying fishing net.

The house was damaged by flood last year. Since then they are staying under a roof without any wall. They could not rebuild their house due to lack of money.

She collects drinking water from her neighbor's tube-well. She uses water from a small pond or the river for all other works. She bought and installed a sanitary latrine, which is used by the adults only. She does not feel that children should use it. They have no link road to go out from home. So it becomes a severe problem during floods. They have to walk through a neighbor's courtyard. They are to stay at home as prisoner of water. Children sleep on their laps. They do not get any support from any agency during or after flood.

Honufa is young. But she already realized that life is not easy. She studied up to class five. Her father was the only earning member in their family. He was a worker in the local ferry *ghat* (jetty). So they always lived in poverty. As they have no son except three daughters, her parents were very much worried about their marriage. So her parents arranged her wedding while she was only 12. They to paid 4000 taka as dowry while 5000 taka was spent for her elder sister.

Honufa gave birth her first child when she was only 13 and a second child when she was 16. After the birth of second child she became blind. Doctor said that due to lack of vitamins, some other complications and possibly early marriage might be the reason for blindness. Her husband was not home at that time. But he got the message and returned immediately. He took her to a hospital. He had to take loan for her medical treatment. She is very happy with her husband for this, as she got back her eyesight due to proper treatment. She is now convinced that early marriage may lead to complications and she will not allow it for her daughter.

Hanufa's father-in-law has two wives and his first wife's son is her husband. He stays with his second wife and her children while Honufa has to take care of her mother-in-law. Her mother-in-law works as maidservant of a reach family in the village. She stays with Honufa at night while her husband goes for fishing and takes only one meal with them. Honufa cooks only at noontime and keeps some food for the evening and the following morning. They normally have rice with fish or vegetables or even rice with salt only. "We cannot buy meat and we never received *dumber mangsha* (*Saudi* mutton distributed among the poor as a dole. Government officials and leaders share it among themselves. The poor never gets it." So they have meat occasionally. When they go to her parent's house, her mother buys some meat for her husband and children. But Honufa knows that her mother has to borrow money for this. She does it happily as this custom to entertain the son-in-law and the grand children with good food. One more time they eat meat when her mother-in-law brings some meat on the day of *Qurbani* (*Eid* day when cattle is slaughtered).

If freed from poverty, Honufa will not allow her mother-in-law to work as a maidservant. She will provide her food and all other necessary things, so that she (mother-in-law) can spend her time praying and playing with her grand children.

7.2 Story of Dulal Gazi

When father got married for third time then I was 18. Now I am 28. My mother was not allowed to sleep inside the room. My father stayed inside the room with his second wife. I had to sleep outside, whether it was raining or not. I shall never forget this torture that my mother and I suffered. I found no alternative of getting separated from my father. My mother was with me and she is still with me. My father gave me 2000 taka at the time of separation. With this money I bought a fishing net. I am married and I have a son and a daughter.

I never studied in a school because my father had no money. Two years back, my house was damaged totally by the flood. Until now I could not rebuild it. I am still living under this broken shed. UP member came to see my house after flood but I did not receive any help from them.

Living

When I was very young, 2-3 years after separation from my father, life was very difficult. I could not go to the river for fishing during *jhor-tufan* (storms), because I was scared. So I had no income and we starved. Some times my mother borrowed rice from the neighbors. But now a days, I do not care about storms. I must earn to feed my family. I have to take risk. It is better to die than to live in poverty. God will take care of the children.

Some times I pulled rickshaw, but I could not continue it. Because, it is a very hard work. I also work as day laborer in road construction from which I can earn 50 taka a day and from rickshaw driving 60-70 taka a day. We are not allowed to catch fish in the river for three months, April to June. This is a Government law. If anybody fishes during this period, police will take away his fishing net. But some do fishing during this time, because they have other ways. If you pay 50 taka to police, you have no problem

I have a boat of my own, which I have made investing 5000 taka that my wife borrowed from *Grameen Bank*. This loan has not yet repaid fully.

I like fishing than any other work because fishing is my *jati kam* (family/caste occupation). I know fishing and income is good. For example, if I work as a construction worker, my *mojuri* (wage) is fixed at 80 taka, but the *sarder* (labor broker/chief mason) will pay me only 60 taka. If I pull rickshaw, the passenger will pay me three taka instead of five. So, *gorib manush* (poor) never gets a fair wage. Fishing it is my *swadheen kaj* (free work)).

Flood

If the river water rises then our house gets inundated. If flood and storm come together, then houses collapse. If it is cyclone then everything is washed away. Since our house is on the riverbank, outside the *bundh* (dyke), it can be inundated any time. Nobody helps us during floods. Maybe, the government allocates relief for us, but *netara khaiya halai* (the leaders appropriate it). We do not look forward to get relief, because it will never reach the poor.

Hospital

Hospital is not for the poor, but for the *takawala* (rich). One day I went to hospital with a sick relative. We were asked to stay in the corridor. But some people from other side of the river, who are rich, were given better treatment. I must pay the doctors in hospital, otherwise no treatment.

I go to pharmacy if I am sick. I pay only for medicine.

Future

The poor has no *bhobishyat* (future). Poor people's dream never gets materialized. If God favors, I shall send my children to school. I wish I will save money for children. I can save 50 taka weekly. Maybe after 15 years it will be about *lakh* (hundred thousand) taka. We have a savings account in my son's name with *Grameen Bank*. Their staff comes to our house to collect savings. It is easy for us to maintain the account. I have a plan to open a similar account in my daughter's name.

Help from government

I did not receive any help from the government in the past and I do not expect any. People have lost confidence on the government. If government allocates 10 taka for me, it will be lost on the way before reaching me. Rather it is a big loss for the government if it allocates something for me. So, I don't want any help from the government.

8 KOHINUR: STORY OF A FEMALE-HEADED HOUSEHOLD

Kohinur is 26. She has an eight years old son. She was divorced for non-payment of dowry. Her life is full of struggle. When she was child, her parents were living in the city of Khulna or Satkhira town. Her father had no land except homestead that made their life difficult to live in the village. In the urban area they all were working. Her father was a day laborer, she and her three sisters were housemaids.

When she became adult her family came back to village to arrange marriage for her. They stayed with a relative, as they had no house. One of her relatives brought a proposal for her marriage and the groom stayed with them for few days. After marriage she again went to urban area with her husband and she was happy for two years. She gave birth a boy and was busy with house work. But her husband demanded 20000 taka from her parents and threatened to divorce if not paid the amount. Her parents were not in a position to pay the money. She tried to stay with him despite all torture. Suddenly a middle-aged woman came and said that she is the first wife of Kohinur's husband. When she raised this issue with her husband he was very angry. During her marriage he never mentioned about his first wife and children and they could not collect the information as he was from Hatiya, which is far away from their place. Her husband then sent her back to her parents' house for dowry. At that time her son was only seven months old. She could not manage the money and returned to him without with empty hand. This made her husband very aggressive. He started physical assault on her. Finally he divorced her and from then she and her son stay in her father's village home at Gabura.

As her father is also very poor she has to stay separate and work as maidservant or day laborer. Her father used to catch crabs from river and to go to the forest to collect honey and wood. But forest is not safe. Once her cousin was attacked by a tiger and killed. Her mother also works. She collects shrimp fry or work as a housemaid. She has another divorcee sister who also stays with her parents. So she decided to work hard and earn money to support her parents. She feels that as she is living close to her parents and relatives she feels secured for her son. When she goes for work, they take care of her son. That support is not available in the urban area. She may not even get work in the city, as no family wants to employ a maid with a child.

She works as day laborer, as shrimp fry collector, as fisher and so forth, depending on the opportunity. She also worked for a local NGO named *Shushilan* for two years as earth worker. *Shushilan* introduced a forced savings program for earth workers as per the WFP condition. So Kohinur saved 8000 taka, which she deposited in her account. She did not withdraw the money and kept it for emergency. Afterwards she was involved in shrimp fry collection from the river and fishing as well. This is a hard work. She has to stay whole day and even at night during the *gon* (full moon) when more fry and fish are available in the river. It gives her regular income. She prefers this work then working as a maidservant. As a maidservant she did not get any cash and received food for one person that she had to share with her son. Now she has freedom to do work and can spend some money for her son's education. But she feels bad when her son wants to have some fruits but she cannot buy due to lack of money. She has to buy rice and salt first.

By this time her father became older and was suffering from some diseases. So she has to take care of him and as well. She has no brother and has three more sisters, one of them being a divorcee. She was looking for more avenues of income. She planned to renew her father's forest card. To do that she borrowed 2000 taka from *Shushilan* and renewed her fathers' card to enter the forest. To obtain the card, she had to struggle, as she did not pay money to *dalal* (middlemen) who demanded 3000 taka. She repaid the loan in two installments and noticed that she had to pay a high rate of interest. She also needed more money as she decided to lease in some land for farming. Therefore she withdrew her savings from the bank and repaid the loan first. Rest of the money she spent for leasing a piece of land and cultivated it for one season. But two persons demanded ownership of the land. There was a conflict

and one person was killed. She was confused what to do. With her father's advice, she stopped cultivation. Now it is uncertain whether she will get back the lease money for the stipulated period that she did not use the land.

She also tried to work as agriculture laborer, especially when there is crisis for shrimp fry. But she noticed that the landowners had reduced crop cultivation and shifted to shrimp *gher* in their land. As a result, there was a reduction in demand for agricultural labor. The *gher* owners hire only male laborer. According to popular belief, females are unwanted in the *gher*. At present, shrimp fry collection is the only source of earning for her. Though this is very hard work and she got some skin disease. She uses a cream regularly to get rid of itching. As income is not enough, she cannot provide her son sufficient food, clothes and education. She wants a better job.

She lives on the *khas* land (indisposed government land) and does not own any land. Government hospital is far away. People die without treatment. They have no tube well, so they drink pond water. Water of the nearby shallow tube well is saline. Living in a village has some advantages. She observed that children play, as there are many open fields. When she was a child she never got chance to play. Because she has to stay with other families as a maidservant and she was not allowed to play.

She has to face cyclone and heavy rainfall. There is no cyclone shelter in a close distance though they face cyclone almost every year. During flood or cyclone they stay in the boat and the boat had to rent from others.. They stay close to *Sundarban*. They do not get any support immediately after a disaster.

She dreams that one day her son will be educated and she will have a better life. But she has some doubt too. Her son may become like his father. Even then her son is the main asset in her life. She wants to have a source of regular income and provide him proper education.

9 STORY OF SATTAR

Abdus Sattar (54) lives in Khalishabunia village under Gabura union of Shyamnagar thana, Satkhira. Among his family members are his mother (80), wife (40) and two daughters (18 and 2). Sattar's house is on the riverbank. He is scared of flood anytime.

His only brother was killed by tiger when he went for honey collection in *Sundarban*. He is also afraid of tiger as he too goes to the forest. He is a *Bawali* (honey collector). Sattar says, "Both *bagh* (tiger) and *bonna* (flood) are my enemies."

Flood

My house was totally washed away by flood of 1988. As flood was coming, my house was going under water. So we had to leave the house and take shelter in our *puran bari* (old house). We could not take anything with us, because we had left the house at midnight. The *current* (velocity) of water was high. I was holding hands of my mother and children while I was getting out of the house. Suddenly my mother was cut off. I jumped in the water and rescued her. Next morning I came to see the condition of my house. I found all our chickens and ducks dead and lying in mud. We came back from *puran bari* and lived on a boat for 15 days. Then floodwater receded. We cleaned the homestead, made a *chhapra* (shanty) and we started living in it. We did not receive any support from anybody. It took two years to rebuild the house and I recovered from the losses after ten years.

Two years ago, my house was damaged by storm. Our *Union Parishad* member came to see the damaged house and assured me of some assistance for house repairing. More than two years is over but nothing happened. I repaired my house on my own. I spent 3000 taka for that.

We do not have *borsha pani bonna* (monsoon flood). The *Wapda bundh* (Dyke built by the Water Development Board, erstwhile WAPDA) protects us from flooding. But if there is a big flood, then it

cannot protect us. Usually there is no flood in this area. If there is heavy rainfall then there is flood inside the *bundh*. Flood caused by breach in the dyke is very dangerous. It comes all on a sudden and *sab kichhu bhasiey niye jai* (takes away everything). *Bundh* has benefited the rich. They can make *chingri gher* (shrimp field). But the poor are not benefited from the *bundh*. There is no agriculture and the poor cannot sell labor. *Chingri gher* requires less labor.

I am an absolute landless

My house is on *khas* land. This plot is allotted in my *mama's* (maternal uncle) name. But I have to give money for DCR (paper for title) once in every five years. I am living on this plot for last 20 years. Three years back I took a piece of cropland on lease for 2000 taka, which my wife borrowed from one NGO. I cultivated rice for two years. But I cannot go to that land for last one year, because one person was murdered on this land. There was quarrel between two parties to occupy the land. My plot was also caught in a dispute.

My living

My main income is from honey collection from Sundarban. *Chaitra-Baishakh* (mid-March to Mid-May) is the best season for honey collection. I can earn 60-70 taka per day. We 8-9 persons in a group go to the forest with a boat, which we hire, from a *mohajan*. *Mohajan* gives us capital, say 20000 taka. We are to sell the honey to the *mohajan*. If the market price of honey is 3000 taka per *mond*, we are to sell it for 2000 taka. Every time we go to the forest, we risk our life. We pay *ghush* to the forester very time we go. Otherwise they threaten to arrest us. Since we pay *ghush*, we cut tree and sell it in the market. It would be a great help if the government protects us from the torture of the forester. We have to pay *ghush*, 200-300 taka every time, to BDR. *Ghush o debo, abor nao o khali anbo, ta hoi na* (if we pay bribe, we cannot return with empty boat). We must cut trees to manage money to pay the forester and the BDR, and for ourselves too. Some times the dacoits snatch everything from us. I was victimized more than hundred times in my life. But I have to go to the forest, because honey collection is my main source of income.

When I do not get honey, I catch fish from the river. Some time I sell labor to agriculture field during harvesting time. Some time there is no work.

Medical treatment

I am now sick. Five years back, I had strong pressure. Our UP Member took me to Khulna, to a private clinic. He did not take me to a government hospital. The Member collected money from the villagers for my treatment. Already 15000 taka has been spent for my treatment. I have a heart disease. I am surviving on medic ine. I cannot work hard any more. I cannot work fast, I cannot talk loud, and I cannot pull anything heavy. I have to take medicine regularly for which I need to spend about 300 taka every month.

Disease

Diarrhea, pneumonia, fever, scabies, stomach pain are common diseases here. Diarrhea occurs round the year. There is a hospital in our area. Another one is there, on the other side of the river, in BDR Camp. Only serious patients go to BDR hospital for treatment.

In the past, we saw the government health worker visiting house to house or they talked to people sitting in one place. They do not do that anymore, they do not come to us. They give *tika* (vaccine) from their house, but they take 20 taka for each *tika*.

There is one gram dacter (village doctor). We go to him. We pay him 20 taka.

Water

We drink pond water. There is a pond about one mile away, which is used only for drinking water. Water in other ponds is salty. We are to use this saline water for bathing and other things.

Dowry payment

My father paid 75 taka dowry to my wife. But I had to pay 20000 taka for the wedding of my two daughters. Still, there was demand for more money, but I could not pay. My eldest daughter is a divorcee. She has a son of 7-8 years. Second daughter's husband is demanding 15,000 taka more. It is not possible for me to pay this amount. He is not taking back my daughter. She is pregnant for 34 months. I do not know what will happen.

Help

There is one *guchchha gram* (clustered village) built by the government. UP Chairman has selected people, from his own, as dwellers for this village. Government can build more *guchchha gram* for us. One NGO came to our village recently. My wife is has become their member.

My mama helped me with a loan of 2000 taka for leasing a piece of cropland. I have not yet paid it back.

Some NGOs came to our area. They offered us loan for tin, business, etc. They asked us to keep weekly savings. We deposited savings with them. Some people borrowed but could not pay back, because most people are poor here. Those NGOs left the area with are savings.

Future

I wish the government will allocate land in my name so that my children can live in that land.

Government should bring us the sweet water back so that we can grow crop. Nothing grows due to salinity. Government should close down the *gher*. Then sweet water will flow into the area. We will also be able to grow crops, trees and vegetables. We will have more work.

Government should build at least two cyclone centers. Government must protect us from the forester *mastan* (terrorist).

Government can protect us from dacoits by providing the *noubahini* (nevy). If they patrol it would be enough for security. Then the *bawali* would be able to go to the forest for honey collection freely.

10 NILIMA: STORY OF A FEMALE-HEADED HOUSEHOLD

Nilima Mandal is living in Mirzapur village in Dumuria of Khulna district. She is a widow. She was married when she was only seven years old. She thinks that she had a peaceful life only when she was a child. Rest of the life is sorrowful and she could not remember any happy moment because she never had it.

From the childhood she started her struggle for life with her husband who was a hardworking man. In addition to cultivate his own land he used to work as a laborer in agriculture. Once he beased in some agriculture land and cultivated it. But they could not continue leasing because of lack of money. Afterwards both of them were involved as manual laborer. Then her husband became very sick as he had TB. She brought him to hospital and after three months he was cured. But he could not do any hard work. Then he was involved as a fish farm laborer. But within few months he suffered from jaundice. Due to lack of money he did not have proper treatment. When she noticed that his condition deteriorated, she brought him to hospital. But it was too late and he died there.

She was left alone with three children. She went to the city to work as a housemaid. But she could not stay there more then eight days. She came back to the children. She started work in her own village as a maidservant for a rich family. She had to work dawn to dusk. But she was happy because at least she could comeback home to sleep with her children.

She realized that by doing housework she could manage food only, and that was not sufficient for all. Then she started work as a daily laborer. The attitude of the villagers was against such work by females. So she had to convince people by showing and proving that she can do hard work like male laborers. Initially she had to accept half of the wage a man used to get.

She has 15 *katha* land that was mortgage out when her husband was sick. She became member of *Prodipan* and *ASA*. She took a loan from both NGOs to get back her land. Then she started shrimp culture in her own land. It was profitable. Yearly income was 30000 taka. But bad *kismat* (fate) runs after her. Her 12 year old son had TB. After prolonged treatment he was cured. Then younger daughter was affected by the same. So she had to spend a lot of money for their treatment. She sold all shrimp from her farm. As a result she had no income except day labor. But she has to repay the loan. Both the NGOs became wild to get their money back within the given time. They did not agree to extend time for her though she was in trouble. Finally she had to mortgage out the land again and repaid the loan. After that she lost interest to continue membership with any NGO. "They are not friends of the people", she maintains.

Her son could not do any hard work, so that he could not earn money for the family. As a result, she continued as the only earning member. Now she gets 60 taka per day. But still she gets less than a man. She is an expert worker in fish farming and she has regular work. But she cannot work regularly due to sickness and old age.

She arranged marriage of her two daughters. The younger daughter will never be able to give birth any child. She is worried about it. Nilima also arranged marriage for her son and she has a one year old grand daughter. Now Nilima wants to educate her.

Nilima is considered as a knowledgeable woman in her village. Neighbors come to her for suggestions for their work and family. She feels that they have to lobby for equal wages for women and men.

11 STORY OF SUBHASH MANDAL

Subhash lives in Mirjapur village under Dumuria Thana of Khulna District. Subhash and his wife had no schooling. Recently he learned writing his name through attending an adult literacy center. They have one daughter, already married, and a son who reads in class five.

His father had no land except a homestead. He and two of his younger brothers left home and started living in others' houses as laborer.

I am homeless

When I left my father's house I had to live here and there. My life was just like a *raster manush* (urchin).

Then I got married and started staying with my new wife making a hut at the back of a primary school building in this village. One day a rich woman of the village noticed us and invited us to make a house at a corner of her homestead. Since then I am living here. Two years ago, my house was totally damaged by flood. I build my house again. One young man in the village gave me 1300 taka as loan. Two persons helped me in construction work and did not ask for wage. But I offered them meals. My wife and I worked very hard. Still my house is unfinished because I could not manage enough money. We have also a kitchen collecting straw from the villagers.

Living

We were four members, a son, a daughter, wife and I. My daughter was married last year. But she is with us for last two months, because her husband beats her. So she does not want to go back to her husband. *Jamai* (son-in-law) wants more money from me. But I cannot afford.

We need 3-4 kg rice per day. I have a rickshaw van. I can earn from this some time 30-100 taka. Some time I cannot paddle when I am sick. Some times it happens for 5-10 days. Then I have to borrow money from the neighbors, some times rice.

During harvesting time I sell labor from which I can earn 60-70 taka per day. We have some chickens. We sell eggs. If I am sick, or if it is a very stormy day, I cannot go to work and I have no income. Then my wife borrow s taka or rice from neighbors. I pay it back later. My neighbors always help me.

Water and sanitation

There is one tube well after two houses from which we get drinking water. We made a latrine. I bought a ring-slab latrine from Dumuria. I installed it myself.

My rickshaw van

I have a rickshaw van of my own since last two years. Before that I paddled *mohajan's* van. I have to contribute 30 taka to the *van samity* every month. I never get this back. If I do not pay, I am not allowed to paddle. I am not allowed to paddle beyond Dumuria thana. If I cross the boundary, I have to pay penalty to the *van samity* of that area.

I had always a dream to have a van of my own. One day I expressed my wish to buy a new van to a person very closes to me and always helps me. He suggested me to keep some money with him as savings.

One day he took me to a van workshop in Khulna and negotiated a van for 3700 taka. Next two days I worked day and night and I could save 120 taka. *Kheye na kheye* (even not spending money for food) and through working day and night I saved 1000 taka in few weeks, and I brought this amount to my friend. He took to the van workshop and arranged an agreement between workshop and me to have the van on credit.

My daily income was doubled. In two years, I paid the full amount.

Help from outsiders

We do not get any support from the government. If relief comes, the Chairman and members distribute it among their own people. Once I came to know that government would give rice/wheat as relief. I went to our Member for a card. He replied to me, "it is not possible to give you a card, because there are other people." The cardholders never bring the rice/wheat home, they sell it in the market. Because they do not need it.

There is one o-two NGOs who give loan, nothing else. I went to one NGO for help. They asked me whether I was a member of any group. I said no. They asked me to form a group. I came back and talked to some persons, but I failed to form a group. My wife is also not a member of any group.

If government could give us easy loan, then it may help us do something.

Benefit from Beel Dakatia project

Roads have been constructed. I can run my van on it, and I can earn income. *Bundh* protects the crop from flood and salt water. People can grow crops. We can sell labor. If people can grow crops it is also benefit for us, *akal porbe na* (there will be no famine). Rich people make much money from *gher*. Poor people can sell labor in *gher*.

But, we do not get fish any more. Rivers and *khals* (channel) are closed. One *khal* passing through our village has died. We cannot run boat on it. We used this water for washing and bathing. But there is no water.

ANNEX E: DEFINITION OF KEY WORDS

DEFINITIONS

Definition of key words used in this report are presented below1²:

Coastal Zone

Administrative districts possessing and/or access to coastal resources and impacted by natural phenomena like tide, salinity and storm surge.

Earner

A person who brings material return in cash or kind for services rendered and for the use of goods. Services imply labor and organization of production, while goods imply land and capital. The concept of earner includes all persons who receive income and is synonymous to economically active persons including self-employed persons.

Household

Smallest unit of social institution. It is a dwelling unit where members take their main meals under a common cooking arrangement. A household includes resident non-family members fulfilling this condition and excludes non-resident family members.

Head of household

The person responsible for management of household and regarded by other members as being responsible for them. The head may not be the senior most male member.

Income

Material return in cash or kind received in exchange of goods and services in a particular period. Value of outputs from self-employed activities consumed and sold; receipts as rent, wage, interest, profit, remittance, charity and other special types of receipts.

Literacy

Ability to read and write. A person of age seven years and above and who is able to write a letter in any language is considered as literate. The corresponding age for adult literacy is 15 years and above.

Poverty

Various forms of economic, social and psychological deprivation among the people who lack adequate ownership, control or access to resources for achieving a minimum level of living. It is a multidimensional issue involving income, consumption, nutrition, health, water and sanitation, education, housing, crisis coping capacity, access to credit and other aspects of living.

² Source: BBS; DfID (Sustainable livelihoods guidance sheets)

Livelihood

It is synonymous to occupation. Means to sustain a person or a household. This includes a range of occupations/activities, such as, farming, fishing, industry, etc., that generate proceeds, income and wealth.

Livelihood Asset

Livelihood assets create the base for livelihood options and activities for a household. These assets are broadly categorized as natural, social/institutional, human, financial/economic and physical/technological.

Human capital

Human capital represents skill, knowledge, ability to work and good health that together enable people to different livelihood strategies and achieve their livelihood objectives. At a household level human capital is a factor of the amount and quality of labor available. This varies according to household size, skill level, leadership potential, health status, etc.

Social capital

Social resources upon which people draw in pursuit of their livelihood objectives. These are developed through:

- networks and connections, 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 wider institutions, such as political or civic bodies;
- membership of more formalized groups which often entails adherence to mutually-agreed or commonly accepted rules, norms and sanctions; and
- relationships or trust, reciprocity and exchange that facilitate cooperation, reduce transaction costs and may provide the basis for informal safety nets amongst the poor.

Natural capital

This term is used for the natural resource stocks from which resource flows and services 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 biodiversity to divisible assets used directly for production such as trees, land, etc.

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. The following components of infrastructure are usually essential for livelihoods:

- affordable transport
- secure shelter
- adequate water supply and sanitation
- clean, affordable energy;

• access to information (communications)

Financial capital

It denotes financial resources that people use to achieve their livelihood objectives. It includes flows as well as stocks, and it can contribute to consumption as well as production.

- Available stocks: Savings (cash, bank deposits, liquid assets like livestock and jewellery), credit;
- Regular flows: Excluding earned income, the most common types are pensions, transfers from the state and remittance.

Livelihood strategy

It indicates a range and combination of activities and choices that the people make/undertake in order to achieve their livelihood goals (including productive activities, investment strategies, reproductive choices, etc.). People's access to different levels and combinations of assets has a major influence on the choice of livelihood strategies. Different livelihood activities have different requirements. Those are amply endowed with assets are more likely to be able to make positive livelihood choices.

Occupation

Activity performed to earn an income. A person may have several occupations. The one being the source of highest income is considered as main occupation.

Resilience

Capacity to cope with vulnerabilities.

Vulnerability Context

The Vulnerability context frames the external environment in which people live. The wider availability of assets and people's livelihoods are affected by trends, shocks and seasonality that originate from these exogenous changes. People have limited or no control over them.