

Coastal Livelihoods an introductory analysis

Working Paper
WP011

Dhaka
January 2003

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

**Coastal Livelihoods
an introductory analysis**

Working Paper
WP011

Prepared by
Mohiuddin Ahmad

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

Dhaka, January 2003

Foreword

This working paper follows the working paper WP004 that documents and presents a first analysis of the household perception survey carried out by the PDO-ICZM project in the months May – August 2002. The two documents together are the first results of the PDO-ICZM project's endeavor to improve the understanding of coastal livelihood conditions. This understanding should enable the project to develop a meaningful Coastal Zone Policy and subsequent effective Coastal Development Strategy, aiming at a sustainable improvement of livelihood conditions of the people living in the coastal zone.

Given the limited time available, the household survey was necessarily selective, targeting the most vulnerable parts and livelihood groups of the coastal zone in order to have a better understanding of the livelihoods of the coastal poor. The present working paper brings in three other sources of information, aiming to obtain a more representative picture of the coastal livelihood conditions: secondary (statistical) data; existing literature; and the experience and opinion of experts. Based on these sources, the paper identifies relevant development processes in the coastal zone and focuses on the enabling institutional environment as an important component in improving livelihood conditions.

Again, the analysis is limited and necessarily subjective. However, it substantially broadens the discourse on the coastal livelihoods and is a useful step towards better understanding. It is intended to produce a first overview of coastal livelihood conditions in the first months of 2003, that would be widely distributed inviting feed back from organizations and individuals working in the coastal zone. In addition, it is expected that in the course of the year 2003 additional information on the spatial distribution of vulnerabilities will be obtained through a FAO-supported project, executed under the guidance of the PDO-ICZM project. This and other information obtained throughout the year 2003 will result in a more comprehensive report on Coastal Livelihoods at the end of 2003.

As mentioned, the present report is based on primary and secondary information; however, it strongly reflects the subjective opinion of the main researcher. It is realized that this has limited value, but it reflects the selected approach to rely on expert opinions to be able to arrive at a somewhat representative picture of coastal livelihoods within the project's time, personnel and budget constraints. It implies that the working paper does not represent any established opinion or selections of the project as such, but aims to invite a discussion among other experts to broaden the scope and base of the project's understanding of coastal zone livelihood conditions.

study team

Md. Sayed Iftexhar
Afsana Yasmeen
Dirk R Frans (principal researcher)
Hamidul Huq
Marianne Nugteren
Begum Shamsun Nahar
Md. Shahjahan
Rob Koudstaal
Mohiuddin Ahmad

Coastal livelihoods-an introductory analysis

TABLE OF CONTENTS

FOREWORD	3
STUDY TEAM	4
TABLE OF CONTENTS	5
LIST OF TABLES.....	6
LIST OF BOXES.....	6
ACRONYMS	7
GLOSSARY	8
SUMMARY.....	9
1 INTRODUCTION.....	1
1.1 Background	1
1.2 Methodology.....	1
1.3 CLA as a continuous process.....	2
1.4 Layout of the report.....	2
2 DEVELOPMENT TRENDS AND MAJOR LIVELIHOOD CATEGORIES	4
2.1 Selection of four livelihood categories	4
2.2 Context and trends.....	5
2.3 Poverty and vulnerabilities.....	5
2.4 Rural wage laborers (RWL).....	6
2.5 Small farmers (SF).....	8
2.6 Fishers (F)	9
2.7 Urban wage laborers (UWL).....	10
3 PERCEPTION OF LIVELIHOOD CONDITIONS	13
3.1 Capital assets.....	13
3.1.1 <i>Natural assets</i>	13
3.1.2 <i>Physical assets</i>	13
3.1.3 <i>Human assets</i>	13
3.1.4 <i>Social assets</i>	14
3.1.5 <i>Financial assets</i>	14
3.2 Strategies.....	14
3.3 Outcomes.....	15
3.3.1 <i>Poverty</i>	15
3.3.2 <i>Vulnerabilities</i>	16
3.3.3 <i>Ideal future</i>	18
4 GENDER ANALYSIS	21
4.1 Division of labor	21
4.1.1 <i>An overview</i>	21
4.1.2 <i>Division of labor in different livelihood groups</i>	22
4.1.3 <i>Inequalities</i>	22
4.2 Access to and control over household and community resources/assets.....	23
4.2.1 <i>Access to resources</i>	23

4.2.2	<i>Control over resources, assets and capital</i>	24
4.3	Decision making process	25
4.4	Mobility.....	25
4.5	Main constraints/obstacles	25
4.6	Priorities and opportunities	26
4.7	Vulnerabilities.....	26
4.7.1	<i>Food security</i>	26
4.7.2	<i>Water security</i>	26
4.7.3	<i>Income security</i>	27
4.7.4	<i>Health security and personal safety</i>	27
4.7.5	<i>Safety of house and property</i>	28
4.8	Concluding reflections	28
5	ENABLING ENVIRONMENT	29
5.1	Local government.....	29
5.2	Government institutions	29
5.3	NGOs	30
5.4	Participation.....	30
5.5	Law and order and enforcement.....	31
5.6	Market	31
	REFERENCES	33
	ANNEX A: MAP SHOWING LOCATIONS UNDER THE PDSCL SURVEY	35
	ANNEX B: STATISTICAL DATA	41

list of tables

Table 1: Vulnerabilities identified through the household survey	18
Table 2: Gender division of labor	21
Table 3: Asset distribution	24

List of Boxes

Box 1: Vulnerability to cyclones	8
Box 2: Hard work for regular income	10
Box 3: Living	12
Box 4: I have my own family	29
Box 5: NGO helps	32

acronyms

BBS	Bangladesh Bureau of Statistics
BWDB	Bangladesh Water Development Board
CARE	Cooperative for Assistance and Relief Everywhere
CDS	Coastal Development Strategy
CLA	Coastal Livelihood Analysis
COAST	Coastal Association for Social Transformation
CPR	Common Property Resource
CZ	Coastal Zone
DfID	Department for International Development
DPHE	Department of Public Health Engineering
ERD	Economic Relations Divisions
F	Fisher
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
GoB	Government of Bangladesh
ICZM	Integrated Coastal Zone management
LGED	Local Government Engineering Department
NGO	Non Government Organization
PDO	Program Development Office
PDSCL	Perceptions of Direct Stakeholders on Coastal Live lihoods
RWL	Rural Wage Laborer
SF	Small Farmer
SLF	Sustainable Livelihood Framework
SMA	Statistical Metropolitan Area
TBA	Traditional Birth Attendant
UP	Union Parishad
UWL	Urban Wage Laborer

Glossary

Andolon	Movement
Aratdar	Wholesaler
Bagda	Brackish water shrimp
Beel	Open water body
Dadon	Advance against labor/produce
Doa-tabiz	Amulet
Gher	Shrimp field
Gon	Full moon
Hilsa	Fish species (<i>hilsa ilisha</i>)
Kabiraj	Traditional healer
Khata-Kolom	Paper and pen
Malaria	Eucalyptus tree
Mastan	Muscleman
Mohajon	Proprietor/owner of boat and gear
Salish	Traditional court for mediation
Shishu	Tree species (<i>dalbergia sissoo</i>)
Shushilon	Name of local NGO
Shutki	Dry fish
Union Parishad villages	Local government at the union level comprising several

Summary

The purpose of this report is to improve insight in the livelihoods of poor men and women living in the coastal zone. The analysis is based on primary and secondary data and expert opinions. The primary data comes from the 94 men and 101 women interviewed and the 18 life stories recorded in the “Perceptions of Direct Stakeholders on Coastal Livelihoods” survey (WP004, 2002). The secondary data, both quantitative and qualitative, comes from both government and non-government sources.

The “Sustainable Livelihoods Framework” has been adopted by PDO-ICZM as the main conceptual framework.

Because ICZM’s main aim is to alleviate poverty, the analysis focuses on the poorer groups in the coastal zone. In identifying these poorer groups, it is found that the traditional categorical classification of landless being the poorest group in the rural society does not hold anymore. Less and less people are able to make a living from agricultural land, which has led to rapidly diversifying occupational patterns and processes of urbanization and moving-away from a subsistence economy. Though in such a changing society categorization of livelihoods has limited value, still four occupational groups can be identified that would represent the poorer section of the society: rural wage laborer households (about 1.6 million), small farmer households (about 2.9 million in a broad sense and 1.7 million in a narrow sense)¹, fisher (fish catching) households (about 0.5 million) and urban wage laborer households (about 0.6 million). Together they form over 70 % of the households (in a broader sense) of the coastal zone.²

It is further reported that in terms of income poverty, some districts in the coastal zone are not amongst the poorest in Bangladesh. Agriculture wage rate may be an indicator to appraise the situation in this regard (see Annex B.2). It is an important finding that poverty in the coastal zone, more than elsewhere in the country, seems to be related to the hazardous natural environment and the absence of a conducive institutional environment that would enable households to cope with these hazards. This overwhelming vulnerability reduces the possibility to optimally use the opportunities offered by the natural and human resources of the coastal zone.

It should be stressed in this context that THE resource of the coastal zone are its people. People have a positive outlook towards the future and are highly flexible and assertive in adapting to changed circumstances, exploring and using opportunities offered to them. The identified processes of diversification seem in part to be in response to the vulnerabilities of the coastal zone. This leads to the conclusion that an improved enabling environment would greatly enhance the use of this human resource in reducing their vulnerability and poverty. According to people’s perceptions, this would relate to better infrastructure and services, more credit facilities, improved law

¹ In a broad sense owning from 0.05 acre to 2.5 acres of land; in a narrow sense owning from 0.5 acre to 2.5 acres of land.

² Estimates are based on the number of rural households (Agricultural Census 1996) and urban households (Population census 2001). According to 2001 census, number of households in the CZ is 7.25 million (population being 34.8 million). One half of the urban households are assumed as wage laborers. Fisher households overlap with farm households in the agricultural census.

While adding up figures of different livelihood categories, it is to be borne in mind that household and population data correspond to two different years, 1996 and 2001.

and order, less injustice of the existing power structure, improved collaboration between government agencies.

Special attention has been given to gender equity in terms of vulnerabilities. It was found that in coping with the natural hazards and human induced problems and/or constraints, women experience specific constraints that limit their choices and opportunities. Since women's multiple productive and reproductive activities are not supported by a necessary access to and control over household assets and by decision-making power, mobility, self confidence and good health and education conditions, these inequalities make women substantially more susceptible to the dynamics of their environment.

introduction

How do poor men and women in the coastal zone of Bangladesh make a living? What are their main resources, vulnerabilities, options and constraints? What can outside actors, such as the government and NGOs, do to assist the poor to improve their lives and those of their children? This working paper tries to shed light on these and related questions.

Background

The Coastal Livelihoods Analysis (CLA) is one of the main activities of the “Project Development Office of Integrated Coastal Zone Management” (PDO-ICZM) in the years 2002 and 2003. It is a steppingstone towards preparing the major output of the project, that is, a “Coastal Development Strategy” (CDS) by 2004.

The Government of Bangladesh (GoB) and the donors agreed that the CDS would not be a traditional, top-down blueprint plan. Instead, it would structure a process approach that would focus on the understanding and the needs of the direct stakeholders: the poor people in the coastal zone. The PDO-ICZM adopted the “Sustainable Livelihoods Framework” (SLF) to conceptualize people’s livelihoods and understand the various processes and dynamics. This framework has the following key features. People are seen as drawing on five capital assets of their livelihoods: human, natural, physical, social and financial. Based on their assets and context, people make a number of choices on the kind of livelihood activities they undertake. These activities generate income (in cash or kind) that is in turn used for consumption purposes, re-circulated as inputs into activities and social payments re-invested in one of the five assets. People are exposed to certain vulnerabilities that disrupt their lives and are beyond their immediate control. The SLF model distinguishes three types of external dynamics people are vulnerable to: shocks, seasonality and trends. People respond to these vulnerabilities by applying either adaptive or coping strategies. The outcome of all of these factors is a level of well-being.

This livelihoods model depicts a dynamic context in which individuals and households undertake a wide range of activities, are influenced by many different external factors and in which they make conscious choices to maximize opportunities and minimize risks. Three sub-components of the model need brief mentioning. The first is people’s link with the local resource base. This is not direct, but filtered through a system of access and entitlements. The second is that the vulnerabilities do not impact the individual directly but are filtered through a layer of resilience and sensitivity, which reflects the capacity of households to cope with these vulnerabilities and determine their risk-seeking or risk-avoiding behavior in making strategic choices. This capacity in turn is a function of the five capital assets, depending on their access to the local resource base. Finally, the vulnerabilities and the individuals operate within an overall institutional context that influences all other aspects. This context includes the local, informal beliefs, rules, attitudes etc., as well as the local, national and international formal and informal institutions.³

Methodology

The analysis in this report is based on the following sources:

- ◇ the report on the “Perceptions of Direct Stakeholders on Coastal Livelihoods” (PDSCL) survey, conducted by the PDO-ICZM between May and August 2002 (WP004, 2002);
- ◇ secondary quantitative data from various sources such as the Bangladesh Bureau of Statistics;
- ◇ secondary qualitative analysis of rural poverty in the form of recent papers and analyses, such as “Bangladesh: a national strategy for economic growth and poverty reduction”

³ For more details see “Livelihood Systems in Coastal Development” by Professor John Soussan, March 2002 (PDO-ICZM, WP004, 2002: Annex A) .

- (ERD, 2002) as well as a number of critical reviews of this draft, and “Hands not land: how livelihoods are changing in rural Bangladesh” (Toufique and Turton, 2002); and
- ◇ expert opinions, reflecting the working experience of the researchers at community and household levels in the coastal zone.

Through the PDSCL survey, the senior female and male of about 100 coastal households were interviewed and the life stories of 9 of the men and 9 of the women were recorded (for a map indicating the localities, see Annex A). Through the survey and interviews the people were asked to identify their main assets, the key vulnerability issues and the opportunities for priority action.

During the last quarter of 2002 some secondary statistical data were collected and analyzed. The data available has been used in this report mainly to place coastal livelihoods, developments and potentials in a broader perspective. It should be pointed out here that some important data are not available for district level or below. At such an aggregate level major local differences become invisible and much work remains to be done to make the secondary data set complete and useful to the CDS.

Secondary qualitative papers and analyses have played a major role in this analysis. The reason is that Bangladesh is rapidly changing and not always as predicted earlier. The country’s landscape, both urban and rural, is now very different from even 10 years ago (Toufique and Turton, 2002); (Action Aid, 2002; Akash, 2002a; Akash, 2002b; ERD, 2002). The findings of the PDSCL survey have been reviewed in the light of these different reports and their analysis and have contributed much to the CLA. The usual disclaimer about possible misinterpretation of the works of others and the responsibility of the authors of this report apply.

CLA as a continuous process

It is intended to summarize the findings of the PDSCL survey and of the analysis reflected in this report in a first report on livelihoods in the coastal zone. Further, in 2003, the PDO-ICZM project will focus its livelihood-related activities in 2003 on the following four activities: producing vulnerability profiles; conducting case studies; initiating stakeholder consultations, and identifying and analyzing priority actions.

At the same time, more comprehensive and district-level segregated statistical data will be collected from secondary sources during 2003. The outcome of all these activities will feed into an update of the coastal livelihood report at the end of 2003.

It should also be mentioned that in 2003 activities have started to analyze the existing situation with respect to the enabling institutional environment at both national and local levels and to develop models of good practice in support of the CDS.

Layout of the report

Following this introduction, Chapter two justifies the selection of four major occupational groups (2.1) and describes their livelihoods in some detail (2.4 to 2.7). This chapter also describes relevant general development trends (2.2) and relates vulnerability and poverty (2.3).

Chapter 3 gives a general descriptive overview of the outcome of the perception survey, following the structure of the SLF model: capital assets (3.1), strategies (3.2) and outcome (3.3). Subsequently, Chapter 4 looks more closely into: the gender division of labor (4.1), women and men’s access to and control over resources (4.2), decision making patterns (4.3), mobility (4.4) and the main constraints and opportunities women and men encounter in relation to sustainable livelihood in coastal area (4.5 and 4.6). Special attention is given to the gender aspects of vulnerability in Section 4.7.

Chapter 5, finally, deals with the institutional environment, within which the poor seek to make a living. It identifies the present context, analyses this and suggests how it can be made more enabling to poor women and men.

Development trends and major livelihood categories

This chapter selects four occupational groups as target groups for the PDO-ICZM project (Section 2.1) and describes their livelihoods in some detail (Sections 2.4 –2.7) and in the context of development trends in general (Section 2.2). Section 2.3 gives considerations on the relation between vulnerability and poverty in the coastal zone. For more detailed information on the PDSCL survey and findings, see PDO-ICZM report WP004.

Selection of four livelihood categories

Livelihoods in rural Bangladesh are rapidly diversifying (Toufique and Turton 2002: 22) and the PDSCL survey confirms that this also applies to the coastal zone. Individuals engage in a variety of activities to make ends meet. One day a man may spend working as a day laborer for a medium farmer, another day moving earth in a GoB project, then he may go off to the city to sell cattle, return to catch fish or save cash by repairing their house. The senior women in that household is likely to be involved in a number of cash-saving activities such as collecting cow dung, firewood, or if these are not available leaves for fuel. She may earn cash or be paid in kind helping with post harvest activities or may ‘sharecrop’ the cow of a better off neighbor. What applies to individuals applies even more to households; if there are a number of men or women of working age, they often engage in a variety of activities to spread the risk of unemployment, seasonality and maintain and expand their networks.

Nevertheless, it is still possible to identify major livelihoods around the main occupation of the poorer section of coastal society. Based on secondary data about present numbers and trends, the following four major occupational groups have been selected: *rural wage laborers*; *small farmers*; *fishers* and *urban wage laborers*. The rationale for their selection is the following.

- The selection is in line with GoB policy and ICZM goal to reduce poverty. From various studies it is clear that the poorer groups in rural society are households with no or limited access to land and depend on their labor to make a living.
- Rural Wage Laborers (RWLs) are chosen because they are at the bottom of the social ladder and make up most of the poor who live in the rural area.
- Small Farmers (SFs) are included because they are at risk of sliding into poverty and becoming tomorrow’s poor.
- Fishers are looked at separately because fish resources are endangered by over-exploitation while traditional fishers are exposed to others encroaching on their livelihoods, making them highly vulnerable.
- Urban Wage Laborers (UWLs) are included in the analysis because they are the poorer section of urban societies and their number is rapidly growing and is likely to overtake that of each of the other categories over time.

As hinted at above this classification is not watertight. Small farmers are also part time fishers and occasionally also sell their labor. The PDSCL survey showed that fishers invest in land and when it is too dangerous to go fishing in the Bay of Bengal they may work as day laborer. Even the distinction between rural and urban wage laborers is somewhat artificial. One of the major changes in Bangladesh since independence has been the development of physical infrastructure in the form of roads, bridges, markets and electrification. This has brought previously isolated and rural areas out of their isolation and into contact with the rest of the country and economy. As a result the distinction between rural and urban areas and livelihoods is becoming less meaningful. Instead there is now a

much more gradual continuum from more rural to more urban, physically, socially, economically and psychologically.

Context and trends

The wider socio-economic context of these four occupational groups in the coastal area is as follows. Until a few decades ago, Bangladesh was basically a rural society with the majority of households depending on agriculture in one way or another. At that time it was useful to distinguish between the landless, who were considered to be poor and dependent on common property resources (CPRs), and the landowners, who were farmers and relatively better off. In the coastal area this meant the poor were assumed to be the landless, depending on fisheries and other CPRs. This categorical classification of poverty is no longer that relevant for the following reasons (see Annex B.1):

- ◇ around 54% of households in rural areas of the coastal zone (53% in rural Bangladesh) are 'functionally landless',⁴ that is, they cannot possibly make a living based on agricultural land (BBS, 1999);
- ◇ sectoral contribution of agriculture to GDP has declined from one-fourth to one-fifth in the 1990s (BBS, 2001a: 449);
- ◇ small farmers are in a very vulnerable position, barely making ends meet from their farm income and for practical, social and psychological reasons they find it difficult to diversify into wage earning activities; and
- ◇ the percentage of the population living in urban areas in Bangladesh was 23.4% in 2001 and by 2020 the urban population is likely to increase to 47% (World Bank, 1998).

The PDSCL survey strongly confirms this new understanding of diversified livelihoods and the move-away from a subsistence economy (including dependency on CPRs), towards integration with the money-based national economy. In fact the poorest of the poor seem to have the least access as reported by the CARE/DFID "Monitoring of Livelihoods Project":

"Valuable common property resources tend to be captured by the occasionally poor households. They have better access to beels and rivers and fodder resources than the poorer households. Always and usually poor households use wild foods, forest resources and aquatic resources (of relatively low worth) more than the occasionally poor group. Occasionally poor households use beels for cultivating fish, rice seedlings and winter rice. When the always poor do access the beels and rivers, it is for fishing and bathing."
(CARE Bangladesh, 2002: 9)

The men and women that were interviewed in the PDSCL again and again mentioned ways in which their livelihoods are anything but isolated. Their worldview is one in which their livelihoods are clearly linked to the regional and national economy. Many of those interviewed for instance mentioned the need for cash earning income opportunities. This is the case even though the people interviewed lived in the more outlying areas of the coastal zone, where the physical infrastructure is still relatively underdeveloped and the linkage with the urban sector therefore less than that in the rest of Bangladesh.

Poverty and vulnerabilities

The Bangladesh coastal zone is known worldwide for its vulnerability to natural disasters. This rather negative perception may in fact be incomplete as the primary data, and as far as now available also the secondary data, highlight that the coastal zone is also very rich in natural and human resources.

⁴ Defined as owning less than 0.5 acre (0.02 ha) of land.

The men interviewed in the PDSCL generally reported a more positive perception of their lives than the women. Furthermore, the most recently available greater district level male agricultural wage rate data shows that in 4 of the 7 greater districts in the coastal zone wages are above the national average (see Annex B.2). The three greater districts with lower than average male agricultural wage rates, Khulna, Jessore and Faridpur are not in fact coast-facing (with the Sundarban forest forming the less inhabited southern part of Khulna). Data on female agricultural wage rates is more scattered and incomplete, but the data that is available suggests that for female rural wage laborers the picture is less rosy (BBS, 2001a:438). One thing, however, is clear, the coastal districts are not amongst the poorest in Bangladesh as those are in the north-west of the country.

From the PDSCL and secondary sources and statistics, a picture emerges about the coastal zone of a relatively well-endowed area, with a large carrying capacity and potential for poverty alleviation, but also with much inequality and a very high risk of natural disasters. The PDSCL shows how even the poor see ways and means of improving their livelihoods, but it also shows that the poor cannot cope with the many risks that they face on their own. In fact their livelihoods are part of a very dynamic context in which their access to natural resources change under the influence of local and national, formal and informal institutional changes. Most of the poor do not have enough assets, nor secure entitlements, to face the different vulnerabilities that threaten their livelihoods.

Outside actors, such as GoB agencies and NGOs, are in a position to do a great deal about reducing the vulnerabilities of the coastal population. This indicates that poverty alleviation and equality increasing efforts in the coastal zone will have to deal with reducing vulnerabilities more than anything else. The CLA therefore focuses on these vulnerabilities and how to reduce them (see also Chapter 3).

Rural wage laborers (RWL)

Introduction and general overview

Though Rural Wage Laborers (RWL) are a very diverse group, their main characteristic is that they have no or limited access to land. People in this group mainly depend on manual labor to make a living. RWLs are vulnerable to seasonality of employment and therefore low levels of income. Many households in this category are trapped in a vicious circle influenced by lack of the various forms of capital, lack of health, vulnerability to natural disasters, limited coping capacity and indebtedness.

Total number of households in the coastal zone is estimated at 7.25 million in population census 2001 (BBS, 2001b). According to the latest national figures (Agricultural census 1996), there are 4.95 million rural households in the coastal zone of which 1.64 million (33%) are 'agriculture laborer' households. The proportion of agriculture labor households is 36% in rural Bangladesh as a whole (BBS, 1999). They are presumably from the 'landless' category to a large extent, which accounts for 54% of the households in rural coastal zone (BBS, 1999).

The majority of the adults of these RWL households have grown up in a household that depended mainly on farming. Due to population growth, fragmentation and loss of land holdings through inheritance and indebtedness and river erosion, they have lost access to land and become dependent on wage labor. Many were, and still are, involved in agriculture-related wage labor but their number has been gradually decreasing at 0.26% per year. On the other hand non-farm sector households have increased rapidly at 2.89% since the mid 1980's (Saha, 2002:47). The PDSCL confirms that also in the coastal zone RWL households dependent heavily on non-agricultural activities.

In the coastal zone, many men and women are moving away from wage labor to self-employment. The driving forces are the availability of credit through NGOs and a growing

demand in the market for rural products. The growing demand for livestock and poultry products is particularly noteworthy and is partly fuelled by the growing middle class in both rural and urban area. As a result there is a general move away from agricultural labor towards a much more diversified set of livelihoods among the households that depend on wages. In the process these rural households have become more and more integrated into the market and money economy.

Overall conclusions

The PDSCL survey confirms the findings at national level that human development index has improved considerably, but that income poverty has not declined nearly as much. The data also highlights that women in the coastal zone, as elsewhere, still bear the brunt of poverty (ERD 2002 2-10); (Rahman 2002 79).

Rural wage laborer households are often assumed to be 'landless'. This analysis suggests that poorer households in the coastal zone still heavily depend on output from their homestead land and ponds. The poor see scope for further developing these assets, thereby diversifying their livelihood activities and spreading and reducing the risks they face of a sudden or longer term decline of income from other livelihood activities.

The poor have highlighted the need to reduce their vulnerability to damage caused by cyclones and, to a lesser extent, floods to houses, belongings and homestead land. After all, these assets are the 'base' for which rural wage laborers make a living. At the same time their furniture, cattle, poultry, fish stock, food stock and trees are their 'buffer' in time of need. These items can be sold for cash in case of illness or other misfortune.

The importance of group membership for women of rural wage labor households cannot be stressed enough. In fact again and again the women stress the positive impact of those groups on their well-being. It is clear that group formation, awareness raising and credit provision have a major role to play in alleviating human and income poverty among coastal poor women.

This analysis has consequences for the way the coastal zone is perceived. In the 1970's the widespread perception of Bangladesh was that of a stagnant and almost hopeless case, with the 'landless' being in the worst possible situation. On the basis of the PDSCL survey and secondary sources this negative perception gives way to a more positive one of active and aware individuals, focused on making the best of circumstances to grow out of poverty. The rich natural resources in the coastal zone provide ample opportunity for this.

At the same time men and women of RWL households also highlight their vulnerability to natural disasters, which they cannot handle on their own due to their limited coping capacity. They expect the GoB and NGOs to tackle problems that they cannot handle at a household level, such as vulnerability to cyclones, lack of safe drinking water, lack of medical and educational services.

Box 1: Vulnerability to cyclones

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.

Maulovi Sami Uddin (55)
Chakaria, Cox's Bazaar
(Source: PDO-ICZM, 2002)

Small farmers (SF)

Introduction and general overview

Defining farms into categories that are relevant to livelihood categories is not straightforward. In some areas of Bangladesh a farmer operating 1 ha can be quite well off, while in another area even 3 ha may not yield a sufficiently secure income. In the BBS literature households owning up to 2.5 acres (roughly one ha) of land are considered as small farmers (BBS, 1999).

According to the 1996 Census of Agriculture, 2.9 million households own land up to one ha. If households who are considered as “functionally landless” (owning less than 0.5 acre or 0.02 ha), are deducted from the “small farmer” category, then their number is reduced to 1.7 million, and they are 34% of rural households (same in the CZ and in Bangladesh). Small farmers are one of the two largest livelihood groups considered in this analysis. While they are seemingly usually better off than the RWL households, disasters like cyclone, drainage congestion and flood often make them vulnerable. Low profit margins in grain production, lack of financial reserves and natural disasters often force them to borrow from private moneylenders and/or resort to distress sale of assets.

A specific characteristic of this category of poor is that they are often least able/willing to diversify their livelihood activities. Because they have to regularly maintain their crops and livestock they do not easily accept daily wage employment. Even if such work were flexible and available nearby, social reasons sometimes make it difficult for these households to work for others. Their numbers and precarious position around the poverty line deserve a closer look.

Overall conclusions

The men and women from SF households in the coastal zone are generally better able to make a living than those of rural wage laborer households. The outcome of their activities is a higher level of well-being. However, unless their situation improves, children of this category might slip into poverty in the next generation because of land fragmentation (see also Rahman, 2002:79).

The PDSCL and other sources indicate that SF households need access to credit appropriate to agricultural production as well as extension to improve the production of their limited land. Studies on the spread of modern agricultural technology show the highest levels of acceptance in the small farmers' category (Rahman and Hossain, 1992). The reason seems obvious; without higher productivity they simply cannot survive. This pressure on minimal and ever decreasing land will continue. Land available for agriculture is likely to decline at the rate of approximately 1% per year that has been the case in the last decade or so (Saha, 2002:48). Unless SF households are provided with improved access to credit, new products and technology, many will not be able to make ends meet. Here there is a role for all three outside actors, the GoB, the NGOs and the private commercial sector.

The above trend sketches the situation if there are no disasters. However, if a cyclone strikes and wipes away the standing crops, houses, stored seeds, agricultural implements, livestock and poultry, many of the SF households will be forced into debt and distress sale of their productive assets. If disaster strikes these households cannot cope on their own. Sometimes post disaster response has bypassed the SF households. For the sake of preemptive poverty alleviation the GoB will have to ensure that following a disaster these farmers have access to relief/rehabilitation assistance as well as emergency credit to restart production.

In fact the above requires a major conceptual change by GoB and NGO staff about the position of small farmer households. For the last three decades this category of farmers has missed the patronage of all three outside actors, the state, the commercial sector and the

NGOs. Medium and large farmers have relatively easy access to credit via state and private banks. They consider supplying credit to small farmers as a much more risky business. These farmers themselves are often reluctant to take credit for fear of losing their land in case they fail to repay the loan in time. NGOs, almost by definition, did not cater for the credit and other needs of small farmers as they considered them above their target group. Small farmers have therefore rightly been described as “tomorrow’s poor” (Rahman, 2002:79).

Finally it may be pointed out that while the number of farm households as percentage of the population will go down, the absolute number of people engaged in agriculture is likely to stay more or less constant and may even increase slightly over time (World Bank 1998). The area operated by small farmers is likely to further increase as large and medium size farms split up into smaller holdings. Providing foodstuff, in all its diversity, for the ever increasing population of Bangladesh will depend on how well small farmers produce. It is crucial that their production stays slightly ahead of demand and remains stable. After all, poverty alleviation efforts for rural and urban wage laborers will fail unless food production remains stable and real prices constant (Islam, 2002:12). This reality is an added reason for outside support for small farmers to enable them to improve production in normal times and recover quickly following natural disasters.

Fishers (F)

The fisheries sector plays an important role in the economy of the coastal zone with its vast inland and offshore fish resources. According to the 1996 Census on Agriculture, the number of ‘fish-catching’ households in the coastal districts is 484,000. They are 14% of rural farm households (compared to 8% in Bangladesh). They are from different categories of farm households.

Introduction and general overview

Comparison of the long-term trends in wage rates for the different categories of labor shows that those working in the fisheries sector have relatively good wages. Their indexed wage for 2000-2001 stood at 2292 against that of agricultural wage laborers at 2132 but lower than the general wage index at 2489 (base year 1970 = 100, see BBS monthly bulletins).

Local and international demand for fish and shrimps has increased steadily over the years, resulting in prices increasing faster than the average of price index.

However, most of the profit in the sector ends up in the pockets of relatively small groups of large producers who control the market. The poor men and women who are involved in catching the fish or producing the shrimps see little of the profit, yet run all the risk associated with fishing in the Bay of Bengal or working in the saline water of shrimp farms.

Box 2: Hard work for regular income

With assistance from the government Rabeya 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).

Rabeya Khatun (50)

Moheshkhali, Cox’s Bazar

(Source: PDO-ICZM, 2002)

Overall conclusions

Of all four livelihood categories analyzed in this report, fishers are the most typical for the coastal zone. Their numbers are not nearly as high as those in the other groups, but a coastal zone plan is only complete if it includes provisions for fishers.

The rich inland and offshore fisheries resources attract more and more people into this sector. However, the rich resources also expose the fishers to very high natural and sometimes human-made risks. While nothing can be done to stop cyclones from battering the coast, much can be done to reduce the vulnerabilities of the fishers. The existing early warning system is a clear example, and has already led to much lower casualties among fishers. Access to these warnings and compliance with them, leaves much room for improvement. Lured by large catches and big profits, individual boat owners are likely to continue taking risks. The fishers on board often have little or no say, fearing losing a job that in normal times provides them a reasonable living.

The often substantial profits in fisheries lead to over-exploitation of fish and shrimp and a declining resource base, all along the coast. The GoB has legislation in place to prevent this from happening but enforcement is lagging behind. At the same time some legislation is apparently imposed without those most directly affected being made aware of the need, or provided with compensation in one form or another. Here there is much room for improvement to reduce the shocks, seasonality and trend vulnerabilities that this legislation has on fisher livelihoods. Without taking these immediate and visible impact into account it is unlikely that the otherwise positive impact of this kind of environmental friendly legislation will ever materialize.

Another factor that has a major impact on fishers' livelihoods is piracy. The actual incidents of piracy, kidnapping and murder at sea as well as the fear they create, has a real negative impact on fisher households. Many are considering on-shore occupations because they are unable to live with the risks. Here again individual fishers are unable to do what is necessary, and they look to the government for marked improvements in the law and order situation.

Worldwide capture fisheries resources are declining and reports from Bangladesh show the same trend at the household level. At the same time demand for fish is increasing, both locally and internationally, and the difference between demand and supply is mainly met by increasing culture fisheries production. The large number of mini ponds and other water bodies in the coastal area, and the fact that poorer households own many of them, creates an opportunity for culture fisheries, as well as to alleviate poverty in the coastal area.

Urban wage laborers (UWL)

Introduction and general overview

UWL is the fastest growing of the four occupational groups considered in the CLA. At the moment one in four poor households live in an urban setting. Their number is rapidly increasing. The process is fueled by both push and pull factors. On the one hand many RWLs are unable any longer to make a living in rural areas and at the same time the rapid expansion of urban areas create a host of employment and other income opportunities.

The coastal zone includes two of Bangladesh's main cities, Khulna and Chittagong. Data available for the Statistical Metropolitan Area (SMA) of these two cities show a population of over 3.2 million in Chittagong and 1.2 million in Khulna (BBS, 2001b). Apart from these two SMAs each of the other 19 districts has at least one and sometimes more municipalities. Their total population is just over 2.0 million (BBS, 2001b:19-27). According to 1991 Census, urban population was slightly over 6 million, which was 19.3% of the coastal population. This is slightly lower than that of

Bangladesh (19.6%). Urban population in the country increased 23.4% in 2001. Disaggregate data for urban population of 2001 Census at the district level is not yet available.

Research indicates that 90% of the migrants to Dhaka city come from the central and southern districts of Faridpur, Barisal, Comilla and Dhaka (Afsar 2002:90), two of which are coastal districts. This might provide an explanation of why urbanization within the coastal zone is less than in Bangladesh as a whole, as many seem to leave the coastal zone and settle in and around Dhaka. It might also be an indication of a possible future trend of higher urbanization rates in the coastal zone as Dhaka will become overcrowded.

According to the preliminary 2001 census report (BBS, 2001b:6) rural population growth between 1991 and 2001 was 10.42% while urban growth was 38.02%. The rapid urban growth is also found in the coastal zone and in the next few decades the ratio of urban/rural poor is likely to change with more and more of the poor being urban-based and making a living as wage laborers.

All the indicators of poverty (head count, poverty gap, squared poverty gap and Gini index of inequality) indicate that poverty is less in urban areas than in the rural part of the country (ERD, 2002:7). There is some uncertainty about whether or not urban poverty continues to decline (ERD, 2002:8-9). One thing is however generally agreed, namely that the absolute number of urban poor is rapidly rising and is likely to continue to do so. If present trends continue the number of urban poor will ultimately overtake that of rural poor.

Overall conclusions

Urban wage laborer households share some of the characteristics and vulnerabilities of the three other occupational groups considered in this analysis of coastal livelihoods, but they are also different in other aspects. Their houses are as vulnerable to cyclones and probably more so to water logging than those of the rural poor. If they have access to some homestead land they continue to raise livestock and poultry and plant trees.

Urban and rural poor value the assistance available from NGOs, particularly the social benefits that come from group membership and the economic benefits that come from access to credit.

At the same time the urban wage laborers also have more to do with the formal economic sector, as can be seen from their awareness of the value of legal minimum wages, working hours and involvement with a central bargaining agency. Education of their children ranks high on their investment priorities as they see this as a major route out of poverty.

Expansion of employment opportunities is of course crucial to the urban poor. Lack of employment is one of their main vulnerabilities. Access to potable water, sanitation and medical facilities are but three of the essential services that the UWL households expect from the government.

Box 3: 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 andolon (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.

Habibur Rahman (40)
Industrial laborer, Chittagong
(Source: PDO-ICZM, 2002)

Perception of livelihood conditions

This chapter contains a summary of the perceptions of all those interviewed in the PDSCL survey.

Capital assets

Natural assets

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 are not mentioned very often but where they are the trend is negative.

According to the women the best years for natural assets were those when they received homestead land either through inheritance, government programs or purchase. For the men the best years are 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 are 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, homestead crops, trees and crops 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 in natural resources. Women also mention floods and fish disease as reasons for a decline in their natural resources.

Physical assets

Both women and men perceive physical assets as basically limited to their private property. Infrastructure, tube wells and electricity are only mentioned a few times while houses, poultry, cattle, and tools are mentioned again and again. Women also mention jewellery, but the men do not mention that at all. In general the men have a more positive perception of the trend in their physical assets.

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 *verandah* to ones own straw shed, creating a separate room within a shed, repairing the house, fitting a tin roof, making brick walls and connecting to house to the electricity net. 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.

Human assets

For women the birth of a son, health of the family members and schooling of children were the main human assets. For men education of sons and daughters, marriage of daughters and skill training are the main human assets.

Women went to considerable length describing how illness and death had negatively impacted their human assets. A long list of suffering, 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.

Social assets

For men and women membership of groups, mainly NGO related, but also related to government or informal local institutions top the list. For women dowry related problems are one of the main reasons for a decline in their social assets while for men discontinuation of 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 assets.

Financial assets

As far as financial assets are concerned women mainly mention loans while men also mention their various income generating activities (farming, fishing, salt farming etc.). Women have a rather negative perception of the trend in their 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 money lenders and Banks. While loans are apparently badly needed, most of the interviewees see them only as a temporary means to an end. Their aim is to settle the loans and they mention fully repaying their loans as a sign of a positive development. Majority of the loans are used for productive activities and mainly by men (even though the women take the loan). Some loans are taken for emergencies such as medical treatment and house repair. Negative changes in household financial assets were caused by a number of events. "Business failure" is mentioned often by the men, and behind such failure are mainly natural events such as cyclones, floods and animal diseases. Failure is sometimes caused by 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.

Strategies

Men and women mention a wide variety of resources to make a living, but three stand out as very common: children and relationships with others, identified by both women and men and land, identified mainly by men. Interviewees see a major role for themselves in maintaining these resources, i.e. educating their children and ensuring their health, maintaining their access to land and maintaining good relationships with relatives and powerful persons in the area.

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

When asked how they spend their cash income between consumption, social payment and investments, both men and women of all but the poorest households mention unexpectedly high levels of investment. Women mention slightly lower percentages than men, but on average both say they invest 30% and 60% of their income on investments. Social payments are normally less than 5% of the household's cash income.

Religious expenses are most often quoted by both men and women as social expenditure. Women and men also mention gifts to poor people, including relatives. Men also mention the various extortion fees that have to be paid to local musclemen, "committees" and other organizations if they want to continue certain type of income generating activities.

Outcomes

Poverty

The women and men interviewed describe poverty mainly in economic terms, i.e. the inability to feed and maintain a household, living “from hand to mouth”, going hungry and depending on others for survival. 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”. Many men and women refer to the absence of either labor power or capital as poverty. Many are keenly aware that a high dependency ration, i.e. many household members but only a few who can earn a living, as a major reason for poverty. The need for small families is clearly acknowledged but lack of access to family planning services leave the poor without choice.

In the range from very poor to rich, women perceive their households to be closer to “average” with the majority towards the poorer side. Men’s perception of their household poverty is more evenly spread across the range, with numbers tapering off from very poor to rich. Farmer and trader’s households consider themselves relatively well off, while fish processing households, day laborer, salt farmer and fisher households rank themselves mainly as very poor. Service holders, industrial laborer and shrimp households consider themselves to be “average” on the scale from very poor to rich.

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

Although the majority of men and women take three meals a day, more men than women eat three meals. Women heads of households report that they normally eat two meals a day. Some of them take 2 cooked meals and one dry meal a day for part of the year.

Most women report illness during the last year, compared to fewer men. Women report to have been ill for on average of 20 days while the men who were ill were so for a longer period. Some men are chronically ill, reporting illness over a third of the time during the last year.

Seasonal out-migration is a necessity for men and on average they spend three months away from home. Some women also mention that they leave their homes and on average they spend one month per year doing so. Some women leave their homes in search of work, but the majority does so for other reasons such as medical treatment of themselves or others and to visit relatives. Men quote mainly work related activities such as fishing, business etc. as the reason for their out-migration.

Almost all interviewees know of households that had grown out of poverty. Women mention as the main factor behind their improvement the fact that the children had grown up and had become income earners. Both men and women mention households that had sent son’s abroad for employment and who had sons who got good jobs because they were educated. Men also mention that households got out of poverty due to success in fishing, shrimp cultivation, business and farming.

Many interviewees know of households that have slipped into poverty from an earlier “above poverty” situation. A wide variety of reasons are mentioned with no particular single reason standing out. A high dependency ration is mentioned quite often, as is misuse and selling out of family property to maintain their previous living standard. Disasters such as cyclones, illness, and death of the main income earner, theft, robbery and marriage of daughters are also mentioned by both men and women. A few men and women mention that in some cases education of the children resulted in them rejecting manual labor. When they did not find a job the household slipped into poverty. A few men and women mention

“laziness” as another reason behind poverty. Finally loss in business activities, including shrimp cultivation, is also mentioned as a reason for the household situation deteriorating. The interviews in general show that people are quite aware of their situation, the options they have and the vulnerabilities they face. They also show that both women and men are actively considering how to manage their assets, resources and risks in such a way that they, and particularly their children, can lead a better life. People are also aware of what they themselves can do to improve life, but even more so of the fact that without outside assistance they will not make it very far. They have high expectations of how NGOs and the government can facilitate improvements in their livelihoods. They look towards NGOs for more personal and small-scale assistance such as through loans and skill training. From the government people expect more large scale and community/regional interventions such as maintaining law and order, reducing corruption, constructing infrastructure and offering public services such as education and medical care.

Vulnerabilities

The vulnerability context

The vulnerability context frames the external environment in which people live. People’s assets and decision making are affected by trends, shocks and seasonality that originate from these exogenous changes over which people have limited or no control. These vulnerabilities affect people as follows.

- *Shocks* can destroy assets directly (in the case of accidental deaths, floods, storms, civil conflict, etc.). They can also force people to abandon their homes and dispose of assets (such as land) prematurely through distress sale as part of coping strategies. Recent events have highlighted the impact that international economic shocks, including rapid changes in terms of trade, can have on the very poor.
- *Trends* may (or may not) be benign, though by definition they are more predictable than shocks. They refer, for example, to declining natural resources or to economic developments such as prices and interest rates.
- *Seasonal shifts* in prices, employment opportunities and food availability are among the enduring sources of hardship for poor people. The main reason for people diversifying their income generating strategies is to cope with seasonality.

Major vulnerabilities

From the survey it is clear that both women and men are fully aware of the main vulnerabilities that affect their livelihoods. Given the otherwise rich natural resource base in the coastal zone it is these vulnerabilities that keep many in poverty, or pull back those who have painstakingly managed to move above the poverty line. The majority of shocks, trends and fluctuations identified by the PDSCL respondents are natural and have a wider geographical setting. Their impact on people’s livelihoods are largely influenced by internal bottlenecks (social norms, values, behavior pattern) and access to resources. These are localized and the impact or outcomes vary between households and individuals. Major differences were also found between men and women (see chapter 4).

The number one shock mentioned by both men and women is cyclones 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, bank erosion affect a few households, but with severe consequences.

Men and women have similar yet different perceptions of the main fluctuations. Water availability tops the list for women while men mention employment as the most important

fluctuation in their lives. Women also mention employment, but it comes on the second place, while men mention water availability second. The fluctuation in the available capital/cash and lack of sanitation are also mentioned by women.

Women and men mention the negative trend in law and order as the main trend. They 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. Women and men roughly mention the number of water related vulnerabilities the same number of times, except for drainage congestion which is mentioned more often by men and salinity, which women seem to be more aware off and concerned about.

Women mention health as a human asset express concern about disease related issues more often than men. Diseases are mentioned often by those living in the Sundarban, on the islands and in the old land of the lower Ganges basin. The people living in the other areas mention diseases around the average number of times.

While the list of vulnerabilities is endless, with women even more vocal than men on what risks they face, and what should be done about them, people make suggestions concerning what they themselves will do, what they expect from NGOs and what they see as tasks for the government. Their own initiatives include such things as repairing their houses, adopting family planning methods, changing profession, saving for lean periods, planting more trees etc. People expect loans from NGOs, but also indicate that the repayment schedule should be appropriate to the use of the loan and that the interest rates should be lower than is now the case.

People also realize that there are many interventions that are outside their own scope or even that of NGOs, and only the government can do the necessary. Examples are building of hospitals and running of medical services, schools, drainage improvement, protection against floods, a more active police department and improved law and order. All in all the interviewees replies to questions about vulnerabilities and potential solutions give the impression of a rather aware and active group of people, willing and able to work towards improvements in their livelihoods with their own resources, but for real improvement also dependent on outside assistance through NGOs and the government system.

Finally the PDSCL survey and secondary sources indicate that the most vulnerable households are those that do not even own enough land to build their house on. Many of these households end up as 'illegal' settlers on government owned land such as coastal and inland embankments. There they often damage infrastructure that was built to reduce the vulnerability of others, putting them at higher risk. In Bhola the Bangladesh Water Development Board (BWDB) in partnership with a local NGO called COAST Trust initiated a program to lease part of the embankment to these embankment dwellers on condition that they maintain their part of the embankment. Such initiatives are worth multiplying as households without even a place of their own to live are right at the bottom of the poverty ladder. Most other possible interventions to reduce their vulnerabilities and enhance their livelihood options have little chance if households are constantly on the move, or threatened with eviction.

Table 1 gives an overview of the main vulnerabilities perceived by the interviewed household, categorized according to the individual or regional character of their impacts. From this table a few conclusions can be drawn. First the table shows that people perceive the dynamic and hazardous physical environment to be the main reason for their insecurities. A second conclusion could be that most of the vulnerabilities have an impact at a regional level, implying that mitigation should be initiated at that level. In addition it merits to be noted that the mitigation of many vulnerabilities at an individual level requires support at a regional level. For example, health security of individuals would depend greatly on basic medical services provided at a local and/or regional level.

Finally, many of the perceived vulnerabilities can (and use to) accumulate and may occur simultaneously. This seems a special characteristic of the coastal zone and may be an important reason for the slow decline of poverty in this resources-endowed region. In other words: in the coastal zone, the vulnerability for the dynamic and hazardous environment seems the main bottleneck for poverty reduction.

Table 1: Vulnerabilities identified through the household survey

	Micro / individual level	Meso / regional level
SHOCKS		
Natural		cyclone; drought; flood; pest infestation; erosion
Physical	loss of property due to erosion or cyclones	damage to local and regional infrastructure
Human	sudden illness or accident death of family member	Arsenic
Social		
Financial	economic crisis -	
TRENDS		
Natural		decline of natural resources; increase in salinity
Physical		drainage congestion
Human	deteriorating health conditions	
Social		law and order
Financial		employment/unemployment
SEASONAL FLUCTUATIONS		
Natural		heavy rainfall; salinity; storm
Physical		drainage congestion; transport problems monsoon
Human	water quality; availability potable and irrigation water	
Social		
Financial	Employment	

Ideal 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 what they plan to do further in the field. 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 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 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 replied that they would take a loan to make their dreams come true. A limited number of them 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 reply that they need the government or NGOs to provide more capital so that they can improve their livelihoods. The interviewees also point out that the loan repayment system needs to become more flexible to reflect the repayment possibilities. Furthermore people say the interest rate needs to be lowered.

Gender analysis

This chapter assesses the findings of the PDSCL survey and the life stories from a gender perspective. This is important to understand to what extent gender relations influence the way women and men are affected by the vulnerability context and have different coping strategies. This chapter therefore looks more closely into the gender division of labor, women and men's access to and control over resources, decision making patterns and the main constraints women and men encounter in relation to sustainable livelihood in coastal area.

Division of labor

An overview

Gender division of labor refers to the socially determined ideas and practices that define what roles and activities are deemed appropriate for women and men. The PDSCL survey provides an insight into the gender division of labor as men and women from the same household were interviewed separately (see Table 2).

Within the coastal area a common trend of dichotomization between family and society has made women mostly responsible for the production of private use values and men responsible for the production of exchange values. Thus the main tasks and responsibilities of women are related to the domestic domain that includes activities performed within the homestead area. Men on the other hand are more involved in the public domain and includes political and economic or income-earning activities that take place or have impact beyond the home and relate to access to resources. Activities executed by women and men are summed up in the following table:

Table 2: Gender division of labor

	Women	Men	Both
Private	<ul style="list-style-type: none"> • Child care -nurturing • Domestic tasks • Livestock-poultry rearing • Post harvest tasks • Subsistence agricultural tasks 		<ul style="list-style-type: none"> • Water fetching • Weaving • Fish processing • Pottery • Daily prayer • Teaching children
Public arena	<ul style="list-style-type: none"> • Collect cow dung • Collect twigs and branches • Peddling • Firewood selling • Domestic maid 	<ul style="list-style-type: none"> • Farming • Fishing • Trading • Daily labor • Gatherer/collector • Traditional healing 	<ul style="list-style-type: none"> • Daily labor • Industrial labor • Small trading • Block farming • Shrimp fry collection • Milk selling • Services • Private tuition

Source: PDO-ICZM, 2002

Irrespective of the main occupation of the household members, women do the majority of the work in the private arena. While men and women share some of these domestic tasks, there is no task at homestead level, which is solely done by men. Though men perform most of the activities in the public arena, women are gradually moving into that area.

Within the boundaries of the homestead, women perform the household and care tasks, such as cooking, cleaning, and child care-nurturing, as well as productive tasks. They are in charge of cattle and poultry rearing, post harvest activities (e.g.: thrashing, husking, and parboiling) and subsistence agricultural tasks (e.g.: homestead vegetation, and fish-duck

culture). Both men and women carry out some activities like water fetching, fish processing, fish drying, net making and repairing, pottery, daily prayer, teaching children, etc., within the private boundary.

In public, women execute some specific tasks that are of an expenditure-saving nature. They go out, for example, to the low-lying areas, nearby hills, forest or rivers to collect cow dung, twigs and branches used as fuel. Some women are involved in peddling, firewood selling or work as domestic maids in wealthier houses. Men and women are involved in daily labor, industrial labor, small trading, block farming, shrimp fry collection, milk selling, services, and private tuition for their living. Outside the home boundaries men are farmers, fishers, traders, daily laborers, gatherers/collectors and traditional healers.

Division of labor in different livelihood groups

From the PDSCL study four major livelihood groups are identified, rural wage labor, urban wage labor, small-scale farmer and fisher, as major stakeholders of the coastal population. Within these groups women and men have separate responsibilities, rooted through cultural context and social construction of sex difference. In the following section divisions of labor have been elaborated as per the above mentioned livelihood groups.

The context and individual factors shape women's notion of choices as *rural wage laborers*. Women tend to accept manual and unskilled employment opportunities that happen to be available in the rural area where they live. This type of work is often monotonous and lowly paid, for example, domestic work, earth work, road maintenance work, etc. Conversely, men tend to find jobs that have a more diversified character and for which mobility and seasonal migration are required.

Traditional division of labor within the *small farmer family* is usually considered as "natural" in the sense of being obviously and originally imposed by the sex difference itself. As part of family labor force women are involved in operations that are basically manual, e.g. seedbed preparation, transplantation, weeding, irrigation and post harvest work that require long working hours. In contrast men's work usually involves machinery such as ploughing by draught animals or power tiller, applying fertilizers, crop harvesting and selling of produce in the market place.

Within the *fisher* household women do fish processing, fish drying, etc. Outside the household women usually fish close to the shore whereas men tend to fish offshore or in major inland water bodies. Some women also go to door-to-door fish selling.

Urban wage labor women have a propensity to work outside to meet their basic needs of survival and supplementing the family income. Both urban male and female laborers work long hours but their wages and other facilities are often not the same. Both tend to have different type of domestic responsibilities. Women take up some economic activities outside the household, balancing their domestic responsibility with their responsibilities to earn an income. Combined these responsibilities limit the time of women to pursue other opportunities or be more mobile.

Inequalities

In the coastal rural area women are overburdened by the reproductive responsibilities, which are not often shared by men. As a result women's economic contribution to the family remains invisible and is neglected. Thus women's role and position at other levels such as in rituals, religion, healing practices, e.g., *kabiraj*, or the work of the traditional birth attendant (TBA) remains disregarded. By contrast in female-headed households the independent role of women in family/domestic life, community and more over decision-making process is imperative.

In urban areas women's economic contribution to attain a minimum standard of living alongside their parents or husband is more recognized. Wage exploitation takes place with

the tendency to utilize cheap women's labor. Even where men and women do similar work, women are discriminated against by giving lower wages and often by humiliation. There is awareness about wage exploitation both in rural and urban area. The major problem is that the poor don't know where to go for help.

In some areas such as Khulna and Bagerhat, extensive large shrimp (*bagda*) cultivation ruins agriculture. In these extreme environmental and socio-economic settings, women's scope for daily labor is reduced. In preparing the shrimp ponds (*ghers*), male labor is prominent. Women are forced to depend on shrimp fry collection, which requires standing for long hours in saline water. This is gradually affecting their health and resulting in income insecurity.

Access to and control over household and community resources/assets

Access to resources

How resources are accessed and who controls them is determined by dynamics outside and inside the household. Here access refers to the availability and possibility to use the resources. The findings of the PDSCL survey on access to resources or assets are summarized in Table 3.

This Table reflects the gender differences in access to livelihood assets. It clearly shows the differences between men and women's roles and responsibilities. Men have access to resources related to the public arena (membership of NGO, Unions, access to land, water), whereas women's resources are mostly related to the private spheres (furniture, household utilities, sewing machines, jewelry, etc). Very few women, including women heads of households, have access to both land and water and hold land titles in their own names.

Housewives tend to have access to land and water through male family members.

Regional differences, religious values, social norms, the law and order situation, and limited mobility also restrict women's access to common property resources, formal and non-formal institutions and physical infrastructures. These gender differences in accessing resources are determined by rules, norms and practices that prevail in different domains, e.g., family norms, patron-client relationships, power relations, informal wage agreements, etc. Women's acceptance of their secondary claims on household resources not only undermines their own well-being but also limit their contribution to a sustainable livelihood. The PDSCL survey found that more and more women are holding saving accounts and that their NGO membership is increasing. This has increased their access to financial resources and raised their mobility. However, access to financial resources does not automatically imply that women also have a say in their use.

Table 3: Asset distribution

	Women	Men	Both
Natural		Tree Wetland Honey Crab Watercourse	Pond Land Homestead Homestead garden
Physical	Furniture Household utilities Sewing machine Bed Handloom Embroidery machine	Trawler Hook Handloom Shop Electricity Road Embankment	Boat Net Poultry Cattle House Rickshaw van Jewelry Tube-well, latrine
Human		Wife Training	Son Daughter Children Education Health Other family members
Social	Relief	Membership in local functional organization Membership in UP Trade Union Political party <i>Salish</i> Relation with neighbors Leadership	Membership in CBO Marriage
Financial	Compensation Production tool Jewelry	Insurance Cattle <i>Gher</i>	Savings Credit Job Income/profit from activities

Source: PDO-ICZM, 2002

Control over resources, assets and capital

Control over resources includes keeping earnings and having a say in household expenditures. Sometimes it refers to ownership and to decision-making as well. Findings of the PDSCL survey show that women usually have control over poultry, homestead vegetation, children and daughters in law. Women however are losing control over resources like inherited land. This is among others due to the fact that women have to pay dowry or have to arrange their daughter's marriage.

Compared to men, women tend to have very limited control over resources and have little decision making power. Even if women have an active contribution to the household productivity, this work is often not taken seriously and does not necessarily give women the power to participate in decision making on the use of the money or products. In contrast with rural areas, women in urban areas have more control over their resources and earnings. Both men and women consider micro credit and training of particular importance. As part of the NGO policy women get the preference in micro credit systems that could act as a driving force to come out from the boundaries of their homestead. Women sometimes manage to use the loan to increase their family income. The power to make small purchases, holding assets in their own name and increased self-awareness are examples of the positive influence of an increased access to micro credit. At the same time, increased access to loans risks to have a negative effect on women's position and on the household's livelihood

capacities. This is because in many cases the loans that are taken by the women are used by the men, but women may not participate in deciding where to spend the money.

In either case, women are held responsible for repayment of the loan. NGO pressure on women to repay loans creates huge tensions for women's well-being and sometimes lead to domestic violence against women. Women are often forced to go out to borrow money or take more loans from another NGO to repay the loan. In those cases women become more vulnerable due to the credit system. PDSCL survey findings reflect the ambiguity of the impact of the micro credit system upon the position of coastal women and the household poverty situation.

Some suggest NGOs are concentrating on women because they are easily traceable, are more disciplined than men, are easier to control and to intimidate and are more sensitive to cultural factors such as honor and shame.

Decision making process

At the household level two distinct decision-making areas are important, choice of strategic activities and spending of income. Women have clear participation in taking decision to send their children to schools and they are more aware about the need than the men.

The survey findings depicted the general idea that women's participation in decision making tends to be limited to decisions on small consumer purchases, buying of food, household consumption items, health care matters etc. In contrast with that men take decisions on market transactions in major assets and marriage of children etc. Nevertheless women are slowly becoming involved in the decision making process by spending their own earnings, loans and cash income as per their need and choice.

Partly due to seasonal migration of their husbands, women have to take more responsibility and obtain more decision making power. In case of a financial crisis women can take the decision to sell assets such as poultry, cattle or to borrow money from others. Sometimes they have to go further for their children's treatment. Situations where the male is inactive, ill, or unemployed or the family is large, can also act as catalyst for women's involvement in productive work. That in turn brings some economic sovereignty and active involvement in decision-making processes.

As part of the various affirmative measures to increase women's representation in decision-making and public representative bodies, e.g., Union Parishad, women are progressively moving forward from their static domestic boundary. Therefore the voice of women is rising. Along with the representation in local government, women's participation and leadership within NGO groups are increasing. In these groups they can voice their needs, choices and priorities and share their experiences with each other. In describing their resource and best years of their active life, many women talked about their group membership.

Mobility

Women's secondary position within the household and social seclusion are reinforced by women's limited mobility. However we see coastal women coming out from seclusion. Driving forces are poverty, development interventions, NGO and/or agency involvement, growth of market centers and health and education policies. An increasing tendency to migrate to urban areas to work as wage laborer also indicates that women are becoming more mobile. At the same time men's mobility is also increasing, mainly because of the seasonal variation in employment possibilities.

Main constraints/obstacles

The limited access to and control over resources, as well as other factors (e.g., restricted mobility, negative social values and norms, bad health) are major obstacles to women having access to productive work. Women's mobility, for instance, is restricted by the cultural traits. However, the poorest of the poor tend to overcome this barrier by going out

of their domestic boundary to find paid work. On the other hand women from non-poor social strata maintain the traditional values to a larger extent and implicitly allow their men to control their social status and mobility.

Priorities and opportunities

Differences exist between men and women in priorities and opportunities. While women mainly talk about income generating activities, children's education, small-scale business, group membership, medical treatment, etc., men focus more on increasing assets by purchasing land, *gher*, fishing equipment, etc.

Opportunities to enhance livelihoods are not always the same for men and women. Training, micro credit, health and education facilities are prominent examples of opportunities for women. On the contrary, men prefer to adopt different types of wage labor for their living. Besides, men are also in an advantageous position referring to job permanency in the industrial labor arena.

Vulnerabilities

People are generally well aware of their vulnerability to local phenomena such as cyclones, flood and drought. However people in the coastal zone are often still unaware of more distant and partially man-made vulnerabilities such as climate change, fluctuation in world market prices, changing land-use patterns, etc. With the ongoing urbanization and monetization and globalization of the economy, the reality of these new vulnerabilities is likely to grow rapidly.

These changes affect the assets and securities of life and thus affect people's well-being. The PDO-ICZM project analyzes the vulnerabilities in relation to the essential well-being related securities, which are identified to be: food; water; income; health and personal safety; and safety of properties. The following sub-sections highlight these securities from a gender perspective.

Food security

Food security depends on such interrelated issues as: crop production; crop loss; food availability; flow of income and family size. Within the households, gender discrimination in food allocation and distribution is evident. Men are getting more and better quality food than women. Even amongst the children this discrimination persists and women and girls go hungry more than boys and men. The major reason behind this is that the traditional priority to masculinity is given in a poverty situation. Even when women have the same numbers of meals a day, they eat less and meals are of lower quality. This difference makes women substantially more vulnerable for changes that affect the availability of food, such as natural disasters and seasonal high market prices.

Water security

In coastal areas, the availability of safe drinking water has been mentioned as one of the major problems that women face in particular. This holds true for both the dry and the wet season. Lack of potable water affects men and women differently. Men have easier access to common property resource, such as community ponds and tube wells, than women. Therefore, many women face difficulties in water fetching, fulfilling domestic tasks, bathing and maintaining reproductive hygiene and sanitation. Many women have to fetch water from far, use indigenous rainwater conservation techniques, use pond and canal water for cooking, bathing, washing, animal husbandry and watering the homestead garden. During the dry season, women suffer in particular from the lack of sanitation facilities and from the need to use saline water for household purposes. The main impact of lack of potable water on men is related to sanitation and health safety.

Income security

Due to lack of cash income, women are becoming more and more dependent on micro credit and low paid work. In case of employment, women's wages are lower. Men are often forced to shift occupations, go for seasonal migration and lose-out on earnings by selling fish catches beforehand to get loans (*dadon*). Loss of assets, e.g., the loss of crop, cattle and poultry due to natural calamities or pest infestation, or an employment crisis, impacts the income security of both men and women.

Lack of employment is a major factor leading to income insecurity and limits women's ability to move and to provide cash support to their family together with men. Due to seasonality of employment men cannot go to work at certain periods of time. Depending on their occupation, the lean period varies. At that time they have to depend on other activities to maintain their livings. Sometimes they borrow money to bridge periods of no or low income.

Most of the men consider landlessness as a reason for their income insecurity. Loan repayment, *dadon*, dowry, land fragmentation and natural calamities influence people to become landless. Illness is holding back men and women from the income earning activities as well.

Health security and personal safety

In the coastal areas both men and women are living in a poor health status. Poverty, frequency of natural disasters, lack of health and sanitation facilities, lack of awareness and superstitions are major factors behind health insecurity. Women's reproductive health is degrading as a consequence of prevalent food taboos during the pre- and post natal phases, of insufficient food allocation, poor hygiene and sanitation, frequent pregnancies and their hardship often leads to illness.

Improving their health requires proper treatment and dietary improvement, which women don't have access to. Coping measures include borrowing money from kin or neighbors, formal/ non-formal medication and wearing amulets (*doatabiz*). Illness of income earners has a two-fold impact. It leads to a reduced income due to inability to work and to medication costs. As in most cases, men are the cash earners and they have to bear the medication cost if any member of household falls ill.

Domestic violence is eminent in the coastal area. Women experience domestic violence frequently from the hands of their husbands or other relatives from the in-laws side. The lack of law and order affects men and women differently. Young women cannot go out to the public place very often due to the presence of musclemen. Because of the perceived threat many grown up girls remain at home and do not attend secondary school. In rural area female heads of households face more personal insecurity than the 'housewives'. With an

Box 4: I have my own family

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.

Sayera Banu (50)

Lakshmipur

(Source: PDO-ICZM, 2002)

increase in seasonal and long term out-migration of men to urban areas, more and more women will face this kind of vulnerability.

Safety of house and property

The prevailing lack of law and order leads to over exploitation and a decline in resources and loss of assets. As a result, there is much conflict over resources and men face the risk of terrorism, particularly in certain livelihood activities such as fishing at sea.

The loss of assets as a consequence of cyclones (e.g. house, poultry, cattle) and their limited resilience to such disasters, affect women profoundly. At the time of a cyclone and afterwards, women face severe hygiene and sanitation difficulties along with a lack of food, income and secure shelter. In case of a cyclone threats women try to get information from their neighborhood, go far to see the flag or listen to the radio for cyclone warning. During the cyclones they go to a cyclone shelter (if available) and afterwards they do what they can to regain the loss of assets.

Depending on their resources the impact of cyclones on men varies. As men are usually involved in public arena and have more financial capital than women they suffer loss in that capital (like, salt field washed away, crop loss etc.). Women face difficulties in the area of food, housing, water and sanitation purpose more than the men.

In cases of heavy rainfall women cannot go out for earning and face difficulties in their routine domestic tasks. Due to heavy rainfall and lack of food availability women have to stay inside, borrow money, cook less, and eat less.

Concluding reflections

In the coastal areas, natural calamities and climatic conditions (including extreme events, such as floods, cyclones and storms), significantly impact women and men's day-to-day livings. To cope with the natural hazards and human induced problems and/or constraints, both men and women experience economic and social exploitation. Besides, women experience specific gender constraints that limit their choices and opportunities. Since women's multiple productive and reproductive activities are not supported by a necessary access to and control over household assets and by decision-making power, mobility, self confidence and good health and education conditions, these gender inequalities make women substantially more susceptible to the dynamics of their environment.

Enabling environment

The institutional context strongly influences people's capacities to cope with the dynamic and hazardous environment in which they have to make a living. Access to resources and services and law and order are the most important concerns. People are vulnerable to corruption of different service providers and public agencies, and to terrorism by the local *mastans* (musclemen). They are also vulnerable to injustice by local power structure. People generally expect an active and responsive government, better infrastructures, more credit facilities, legal interventions for protection of natural resources and more positive social attitude. However, poor services have generated a passive attitude towards the government. Lack of coordination among government departments cause congestions in service delivery systems, misuse of scarce resources as well as corruption. Payment of bribe against services is widespread. Collaboration between Government, NGOs and the private sector, efficient functioning of the government at the local level, accountability and good governance in the overall development processes are need of the day.

This chapter elaborates on a few findings of the household survey.

Local government

The PDSCL suggests that in normal times poor people do not often go to the *Union Parishad*, as they find it not enough supportive and responsive to their needs. This finding is contrary to that of CARE's monitoring of livelihoods project which found that the poorest of the poor were receiving more help from the UP than from NGOs (CARE Bangladesh, 2002: 12). However in emergency situations like cyclones and floods, coastal poor do get relief through UP, though they have many complaints about how it is handled.

In the coastal zone, as in the rest of the country, there is relatively little coordination between NGOs and local government bodies such as the UPs. There is much to be gained from improved coordination as interventions can be timed and targeted to have mutually reinforcing impacts.

People have also a negative impression about local justice, which is administered through the *salish*. It is often dominated by local government and religious leaders and other elite. Differences in occupation, economic status and religious belief often influence the justice that people expect and get from the *salish*. The local government is expected to contribute to the maintenance of law and order, which they do not perform to the expectation.

There is a great need for disaster preparedness where the local government can play an important role. People are in need of timely storm warnings and information about employment and social services. Local government can cater these services.

Government institutions

Local people have an intricate relationship with government institutions and agencies. They are getting some services provided by the government, like, physical infrastructure development, health services, educational services and agricultural extension services. But in some sectors the government institutions have negative image, like, law and order, natural resource management, health care, banking, relief distribution and rehabilitation of destitute people. The main reasons behind the negative impression are corruption in service providing agencies, inactive police department, delayed justice, mismanagement in natural resource exploitation, rigid bank loan system and delayed response to disasters. On an average, the role played by the government institutions is very much important. But access to the services provided by the institutions is severely constrained.

People have complaints about health facilities, education infrastructure, drainage, domestic water availability, sanitation and credit. Among the service providers are different government departments like Health, Education, BWDB, LGED, DPHE and banks. The PDSCL indicates that these institutions do not cover the coastal zone and its people adequately.

NGOs

Although there are many NGOs operating in the coastal zone, many of them seem to be working with a single focus, that is credit. Even then this credit is not accessible to the very poor who cannot abide by repayment procedures. The PDSCL indicates that people expect wider coverage and more services from the NGOs, particularly in the field of health care, credit, housing and post-disaster rehabilitation.

NGOs provide collateral-free loan. The people now can get loan and invest in small-scale business. The PDSCL indicates that the rate of interest is often considered high and rigid weekly loan repayment systems reduce the effectiveness of the program. Where the poor get into a cycle of debt, micro-credit has a detrimental impact on their livelihoods. Some of the poor have actually stopped taking loans though they badly need credit both for productive and emergency use.

NGOs are becoming more and more involved with the government. Government is utilizing the efficiency and wide spread coverage of the NGOs and the NGOs are playing supplementary role in providing extension services. Overall, in the financial, health, sanitation and education sectors the NGOs are perceived in a positive manner and are considered relevant by the local people.

Participation

Various studies and reports have indicated that lack of participation by the direct stakeholders is an important reason behind the poor functioning of governmental interventions. Findings of the PDSCL show that people are not happy with many service providers, both government and NGOs. At the moment there are various initiatives in stakeholder participation in development programs. NGOs have been practicing it since the 1970s through community-based poor people's groups. Stakeholder consultation and participation has increasingly being acknowledged as an instrument of program planning and implementation by the government. As more and more multi-sectoral development programs are initiated and targeted to different sections of the population, working arrangements between different agencies, both government and non-government, are being developed and tested.

These initiatives may well yield valuable lessons on what does, and does not work. Existing practices and lessons learned and models of good practices could then develop a stakeholder consultation model, which may lead to demand-driven planning and implementation mechanisms. The ultimate aim of such a consultation process would then be to reduce coastal vulnerabilities and enhance the livelihood opportunities for the coastal poor.

Box 5: NGO helps

Kohinur Begum 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.

Kohinur Begum (26)
Woman head of household
Shymnagar, Satkhira
(Source: PDO-ICZM, 2002)

Law and order and enforcement

When talking about their vulnerabilities, those interviewed often referred to a precarious situation in the field of law and order. Extortionist practices and terrorism are increasing. Fishers and people depending on forest resources are often harassed and attacked by dacoits and musclemen. Fishers and others do not get protection by the authorities. Women do not feel safe to go out alone, particularly in the evening.

Forest and aquatic resources such as shrimp fry and *hilsa* fish are dwindling fast due to indiscriminate harvesting. While there are protective regulations, these are not adequately enforced. As a result people feel discouraged to invest in businesses. Even disinvestments in marine fishing by selling trawlers have been reported. Improved enforcement would attract more private investments in the coastal zone and would benefit the poor in various ways. Another impact of improved enforcement would be less exploitation of critical elements in the natural resource base. Without enhancing law and order and enforcement practices, it is likely that many other vulnerability reducing activities that the poor expect from the GoB and NGOs would not even get off the ground.

Market

The monetization process of the coastal zone is rapidly taking place. The market economy is gradually replacing the erstwhile subsistence economy as elsewhere in the country. This is mainly reflected in activities increasingly being undertaken for the market that brings cash income and shifting of labor force from primary activities such as agriculture, fishing and forestry, to services and industries. There are differences between rural and urban areas in adopting monetization process.

Producers involved in traditional professions are now adopting modern technologies and equipment to respond to the market. For example, farmers now use power-tillers in many areas to plough land, in some areas even tractors. Traditional sailing boats are being replaced by mechanized boats (trawlers) in marine fishery. In response to the demand in the international market, farmers in brackish water zone have substantially changed their land use pattern, replacing paddy farming by shrimp farming. A host of subsidiary activities are flourishing to cater the need of this enterprise, such as, shrimp hatchery, ice factory, processing factory, etc.

Poor people resort to seasonal migration ranging from one week to three/four months from areas of deficit to areas of surplus. They mainly go for wage employment. In the lean period, many small farmers sell labor power in areas of higher cropping intensity and in urban centers.

REFERENCES

- Action Aid, 2002.** The Bangladesh experience with PRSP. Dhaka, Action Aid Bangladesh.
- Afsar, R., 2002.** Migration and rural livelihoods. Hands, not land: how livelihoods are changing in rural Bangladesh. K. A. Toufique. Dhaka, Bangladesh Institute of Development Studies: 89-96
- Akash, M. M., 2002a.** Poverty reduction strategy paper: what, why & for whom. Dhaka: 7.
- Akash, M. M., 2002b.** Wither PRSP (poverty reduction strategy paper). Dhaka: 7.
- BBS, 1999.** Census of agriculture. Dhaka, Bangladesh Bureau of Statistics.
- BBS, 2001a. 1999.** Statistical yearbook of Bangladesh. Dhaka, Government of Bangladesh.
- BBS, 2001b.** Population census 2001 preliminary report. Dhaka, Government of Bangladesh.
- BBS, Dec 2001 and Feb 2002.** Monthly Statistical Bulletin Bangladesh. Dhaka, Government of Bangladesh.
- CARE Bangladesh, 2002.** Livelihood monitoring project (draft report). Dhaka, CARE Bangladesh.
- ERD, B., 2002.** Bangladesh: a national strategy for economic growth and poverty reduction. Dhaka, Economic Relations Division, Ministry of Finance, Government of the People's Republic of Bangladesh.
- Islam, M., 2002.** Poverty creation or poverty reduction under PRSP: a case for reviewing and rethinking the role of the state in Bangladesh. Bangladesh and the PRSP, Dhaka, Bangladesh Economic Association.
- PDO-ICZM, 2002.** Perceptions of Direct Stakeholders on Coastal livelihoods; Working Paper of

the project “Program Development Office for Integrated Coastal Zone Management (PDO-

ICZM). Water Resources Planning Organization, Ministry of Water Resources. Dhaka,

September, 2002.

Rahman, H. Z.; M. Hossain, 1992. Re-thinking rural poverty: a case for Bangladesh. Dhaka,

Bangladesh Institute of Development Studies.

Rahman, R. I., 2002. Rural poverty: patterns, processes and policies. Hands not land: how

livelihoods are changing in rural Bangladesh. K. A. Toufique. Dhaka, Bangladesh Institute

of Development Studies: 79-88.

Rozario, S., 2002. Gender dimensions of rural change. Hands no land: how livelihoods are

changing in rural Bangladesh. K. A. Toufique. Dhaka, Bangladesh Institute of Social Studies: 121-130.

Saha, B. K., 2002. Rural development trends: what the statistics say. Hands not land: how

livelihoods are changing in rural Bangladesh. K. A. Toufique. Dhaka, Bangladesh Institute

of Development Studies: 47-55.

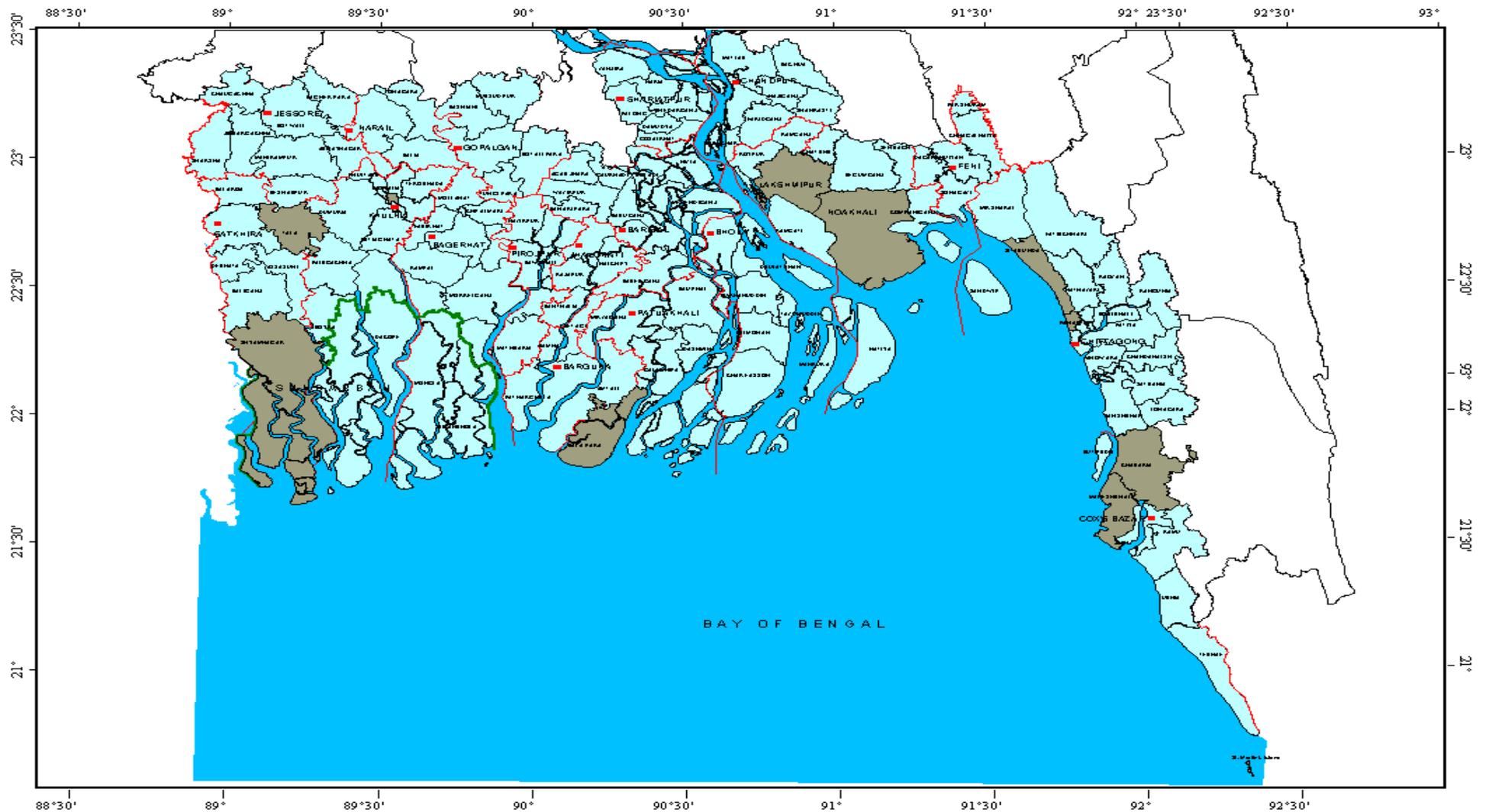
Toufique, K. A.; C. Turton, 2002. Hands not land: how livelihoods are changing in rural

Bangladesh. Dhaka, Bangladesh Institute of Social Studies.

WB, 1998. Bangladesh 2020. a long-term perspective study. Dhaka, The World Bank and

Bangladesh Centre for Advanced Studies.

**ANNEX A: Map showing locations under the PDSCL
SURVEY**



LOCATION OF PDSCL SURVEY

ANNEX B: STATISTICAL DATA

Annex B.1: Social stratification in rural Bangladesh.....	43
Annex B.1.1: Number of rural households by farm category	43
Annex B.1.2: Percentage of rural households by farm category	44
Annex B.2: Agriculture wage rate	45

Annex B.1: Social stratification in rural Bangladesh

Annex B.1.1: Number of rural households by farm category

District	Number of households					
	Landless	Small farmer	Medium farmer	Large farmer	Total	Agriculture labor
Barguna	71,520	42,030	27,525	5,395	146,470	126,480
Barisal	181,011	145,252	37,238	2,920	366,421	78,375
Bhola	147,280	83,075	32,660	5,665	268,680	142,511
Jhalokati	61,318	32,111	15,700	1,506	110,635	127,270
Patuakhali	137,020	54,804	41,761	9,745	243,330	83,671
Pirojpur	115,206	67,902	29,874	3,498	216,480	21,823
Chandpur	208,259	135,213	15,868	638	359,978	116,358
Chittagong	364,197	160,051	38,553	2,902	565,703	159,370
Cox's Bazar	148,010	68,620	18,525	1,940	237,095	32,470
Feni	100,095	72,964	11,550	484	185,093	59,332
Lakshmipur	132,033	85,060	17,845	2,777	237,715	123,638
Noakhali	201,050	134,053	31,254	6,763	373,120	29,030
Gopalganj	69,529	78,305	32,362	3,304	183,500	74,360
Shariatpur	89,437	77,386	20,154	2,078	189,055	89,867
Bagerhat	123,851	82,898	37,922	6,784	251,455	82,468
Jessore	186,630	146,401	51,189	6,497	390,717	57,943
Khulna	103,908	68,085	33,089	6,115	211,197	122,207
Narail	43,545	38,734	22,118	1,982	106,379	46,915
Satkhira	165,818	100,213	35,095	5,746	306,872	69,348
Total CZ	2,649,717	1,673,157	550,282	76,739	4,949,895	1,643,436
Bangladesh	9,386,345	6,066,393	2,077,784	297,665	17,828,187	6,401,453

CZ: Coastal zone

Note:

Socio-economic strata:

Landless: Owning no land or land up to 0.5 acre

Small farmer: Land holding >0.5-2.5 acre

Medium farmer: land holding >2.5-7.5 acre

Large farmer: land holding above 7.5 acre

Agriculture labor households overlap with other categories.

Source: BBS, Agriculture Census 1996

Annex B.1.2: Percentage of rural households by farm category

District	Percentage of rural households					
	Landless	Small farmer	Medium farmer	Large farmer	Total	Agriculture labor
Barguna	49	29	19	4	100	22
Barisal	49	40	10	1	100	33
Bhola	55	31	12	2	100	46
Jhalokati	55	29	14	1	100	47
Patuakhali	56	23	17	4	100	40
Pirojpur	53	31	14	2	100	12
Chandpur	58	38	4	0	100	32
Chittagong	64	28	7	1	100	41
Cox's Bazar	62	29	8	1	100	31
Feni	54	39	6	0	100	32
Lakshmipur	56	36	8	1	100	33
Noakhali	54	36	8	2	100	26
Gopalganj	38	43	18	2	100	31
Shariatpur	47	41	11	1	100	36
Bagerhat	49	33	15	3	100	35
Jessore	48	37	13	2	100	31
Khulna	49	32	16	3	100	33
Narail	41	36	21	2	100	32
Satkhira	54	33	11	2	100	32
Total CZ	54	34	11	2	100	33
Bangladesh	53	34	12	2	100	36

Components may not add to totals due to rounding.

Source: BBS, Agriculture Census 1996

Annex B.2: Agriculture wage rate

Month	Greater district	Without food		With 1 meal		With 2 meals		With 3 meals	
		Male	Female	Male	Female	Male	Female	Male	Female
March	Barisal	68	47	60	44	50	40	47	37
	Patuakhali	70	na	na	na	56	na	51	na
	Chittagong	90	70	74	na	70	na	61	na
	Noakhali	72	48	60	41	na	na	55	na
	Faridpur	61	50	57	47	45	na	44	na
	Jessore	60	na	55	na	51	na	43	na
	Khulna	62	43	60	41	53	40	50	na
	Bangladesh	66	51	57	44	53	39	48	38
April	Barisal	67	46	59	44	50	40	47	37
	Patuakhali	70	na	na	na	56	na	51	na
	Chittagong	90	70	75	na	70	na	67	45
	Noakhali	72	53	61	41	na	na	54	na
	Faridpur	61	51	56	46	45	40	44	na
	Jessore	59	na	55	na	51	na	42	na
	Khulna	62	42	60	41	53	39	51	na
	Bangladesh	65	51	56	44	53	40	48	38
May	Barisal	69	48	61	45	50	40	47	37
	Patuakhali	71	na	na	na	56	na	51	na
	Chittagong	90	65	75	na	70	na	67	45
	Noakhali	72	48	60	41	na	na	54	na
	Faridpur	61	50	57	47	45	na	44	na
	Jessore	60	na	55	na	51	na	42	na
	Khulna	62	42	60	41	53	40	51	na
	Bangladesh	66	51	57	45	53	39	48	38
June	Barisal	70	48	60	45	51	40	45	na
	Patuakhali	71	na	71	na	na	na	na	na
	Chittagong	90	65	75	na	70	na	65	45
	Noakhali	72	50	60	45	na	na	55	na
	Faridpur	62	50	57	48	45	na	46	na
	Jessore	60	na	55	na	50	na	43	na
	Khulna	63	42	60	41	51	40	50	na
	Bangladesh	66	51	58	45	52	40	47	38
July	Barisal	72	50	62	45	53	40	45	na
	Patuakhali	74	na	na	na	Na	na	55	na
	Chittagong	95	na	78	na	75	na	70	45
	Noakhali	73	50	62	45	55	na	52	na
	Faridpur	65	51	60	46	48	na	45	na
	Jessore	60	na	54	na	51	na	44	na
	Khulna	63	43	60	42	51	40	50	na
	Bangladesh	66	57	59	46	53	41	48	39
August	Barisal	75	50	62	na	54	na	48	na
	Patuakhali	75	na	na	na	60	na	56	na
	Chittagong	98	na	75	na	70	na	67	45
	Noakhali	75	50	66	na	57	na	52	na
	Faridpur	63	51	55	45	50	na	46	na
	Jessore	60	na	54	na	52	na	44	na
	Khulna	65	44	62	45	55	40	52	na

Month	Greater district	Without food		With 1 meal		With 2 meals		With 3 meals	
		Male	Female	Male	Female	Male	Female	Male	Female
	Bangladesh	67	51	59	47	53	41	48	40
September	Barisal	74	50	62	na	54	na	46	na
	Patuakhali	75	na	na	na	60	na	56	na
	Chittagong	97	na	77	na	73	na	69	45
	Noakhali	74	50	65	46	56	na	52	na
	Faridpur	65	51	58	46	49	na	46	na
	Jessore	60	na	54	na	52	na	44	na
	Khulna	63	47	61	43	54	40	51	na
	Bangladesh	67	52	59	47	54	44	48	49
October	Barisal	74	51	62	na	53	na	47	na
	Patuakhali	75	na	na	na	60	na	56	na
	Chittagong	97	na	77	na	73	na	70	45
	Noakhali	74	50	64	45	56	na	52	na
	Faridpur	64	51	58	45	49	na	46	na
	Jessore	60	na	54	na	52	na	44	na
	Khulna	64	46	61	41	na	na	52	na
	Bangladesh	67	51	59	46	44	42	48	39
November	Barisal	75	51	63	na	52	na	47	na
	Patuakhali	75	na	na	na	60	na	56	na
	Chittagong	100	70	80	na	75	na	73	45
	Noakhali	75	50	65	na	60	na	55	na
	Faridpur	65	51	60	47	50	na	46	na
	Jessore	62	45	56	na	54	na	45	na
	Khulna	65	47	61	43	55	40	51	na
	Bangladesh	68	52	60	46	55	42	5	40
December	Barisal	75	51	63	0	52	0	45	0
	Patuakhali	75	0	0	0	60	0	57	0
	Chittagong	100	70	90	0	75	0	73	45
	Noakhali	75	50	65	0	60	0	55	0
	Faridpur	65	51	60	47	50	0	48	0
	Jessore	62	45	56	0	54	0	45	0
	Khulna	63	46	56	0	55	40	51	0
	Bangladesh	68	52	60	46	53	43	41	40

Source: BBS, Monthly Statistical Bulletin Bangladesh, Dec 2001 and Feb 2002.

na = not available