CARE Bangladesh
SHOUHARDO II PROGRAM

BASELINE STUDY REPORT
February 2011

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care

SHOUHARDO II

Baseline Study Report

February 2011

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BASELINE STUDY BY TANGO INTERNATIONAL

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If anyone has been inadvertently left off this list, we apologize and extend our sincere thanks.

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List of Abbreviations

BADC	Bangladesh Agricultural Development Corporation
BBS	Bangladesh Bureau of Statistics
BDHS	Bangladesh Demographic and Health Survey
BMI	Body Mass Index
CBO	Ccommunity-based organization
CSPro	Census and Survey Processing System
DAE	Department of Agricultural Extension
DHS	Demographic Health Survey
DOF	Department of Fisheries
DOL	Department of Livestock
DRM	Disaster and risk management
FANTA II	Food Aid and Nutrition Technical Assistance
FCS	Food Consumption Score
FFP	Food for Peace (USAID)
FSUP	Food Security for the Ultra-Poor in the Haor Region
FGD	Focus group discussion
GoB	Government of Bangladesh
HDD	Household Dietary Diversity (Index)
HHS	Household Hunger Scale
HYV	High yielding variety
KII	Key informant interview
LIV	Local improved variety
MCHN	Mother/child health and nutrition
MDG	Millennium Development Goals
MSS	Management score sheet
NCHS	National Center for Health Statistics
NIPORT	National Institute of Population Research and Training
NGO	Non-government organization
OCAT	Organization Capacity Assessment Toolkit
PEP	Poor and extreme poor
PM2A	Preventing Malnutrition in Under 2s Approach
PNGO	Partner Non-government Organization
PPS	Probability proportional to size
SHOUHARDO	Strengthening Household Ability to Respond to Development Opportunities
SO	Strategic Objective
SPSS	Statistical Package for the Social Sciences
TANGO	Technical Assistance to Non-Government Organizations
TBA	Traditional birth attendant
UP	Union Parishad
USAID	United States Agency for International Development
WBA	Well-being analysis
WFP	World Food Program
VGD	Vulnerable group development
VGF	Vulnerable group feeding

Glossary of Bengali Terms

Ana	Local unit of measuring gold/silver
Beel	Open water body
Dadon	Advance sale of crops/products
Khas	Government-owned land or water bodies
Logni	High interest loans
Madrasha	Religious education center
Masjeed	Mosque
Mohajan	Informal moneylender
Salish	Informal village court/arbitration
Upazila	A geo-administrative unit under a district comprising several Unions
Union Parishad	Lowest local government unit

Bengali Calendar:

Apr-May	*May-Jun*	*Jun-Jul*	*Jul-Aug*	*Aug-Sep*	*Sep-Oct*	*Oct-Nov*	*Nov-Dec*	*Dec-Jan*	*Jan-Feb*	*Feb-Mar*	*Mar-Apr*
Baishak	Jaisti	Ashar	Sravan	Bhadra	Ashin	Kartik	Agrahayan	Payush	Magh	Falgun	Chaitra

Glossary of English Terms

Homestead	The yard or compound of a household
Household	A family unit, who share common resources for cooking and eating

Units of Measure

1 $US = 71.6 Taka (08 February 2011)

100 Decimels = 1 Acre

Executive Summary

SHOUHARDO II (Strengthening Household Ability to Respond to Development Opportunities II) is a five-year, USAID-funded Title II project designed to 'transform the lives of women and men in 370,000 poor and extreme poor (PEP) households in eleven of the poorest and most marginalized districts in Bangladesh by reducing their vulnerability to food insecurity'. The project is being implemented by CARE in partnership with the Government of Bangladesh. This baseline study provides an analysis of both quantitative and qualitative data that will guide the project's design, implementation, and evaluation. It provides a benchmark for measuring a wide range of outcomes and impacts over the life of the project. In addition to providing a basic understanding of the conditions households face as they strive to achieve livelihood security under challenging environmental conditions, an important function of the baseline is to provide pre-implementation information on key indicators included in the project's Indicator Performance Tracking Table.

CARE employed geographic and household-based targeting to identify the poorest and most marginalized regions in Bangladesh, and the poorest villages and households in these areas as project participants. The quantitative baseline survey is a population-based survey of the chosen project villages, which together make up its operational area. The area is made up of four regions: Coast, Haor, Mid Char and North Char. The survey data confirm that most households in the project area are indeed poor, with nearly 70 percent being classified as extreme poor or poor during a participatory "well-being analysis" that took place to help identify project participants. Analysis of the demographic data reveal several sources of vulnerability, including a high percentage of young people, high dependency ratios, and a large concentration of female headed households in the poorest groups--a full 42 percent among the extreme poor.

Food security

The project area was partially chosen based on its high food insecurity, and the data collected in the baseline survey confirm that food insecurity is indeed a major problem. The large majority of households report that they have insufficient food for at least one month of the year, with the average household suffering from food insufficiency for a full six months. As revealed by a "household hunger scale", roughly 45 percent of households suffer from severe to moderate hunger marked by frequent episodes of running out of food in the house, members going to sleep hungry at night, and/or not eating for an entire day. Further, as indicated by low dietary diversity, diets are poor in important nutrients required for a healthy and active life. Food insecurity is quite high in all regions, but Haor stands out as having the worse problem when it comes to access to adequate food from a quantity standpoint. There is little difference across the regions in dietary quality. Household food insecurity is very strongly related to their economic status, with PEP households suffering the most.

Livelihoods and economic security

The survey data reveal many signs of economic distress among households in the project's area of operation, particularly for extreme poor and poor households. Nearly 30 percent of all households have a member who migrated in the previous year, often a sign that opportunities to earn income are better elsewhere. Ten percent of extreme poor and poor households were found to have sold labor in advance, and twenty percent had taken out an interest-bearing loan from a non-formal source in the previous year. By these measures, economic insecurity is the worst in the North Char region and the lowest in the Coast region.

The most common occupations among men are agricultural contract labor and farming, together accounting for almost half of the primary occupations of adult males. Other important occupations are non-agricultural contract labor, self-employment in business and salaried employment. Both agricultural and non-agricultural contract labor are more common among poor and extreme poor households than those in the higher well-being categories. Farming on one's own land is rare for the extreme poor and poor households. The occupational pattern in the Coast region differs from that of the others, with farming and agricultural contract labor being less prominent and non-agricultural contract labor and fishing being more prominent.

The most common occupation for women, by far, is "household work", cited for 80 percent of all women, followed by "unable to work". However a far lower percent of women in the extreme poor category report housework as their primary occupation, with a greater percentage working outside of the home for cash income in occupations such as being a servant or maid and begging.

The average monthly household income per capita in the project's operational area is 742 taka. The only region whose per-capita income varies substantially from this overall average is Coast, with a lower mean of 667 taka. As would be expected, per capita income shows a strong increase over the "well-being" or economic status categories, starting from a low of 556 among the extreme poor and rising to 1,364 among the rich. Ownership of assets, both for current consumption and productive assets, also shows a strong increase across the well-being categories.

Data collected on household borrowing show that nearly 40 percent of households had an outstanding loan, with most loans being taken from NGOs and CBOs, but a substantial percentage also being taken from banks or other formal lending institutions, moneylenders, and friends and relatives. Poor and extreme poor households, and those in Haor, have the highest percent of loan balances remaining (over 90 percent), suggesting that they are struggling the most with repaying loans. The top reasons given for taking out loans are for consumption purposes and to purchase agricultural inputs. The reasons given vary greatly across the well-being categories, with the poorer households being far more likely to take out a loan for the purposes of immediate consumption rather than productive investment.

Given that SHOUHARDO II project activities will only be implemented in rural areas, agriculture is not surprisingly the key source of livelihood in the project area. Forty-five percent of households are engaged in field crop production, 23 percent in homestead vegetable production, 68 percent in livestock rearing, and six percent in fish rearing. Improved practices, such as the use of organic fertilizer, quality seed, and animal vaccination, are important for obtaining favorable yields, investing in the future quality of inputs, and protecting the environment. Although many households are already using some key improved practices, there is considerable scope for increasing their use, particularly in livestock rearing.

Household access to social services and safety nets

A variety of social services are available to households in the project area, the most common and almost universal ones being primary schools, Union Parishad services, and health and family planning services. The majority of households do not have access to some basic government services, however, such as agricultural services and services targeted to women and youth. Better-off households are more likely to take advantage of government social services than extreme poor and poor households. Fifteen percent of households participate in some social safety net program, the most common being old-age pensions and vulnerable group feeding/development programs.

Natural disasters and climate change

Overall, over one third of households reported that they did not experience a natural disaster in the previous year. On average, households experienced 1 disaster in the last 12 months, except in the coastal region, which experienced almost 2 disasters in the last 12 months. The highest proportion of disasters experienced in the last 12 months was floods, wind damage and heavy rains. Overall, extreme poor households were more likely to experience a disaster than households in the other well-being categories. This is likely due to the fact that extreme poor households have greater exposure and sensitivity to disasters. In terms of household impact of the most recent disaster, the highest proportion of households lost their home, which includes partial and full damage to their shelter, followed by loss of assets. A higher proportion of households in the coastal region lost their home than in the other regions.

The most common coping strategies used by respondents to recover from a natural disaster were: taking out a loan from friend/neighbor, accepting help from others, accepting aid, purchasing good on credit, and reduction in quantity of meals. The majority of respondents expressed that they could do nothing to prevent the impacts of the disaster.

Overall, the majority of households believed that the climate is changing. When comparing across both regions and well-being categories, the most common perceived climate changes are that it is becoming colder, and temperatures and rains are becoming more unpredictable. Qualitative findings indicate that while existing coping strategies appear sufficient to deal with the impacts of weather-related hazards on the short-term, households lack the capacity for longer term adaptation to climate change.

Women's empowerment and domestic violence

Women's empowerment, besides being an important goal in itself, is a key factor underlying the high rates of maternal and child malnutrition in the project area (see below). The baseline data show that many women are limited in their ability to make important household decisions: most of the time men (mainly husbands) make final decisions, whether after some discussion with women or with no input from them. Women's freedom of movement is also limited. More than half of women, for example, are unable to go to a market at any time. Only five percent of women in the project area reported earning cash income in the previous year and, although there are signs that patriarchal beliefs regarding family life are losing their hold, they are still widely held among women themselves. Women's participation in community groups and local institutions is minimal with the exception of 20 percent participation in a savings or credit group. As would be expected, women living in female headed households are more empowered than those living in male headed households.

Domestic violence is a signal of abuse of power at the household level, and it is women's low empowerment that makes them vulnerable to it. Keeping in mind that domestic violence is a very sensitive issue and subject to great reporting error, over one quarter of women report that a female member of their household was yelled at or struck in the previous year, with roughly half of the cases being of a physical nature. Very few women seek assistance after being abused. The majority of women believe that men are justified in physically abusing their wives after at least some kind of infraction, such as arguing with him or not obeying elders.

Water, Sanitation and Hygiene

Poor access to safe drinking water and hygienic sanitation facilities is a major issue in the project area and clearly merits being a top project priority. Less than 62 percent of households have access to safe drinking water, perhaps considerably less since this prevalence could not take into account the presence of unsafe levels of arsenic (due to low arsenic testing rates). Further, only 26 percent of households have access to an improved, hygienic toilet facility. For those that do have access to a toilet facility, low functionality, uncleanliness, as well as the lack of a nearby hand washing facility contribute to poor hygiene and unsanitary environments. With respect to hygiene behaviors, less than ten percent of all mothers of children under five feel that it is important to wash their hands at critical times, including before eating and after defecation or urination. Safe disposal of young children's feces after they defecate occurs in only 42 percent of households.

Mother and child health and nutrition

Reducing malnutrition among young children is a key goal of the SHOUHARDO II project, and measuring changes in it will be a prime focus for evaluating the impact of the project. Nearly 60 percent (58.6) of children 6-59 months old in the project area are stunted, far higher than the prevalence for Bangladesh as a whole. Fifteen percent are wasted, and 41 percent (of 0-59 month olds) are underweight. One of the reasons for such a high stunting prevalence is poor child feeding practices. Only 62 percent of children less than six months are exclusively breast fed. The quality of complementary feeding for children 6-23 months is very poor, with only 11 percent having a "minimally acceptable diet", that is, a diet with adequate diversity and sufficient meal frequency.

With respect to children's health, the prevalence of diarrhea is fifteen percent, on par with the nation-wide prevalence. The data indicate that children's caretakers are not uniformly ensuring that their children continue to eat normal amounts of food, receive adequate liquids, and receive oral rehydration therapy during bouts of diarrhea. Only 60 percent of children are immunized against six vaccine-preventable diseases by their first birthday.

With respect to women's health and nutrition, 35 percent of women with children under five in the project area are underweight, or chronically undernourished. The percent of women who are of short stature, a predictor of difficulties during pregnancy and low birth weight of children, is 14.9. Data collected on women's food consumption reveals that their diets are particularly low in nutritious vegetables and fruits, and in protein foods.

Just over half of women in the project area receive antenatal care, and for those that do the average number of visits is 2.7, which is below the World Health Organization recommended minimum four visits. Women tend to first seek antenatal care when they are five to six months pregnant, rather than the recommended first trimester. Mothers need more food and daytime rest than usual during pregnancy; only a minority do so, however. A full 37 percent of women receive *less* food during pregnancy than when they are not pregnant and 21 percent report getting less day time rest. Another important component of care for women during pregnancy is Vitamin A and iron/folic acid supplementation. At the time of the baseline survey only 37 percent of women were receiving Vitamin A supplements during pregnancy and only 46 percent were receiving iron/folic acid supplements. Antenatal care is particularly poor for women in the Coast region.

In addition to improvements in food and livelihood security in general, water and sanitation, and women's empowerment, there is clearly a great need for improvement in caring practices for children and women in the project area.

The vulnerability of female headed households

As noted above, there is an extraordinarily high concentration of female headed households in the extreme poor economic status category. Income data provide further evidence that female headed households, which make up 10 percent of the population overall, are among the most livelihood insecure of all population groups. Despite higher empowerment among women living in female headed households, such livelihood insecurity translates into poorer health and nutrition outcomes for both women and children. The prevalence of stunting among children under five is 71 percent in female headed households versus 58 percent in male headed households. While the prevalence of underweight among mothers is slightly lower in female headed households, that of short stature, which reflects longer term forces, is higher (17.8 versus 14.8 percent). More detailed investigation of the factors leading to such vulnerability and poor health and nutrition outcomes for female headed household needs to be undertaken so that the factors can be appropriately addressed over the course of the SHOUHARDO II project.

Institutional capacity of the UPs in SHOUHARDO II

The Management Score Sheet, which was used to measure the institutional capacity of the Union Parishads (UPs) in the SHOUHARDO II program, includes 14 weighted indicators with specified means of verification, such as regular conduction of various types of meetings, meeting attendance, participation of women in UP planning and activities, participation of vulnerable people in standing committees, UP capacity building, community engagement by the UP, disaster risk management activities undertaken by the UP. The mean score of all 172 UPs in the SHOUHARDO II project was 45 percent, indicating overall poor institutional capacity. When disaggregated by region, the means were also below 50 percent, ranging from 42 percent in the Mid Char region to 46 percent in the coastal region. Most UPs scored poorly on all indicators, with the exception of the indicator on the involvement of women and inclusion of women's issues. However, it is important to note here that while women are increasingly becoming UP members and women's issues may be included in the annual work plan, meaningful participation by women is in many cases still very limited.

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1.0 INTRODUCTION

SHOUHARDO II (Strengthening Household Ability to Respond to Development Opportunities) is a five-year, USAID-funded Title II Program designed to 'transform the lives of women and men in 370,000 poor and extreme poor (PEP) households in eleven of the poorest and most marginalized districts in Bangladesh'. The program consists of five strategic objectives (SOs) each contributing to achievement of the Millennium Development Goals (MDGs), Bangladesh's food security agenda and USAID's strategic priorities for Bangladesh. These five objectives include: 1) enhancing and protecting the availability of and access to nutritious foods; 2) improving the health, hygiene and nutritional status of children under 2 years of age; 3) empowering poor and extremely poor women to be actively engaged in initiatives to reduce food insecurity in their communities and families; 4) promoting accountable and proactive work by local elected bodies and government service providers responsible for reducing food insecurity; and 5) assisting community members, government institutions and partner NGOs (PNGOs) to be better able to prepare to mitigate and respond to disasters and adapt to climate change. The SHOUHARDO II contract details are shown in table 1 and an abbreviated SHOUHARDO II Results Framework is shown in Annex I.

SHOUHARDO II targets 172 Union Parishads (UP) in thirty Upazilas in eleven Districts throughout Bangladesh. This includes northern and mid riverine chars, the northeastern haor areas, and the Cox's Bazaar coastal belt (figure 1). Within Upazilas, the project works in Union Parishads (UP) with the highest concentration of poor and extreme poor (PEP) households, where high levels of chronic food insecurity prevail, and where there is high risk from natural disasters. This is in line with USAID's Office of Food for Peace (FFP) Bangladesh Food Security Country Framework, FY 2010-2014; and the livelihood assessments of the Government of Bangladesh (GoB), World Bank and the World Food Program (WFP). The Program is implemented through 16 partner NGOs (PNGOs) using CARE's Direct Delivery approach.

Table 1: SHOUHARDO II contract details

Timeframe:	
Award Start Date: June 1, 2010	Award Completion Date: May 31, 2015
Life of Award Commodity Request:	
Life of Award Direct Distribution Request:	57,537 MT
Life of Award Monetization Request:	229,882 MT
Total Commodity:	287,419 MT
Life of Award Cash Budget:	
Life of Award Monetization Budget Request:	USD 58,147,417
Life of Award 202(e) Budget Request:	USD 14,996,493
Life of Award ITSH Budget Request:	USD 9,170,055
Life of Award CARE Cost Share Non-Federal Contribution:	USD 1,000,000
Life of Award Other Non-Cost Share Resources (GoB contribution):	USD 11,500,000
Total Cash Budget:	USD 94,813,965

"Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life"[1]. Food security is often discussed with reference to four main pillars: availability, access, utilization and stability (table 2). In Bangladesh, there has been significant progress in improving the gross food availability, in particular through cereal self-sufficiency and improvements in land productivity. However, food access and utilization continue to remain critically low, especially among the poorest and disaster-affected households.

1 World Food Summit, 1996

As a result, Bangladesh remains a food insecure country with improvements needed in food security areas but especially in access and utilization[2].

According to the 2005 Joint UN/GoB MDG report, Bangladesh was home to over 60 million food insecure people (GoB-UN 2005). Income inequality and chronic poverty are the primary causes for wide-spread food-insecurity. This is compounded by the population growth of around 2 million individuals annually combined with a reduction of around 82,900 hectares of tillable land annually due to infrastructure and housing development, and industrialization. About a third of the population lives below the lower poverty line with seriously imbalanced diets and extremely inadequate intake of fats, protein and micronutrients. While poverty is one of the main underlying causes of food insecurity of many people, it has manifested in wide scale malnutrition of various types.

Table 2: The four main pillars of food security

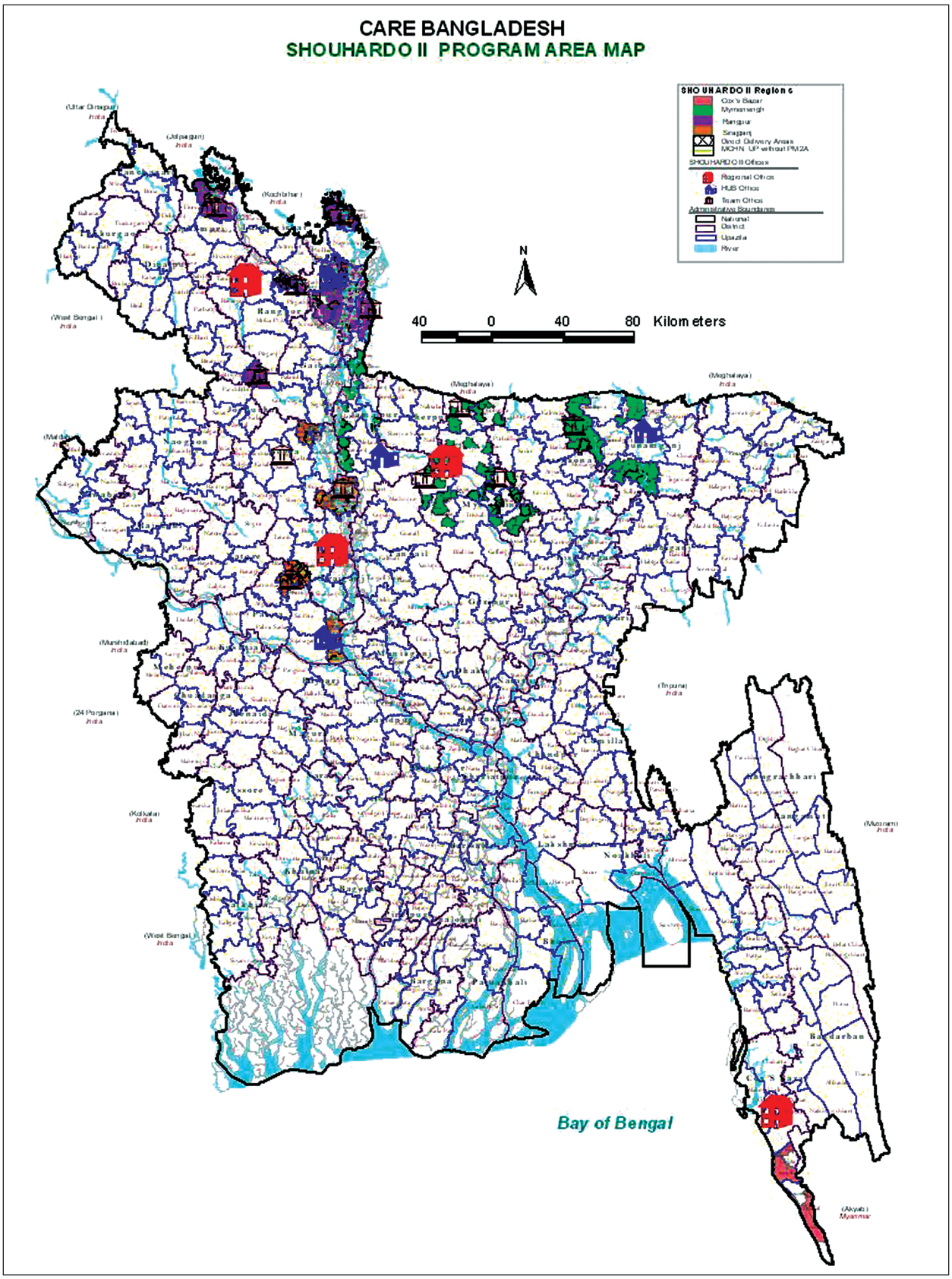
Availability	The availability of sufficient quantities of food of appropriate quality, supplied through domestic production or imports (including food aid).
Access	Access by individuals to adequate resources (entitlements) for acquiring appropriate foods for a nutritious diet. Entitlements are defined as the set of all commodity bundles over which a person can establish command given the legal, political, economic and social arrangements of the community in which they live (including traditional rights such as access to common resources).
Utilization	Utilization of food through adequate diet, clean water, sanitation and health care to reach a state of nutritional well-being where all physiological needs are met. This brings out the importance of non-food inputs in food security.
Stability	To be food secure, a population, household or individual must have access to adequate food at all times. They should not risk losing access to food as a consequence of sudden shocks (e.g. an economic or climatic crisis) or cyclical events (e.g. seasonal food insecurity). The concept of stability can therefore refer to both the availability and access dimensions of food security

In recent decades, malnutrition has become a major public health concern in Bangladesh, affecting the well being of the majority of the population, particularly young children, adolescent girls and pregnant/lactating women in poor households. A 2009 study found that prevalent malnutrition problems (NIPORT, 2009), particularly in under-5 children include underweight (46%), stunting (36%) and wasting (16%) and maternal under nutrition measured by BMI (32%). This suggests that children in Bangladesh suffer from short-term acute shortfall in food intake as well as longer-term under-nutrition. It is important to note that there are also large differences in child malnutrition rates across economic groups. Child malnutrition is pervasive among the poor.

The SHOUHARDO II design was informed by the spatial dimension to poverty and food insecurity in Bangladesh, which creates disproportionate affects on people in disaster and risk prone areas, such as char lands, haors and coastal areas. In 2009, the GoB/WFP/WB undertook a joint vulnerability assessment to prioritize development initiatives and resources in areas of highest food security needs (BBS, 2009), based on Upazila-level population estimates of individuals living below the lower poverty line, which is defined as food calorie consumption of less than 1805 Kcal/person/day. The assessment identified six geographical areas/clusters with 145 highly food-insecure and poverty-prone Upazilas. The six identified clusters were: (i) the North-West disaster area; (ii) the North-Central Chars; (iii) the Drought Zone; (iv) the Haor Basin; (v) the Coastal Zone; and (vi) Chittagong Hill Tract.

2 USAID Office of Food for Peace, Bangladesh Food Security Country Framework 2010-2014

Figure 1: Map of SHOUHARDO II program area



2.0 SHOUHARDO II BASELINE STUDY

2.1 Objectives of the study

The baseline study aims to generate better understanding of the current food insecurity, poverty and vulnerability situation of the program impact group as well as the population at large, and to establish baseline values of indicators for intended outcomes against which future change can be measured in terms of: a) behavior change, b) systemic (institutional) capacity and c) impact on the socio-economic conditions of participating households.

The baseline study will utilize a population-based quantitative survey of a representative sample of households to establish a pre-intervention profile of the areas where SHOUHARDO II will be working over the life of the award. The population of interest is the villages in which the project will implement its activities. All households in these villages were part of the sampling frame from which sample households were randomly selected.[3]

There will be two distinct groups surveyed in the quantitative survey – the first taking a representative sample of the populations where the SHOUHARDO II only targets the PEP households, including food transfers to PEP pregnant and lactating mothers; and the second population where the Program transfers food rations to all pregnant and lactating households in the population, regardless of socio-economic status (following the PM2A approach). These two populations will be referred to as MCHN/PEP and PM2A areas throughout the report.

The specific objectives of the survey are to:

a) Measure the initial status of logical framework indicators;
b) Assess socio-economic characteristics of households;
c) Compare indicators across the four project regions;
d) Establish initial status of logical framework indicators by MCHN/PEP and PM2A area;
e) Explore the level of food insecurity, diversity of food consumptions and prevalence of malnutrition (including infant & child feeding practices) of MCHN/PEP and PM2A households;
f) Understand the natural crisis/shocks experienced by the households and coping mechanisms (resilience); and
g) Gather and analyze information for the purpose of in-depth learning and to assist the project in modifying appropriate interventions and refining its approach and M&E plan.

By providing a benchmark, the baseline survey provides critical data for setting realistic and grounded targets against which key indicators for all strategic objectives can be measured. By carefully designing the survey, taking into consideration norms of statistically valid sampling along with USAID/FFP and FANTA II guidelines, future evaluative efforts will be able to objectively compare changes over time and among defined strata. The information and data generated by the survey can also be useful in designing future similar projects or replicating/scaling-up the current project activities.

A qualitative component is included to add insight and information to the quantitative survey and to seek results on the baseline status of specific institutions.

3 The SHOUHARDO I baseline only sampled poor and extreme poor households in the villages (and urban areas) where it would be implementing its activities

2.2 Scope of the study

The scope of the survey is not limited to indicator measurement requirements of the project. The survey also seeks to better understand differences in livelihood issues of targeted households among the four SHOUHARDO II regions and along a socio-economic continuum of households. It explores key aspects of household food security (availability, access and utilization patterns) while attempting to explain how underlying causes may explain patterns emerging from the data.

The baseline survey was conducted throughout the four distinct regions where SHOUHARDO II is operational – Coast, Mid Chars, North Chars, and Haor. These areas were selected during project design based on their relative level of food insecurity. There is broad consensus that these areas are the most vulnerable, high-risk areas in Bangladesh. The study was designed to test for differences among these four regions.

Coast

Coastal areas in southern Bangladesh are characterized by low-lying plains and gentle slopes emanating from a large, delta-like coastline. Food security in the southern coastal areas is impacted by recurrent storm surges, river and bank erosion, flash flooding and heavy rains. Increasing soil salinity and water logging are impacting yields of rice varieties and other crops and rendering some land uncultivable. The coastal region is highly susceptible to climate change and rising sea levels threaten to inundate significant amounts of land. While infrastructure in the coastal areas is better, in general, than in char and haor areas there are pockets of isolation, exacerbated when storms rage.

North and Mid Char Areas

Chars are riverine islands. While not unique to Bangladesh their prevalence in the riverine systems and their population (estimated at over 6 million) makes them an important land component of the country. Chars are land masses surrounded by water either the entire year or at least a significant portion of the year. They are prone to significant erosion and shape changes due to the forces of water during the flood seasons. Food security is impacted by crop losses due to floods and erosion, isolation and poor access to markets, especially during the flood season, and isolation to traders and services. Floods and wave actions are an annual threat to household assets.

Haor

The haor areas are in the northeastern part of Bangladesh. They are large, shallow depressions prone to significant flooding, which results in wetlands that can be inundated for significant time periods. Higher areas within the haor ecosystem form islands that are inhabited throughout the year. Food security issues here are similar in many ways to char areas. Flash floods and wave erosion impact land availability and food supply. Only one rice crop is typically produced in the haor areas. Homestead areas tend to be small, limiting the amount of food that can be produced and the number and types of animals that can be reared. Fishing is an important activity.

2.3 Limitations of the study

There are several limitations of the study to note. First, the field work was conducted during the month of December 2010. December is a month of relatively high food insecurity in Bangladesh, thus the food security 'picture' that emerges from the study is related to the seasonal factors of food access and availability during this time period. Also, December is during the dry period and events such as flooding, cyclones and other extreme weather events did not occur. This could alter respondent's recall and perceptions around natural disasters and coping.

Additionally, because the sample size calculation was based on the need to have sufficient children under five years old, there was not an adequate number of children under two years of age to carry out an analysis by region for some of the MCHN indicators. Further, while the target sample size for under fives was not met, it was found that there were nevertheless a sufficient number of children in this age group for valid statistical comparisons.

3.0 STUDY METHODS

The baseline survey utilizes a combination of quantitative and qualitative methods. These methods are in part complementary, so that each type of information contributes to an overall understanding of households.

3.1 Household quantitative survey design

The sampling approach for the household survey was first formulated during a Food for Peace (FFP) monitoring and evaluation workshop held in Dhaka, Bangladesh in August 2010. It was then reviewed by TANGO and finalized with feed-back and suggestions from FANTA II and CARE Bangladesh.

The baseline quantitative survey utilizes a multi-stage cluster sample using population-based survey methods. The survey utilized two levels of stratification. The first was a division of SHOUHARDO II into four regions – Coast, Haor, Mid Char and North Char – reflecting the distinct geographic areas where the program is operational. Stratification by region was justified and expected to capture significant variation in results since these regions have distinct and different physical features and resources and are spread out over large distances.

The second level of stratification is into two 'areas' termed MCHN/PEP and PM2A. SHOUHARDO II will employ a different service delivery strategy in each of these two areas. The design is based on sampling an equal number of villages (clusters) and households for both PM2A and MCHN/PEP areas and across the four regions. During analysis weighting of variables is used and based on cell populations by strata. Designing the survey in such a manner allows for statistically valid comparisons between PM2A and MCHN/PEP target areas and across the four regions. Weights were computed based on the total number of households in each area sampled.

The sampling frame for the survey is a list of all households in villages where SHOUHARDO II will be operational. The results of the study will be generalizable to households living in villages where SHOUHARDO II is operational. Villages that participate in the project were selected by CARE Bangladesh based on their vulnerability characteristics, and therefore are not necessarily representative of the regions as a whole.

Sample size calculations were based on ensuring the ability to compare proportion variables between PM2A and MCHN/PEP sites within the four regions. The indicator used to make the sample size calculation was stunting, and was based on the ability to be able to detect a 10 percentage point change in stunting prevalence. An initial value of 0.5 was used along with a 95 percent confidence level, 80 percent power, and a design effect[4] of 2.0. Using these parameters yielded a minimum sample size of 606. Adding a 10 percent cushion for non-response resulted in a required minimum sample size of 666[5] households per stratum.

To keep the sample size reasonable, a single sample of households was selected to collect both socio-economic data (from all households) and health and nutrition data (needed only from households with children under five). To do so, the sample size factored in the proportion of the population in Bangladesh that is aged 6-59 months and the average household size.[6]

4 The design effect (deff) is a factor that adjusts sample size according to the use of clustering and stratification. For a detailed review see Gabler, Siegfried, Sabine Häder and Peter Lynn. 2005. Design Effects for Multiple Design Samples. Institute for Social and Economic Research. Working Paper2005-12.

5 The minimum sample size needed to measure a 10% change in a proportion with 95% level of significance and 80% power is 606. A non-response adjustment factor of 10% gives a minimum total initial sample size of 666 households per region. [FANTA Sampling Guide by Robert Magnani for details.]

6 Note that for collection of the health and nutrition information, data were actually collected in practice from any household with a child 0-59 months rather than only 6-59 months. Data were needed for 0-6 month olds for calculation of two key project indicators: (1) the percent of children 0-5 months who are exclusively breastfed and (2) the percent of children 0-59 months underweight.

The national data (Population Census, 2001) revealed that children aged 6-59 months comprise 11.9 percent of the overall Bangladesh population and the average household size is 5 persons[7]. Applying the required sample size above to these factors equates to 606/(.119*5) or 1,017. Hence, the survey needed to sample 1,017 households per strata cell in order to find at least 606 children aged 6-59 months. Another 10 percent was added to this sample size in order to account for non-response, thus resulting in a final sample size requirement of 1,119 households per strata cell. Applying this sample requirement across the eight cells (four regions by two areas) yields a total minimum sample size of 8,952 households.

Table 3: Sampling statistics of surveyed households, by region and area

Sample Profile		Region				Overall
		Coast	Haor	Mid Char	North Char	
# of Households Planned	MCHN/PEP	1,119	1,119	1,119	1,119	4,476
	PM2A	1,119	1,119	1,119	1,119	4,476
					Total	**8,952**
# of Households Contacted	MCHN/PEP	1,124	1,132	1,113	1,127	4,496
	PM2A	1,122	1,081	1,173	1,123	4,499
# of Interviews Completed	MCHN/PEP	1,056	1,047	1,035	1,073	4,211
	PM 2A	1,061	1,008	1,051	1,077	4,197
					Total	**8,408**
% of HHs Completed	MCHN/PEP	94.0	92.5	93.0	95.2	94.1%
	PM2A	94.6	93.2	89.6	95.9	93.8%

The survey used a cluster design of 200 X 45. A total of 50 clusters (villages) from each of the four regions (25 villages from PM2A areas and 25 villages from MCHN/PEP areas within each region) were selected using probability proportionate to size (PPS) methods. This resulted in a total of 200 villages surveyed across the four regions. In each village approximately 45 households were randomly selected from the village sampling frames[8], with equal distribution for both PM2A and MCHN/PEP areas. Final statistics for the number of households interviewed in each strata are provided intTable 3 above.

Household questionnaire

The questionnaire for the household survey was developed jointly by CARE Bangladesh, and TANGO with input from FANTA II. It was reviewed by USAID Bangladesh and FANTA II for its final content. The questionnaire was based in part on questions posed in surveys conducted under SHOUHARDO I to make comparisons possible. Where necessary, however, questions were updated or reformulated to adhere to FANTA II guidance and sectoral best practices. Technical input by Mitra and Associates, which undertook the data collection for the baseline study, and CARE Bangladesh both before and during training ensured that questions were relevant, culturally appropriate, well-translated, and the listed response codes were correct. Draft instruments were pre-tested in approximately 30 households before enumerator training.

The household questionnaire was divided into multiple sections, each covering a different aspect of livelihoods or subjects relevant to CARE programming objectives. The following topics were covered:

7 These same proportions were found true for the FSUP baseline survey conducted for CARE Bangladesh by TANGO in 2010.

8 In some instances villages were selected twice using PPS (given their large population) and in these rare cases the number of households randomly selected was 90.

Part I. Household Livelihood and Food Security

- **Module A:** Information on the Interview and Area Identification – Interviewers name, area identification, data entry information.
- **Module B:** Respondent Identification for Part I – Household head and contact information, marital status, well-being category.
- **Module C:** Basic Information on Household Members –Elements of household demographics, education, disabilities, primary and .secondary occupations
- **Module D**: Household Economic Security – migration, housing characteristics, ownership and sale of assets, land ownership, income and employment, access to markets, savings and loans.
- **Module E:** Access to Social Services and Common Property Resources – Access to and use of social services, participation in social safety nets, common property resources.
- **Module F:** Disaster Risk Management and Climate Change – disaster risk management, climate change.
- **Module G:** Household Food Security – Food consumption, months of sufficient food, household hunger, household food access.
- **Module H:** Agricultural Production, Fisheries and Livestock Rearing – Field crop production, vegetable production/gardening, fish production/rearing, livestock production/rearing, technical support.
- **Module I:** Water and Sanitation – Access to clean water and latrines.

Part II. Information on Women's Empowerment

- **Module J:** Respondent Identification for Part II – Name and number of respondent.
- **Module K:** Information on Women's Empowerment – Decision-making at the household level, freedom of movement, income-earning, attitudes about family life, domestic violence, participation in groups.

Part III. Information on Children 0-59 Months Old and Their Mothers

- **Module L:** Respondent Identification for Part III – Child names and ages, identification of index child, information on respondent.
- **Module M:** Antenatal Care – Prenatal care, including vitamin A and iron supplementation.
- **Module N:** Food Consumption of the Mother – Consumption of foods from various food groups.
- **Module O:** Mother's Hand-washing Habits and Disposal of Child's Feces – Hand-washing habits, sanitation of child waste
- **Module P:** Feeding of Children 0-23 Months – Breastfeeding history, consumption of liquids, consumption of solids
- **Module Q:** Immunization of Children 0-23 Months – Immunization and Vitamin A supplementation.
- **Module R:** Diarrhea among Children 6-23 Months –Incidence and treatment of diarrhea.
- **Module S:** Height and Weight of Child 0-60 Months and Mother – Anthropometric measurements of children under 5 years and mother.

The respondent for Part I of the questionnaire was a knowledgeable adult household member, with preference given to the household head. Other knowledgeable adults could be respondents as well. The respondent for Part II of the questionnaire was any adult woman household member. Enumerators were instructed that the woman should be asked questions without men present. Preference was given to the female head of household or spouse of the male head of household. For Part III (only administered to households with children 0-59 months of age), the respondent was the main caretaker of a child, usually her or his mother. The final questionnaire is attached as Annex II.

Questionnaire pre-testing

Four experienced female enumerators were recruited and trained for 3 days from 13-15 November 2010 to conduct a pre-test of the draft household questionnaire. The team was assisted by two supervisors and two research officers from Mitra and Associates. The pre-test was conducted on 22 November 2010 in villages outside of the clusters drawn in the sample and the results were used to modify/check the consistency and integrity of the questionnaire. Results of the pre-test were also shared with CARE Bangladesh and used to generate a revised questionnaire used for training quantitative field staff.

Enumerator training

The data collection field staff were recruited during 7-20 November 2010. For the household survey a total of 161 field staff (109 enumerators, 20 supervisors, 20 data editors, and 12 quality control officers) were hired and trained in two groups. Training for the household survey took place in Dhaka for 13 working days from 22 November 2010 to 5 December 2010. At the conclusion of the training each trainee was required to take a practical test, which was used as a basis for the final selection of enumerators and supervisors. Findings from the pretest were discussed during training and all issues were shared with appropriate personnel and incorporated in the final questionnaire.

Data collection

Field data collection was carried out over a period of one month and in one phase, from 8 December 2010 to 2 January 2011. A total of 200 clusters were covered during the fieldwork. All field personnel were assigned to specific clusters for data collection activities. Twenty interviewing teams were deployed to carry out the quantitative fieldwork. Each team consisted of one supervisor, one editor, five enumerators and one field logistical assistant. Field supervisors were responsible for overall data quality. These supervisors reviewed questionnaires, observed interviews and verified that the correct sample units were interviewed. Twelve quality control officers and senior staff of Mitra and Associates visited enumerators in the field and re-interviewed almost 10 percent of households on a random basis to improve the quality of the data.

Data entry and cleaning

All questionnaires received from field were logged in at the Mitra Dhaka office before data entry. Data entry specialists were recruited and provided data entry training prior to data being received from the field. Upon completion of the training, data entry operators began data entry under the supervision of a data entry supervisor. A total of 13 data entry specialists were used to enter data from 23 December 2010 to 25 January 2011. The data entry team also included one computer programmer and one data entry supervisor. Double data entry methods were used. Quantitative data were entered using CSPro (Census and Survey Processing System) and converted to SPSS (Statistical Package for the Social Sciences) and a detailed process to check the consistency and accuracy of the data was undertaken. The data entries were done both in first and second entry to verify the cases where inconsistencies were found and resolved. Information from the qualitative study was translated into English and MSS results were entered onto computer using CSPro and then converted into SPSS.

3.2 Institutional capacity assessment

Management Score Sheet

The "institutional capacity assessment" was carried out to capture both qualitative and quantitative data/information on the capacity and governance of the 172 Union Parishads (UPs) participating in the SHOUHARDO II program.

The tool selected for this was the Management Score Sheet (MSS), which is based on the Organization Capacity Assessment Toolkit (OCAT) and was developed by CARE Bangladesh for the SHOUHARDO I program. The MSS was modified only slightly for the SHOUHARDO II baseline survey, and was reviewed and approved by FANTA II and USAID Bangladesh. Using the same MSS for the SHOUHARDO II institutional capacity assessments retains the learning that went into developing an appropriate tool under SHOUHARDO I and allows a longer term reflection on the investments CARE Bangladesh is making in UP capacity through both programs.

The MSS includes 14 weighted indicators with specified means of verification, such as regular conduction of various types of meetings, meeting attendance, participation of women in UP planning and activities, participation of vulnerable people in standing committees, UP capacity building, community engagement by the UP, disaster and risk management (DRM) activities undertaken by the UP etc… The MSS is based on the existing SHOUHARDO I tool and was only slightly updated for this survey. The MSS tool used for this survey is attached as Annex V.

The MSS was applied to all 172 UPs in the program by trained facilitators through semi-structured small-group discussions with at minimum of 50 percent of UP members present, including at least the Secretary and (vice-) Chairperson and at least two female members/executives. The data was collected during the period 8-25 December 2010 by six two-person teams. A data collection session lasted on average 1 hour. The 12 facilitators were trained in correct application of the MSS tool over a two-day period during the 5-day training week from 28 November – 2 December 2010, which was attended by SHOUHARDO II staff.

Data processing took place in January 2011 in two phases. During the first half of January 2011, the MSS data was cleaned and entered into SPSS, followed by a second round of cleaning by TANGO at the end of January 2011. Analysis was subsequently done using SPSS and Excel.

Key informant interviews

A series of key informant interviews (KII) was organized to support the analysis of the MSS findings around UP institutional capacity. The KIIs were conducted as semi-structured interviews using a topical outline that covered the following main issues that complemented the MSS:

- The role and responsibilities of the UP and UP members
- UP decision making structures and processes, including gender issues
- UP partnerships
- UP community engagement
- UP organizational evolution

Together 20 UPs were randomly selected from the list of 172 (table 4). The KIIs were then conducted by two teams of three facilitators during the period 8-27 December 2010. On average, the KIIs lasted just under 2hrs. KII participants were determined by the facilitators based on availability, and pre-consultations with the UP members and other stakeholders on the day of the proposed interview, and varied by KII. KII participants were the (acting) UP chairperson, UP secretaries, UP members and ex-members. Nine out of the 20 key informants interviewed were female.

Table 4: Key informant interview participants

	Union Parishad	Key informant	Sex		Union Parishad	Key informant	Sex
1	Gandail	Act. Chairperson	m	**11**	Banshikunda	Chairperson	m
2	Daugao	Member	f	**12**	Kushmaile	Member	m
3	Dhalarchar	Secretary	m	**13**	Ghogadha	Member	m
4	Astomonisha	Member	f	**14**	Astomoir Char	Member	m
5	Digdair	Member	f	**15**	Sonamukhi	Secretary	m
6	Palongkhali	Member	f	**16**	Holdia Palong	Member	f
7	Khoga Kharibari	Member	f	**17**	Nila	Act. Chairperson	m
8	Taknaff Sader	Member	f	**18**	Durgapur	Member	f
9	Palsha	Member	f	**19**	Boror Char	Member	m
10	Char Putimari	Chairperson	m	**20**	Baharchaar Taknaff	Ex-Member	m

The six KII facilitators and note takers were trained in interview and record-keeping techniques, and correct application of the KII topical outline over a three-day period during the 5-day training week from 28 November – 2 December 2010, which was also attended by CARE SHOUHARDO II staff. Data processing took place in January 2011. Data was recorded using handwritten notes and structured reporting templates. The data for each KII was cleaned and translated from Bangla to English, and entered in a top-line review excel template for analysis in February 2011.

3.3 Assessment of climate change perceptions at village level

A series of focus group discussions (FGDs) were organized on climate-related shocks and stresses, and changing disaster risk, to complement the questions on climate change and disasters in the household questionnaire. The FGDs utilized a combination of techniques (table 5), namely: a seasonal calendar and vulnerability matrix, followed by group discussion around specific climate-related vulnerability and capacities; and the Problem-Impact-Solution technique. To ensure broader utilization of the findings within CARE Bangladesh, the seasonal calendar and vulnerability matrix followed the methodology set out in CARE's Climate Vulnerability and Capacity Assessment tool.

Table 5: Techniques utilized in the focus group discussions

Instrument	Details
Focus group discussions format (FGD)	Semi-structured group discussions with 5-10 participants; male or female, no mixed groups; 1 facilitator with same gender as the FGD participants; 1 note taker/observer, ideally also same gender as FGD participants
A. Seasonal calendars	Seasonal calendars are very useful means of generating information about seasonal trends within the community and identifying periods of particular stress and vulnerability. Variables included: weather-related disasters, rainfall, crop sequences, labor demand, availability of paid employment, out-migration, incidence of human diseases, and so on. FGD topics included insight into past hazards, changes in their nature, intensity and behavior; to make people aware of trends and changes over time; and to evaluate extent of risk analysis, planning and investment for the future
B. Vulnerability matrix	Focus of the vulnerability matrix is to determine the hazards that have the most serious impact on important livelihoods resources, which livelihoods resources are most vulnerable and to identify coping strategies currently used to address the hazards identified

Table 5: Techniques utilized in the focus group discussions

Instrument	Details
C. Problem, Impact, Solution	Problem-impact-solution is a technique used to organize and summarize the information from the focus group discussion. It reviews what the main problems are, what the impact of those problems are at the individual/household/community levels, and what solutions could be proposed to address these problems

A total of 16 villages in the project area were randomly selected by region from the villages selected for the quantitative survey (table 6); 4 villages per region. The FGDs were further stratified by gender (male/female) and WBA status (poor/extreme poor). This means that in each region two of the four FGDs were with males and two were with females; two were with individuals from extreme poor households and two from poor households. On average, the FGDs took 2-3hrs. FGD participants were identified by the facilitators based on the strata and in consultation with CARE staff and village leaders, while taking into account availability of community members.

Table 6: Participants in the focus group discussions

	Village	Upazilla	WBA status	M/F	#
1	South Alikhli	Teknaf	Poor	M	10
2	South Alikhli	Teknaf	Extreme poor	F	10
3	South Balukhali	Ukhia	Extreme poor	M	10
4	South Balukhali	Ukhia	Poor	F	12
5	Panervita	Fulbaria	Poor	M	8
6	Panervita	Fulbaria	Extreme poor	F	9
7	Modhumari	Mymensing Sadar	Poor	M	9
8	Modhumari	Mymensing Sadar	Extreme poor	F	12
9	Beloya	Gharmghat	Extreme poor	M	10
10	Beloya	Gharmghat	Poor	F	9
11	Gorai Rojhuary	Kurigram	Extreme poor	M	12
12	Gorai Rojhuary	Kurigram	Poor	F	13
13	Mirpur	Bera	Poor	M	10
14	Mirpur	Bera	Extreme poor	F	13
15	Passhim Gandial	Kazipur	Poor	M	9
16	Passhim Gandial	Kazipur	Extreme poor	F	10

The six FGD facilitators and note takers were trained in facilitation and recording techniques, ethics and quality enhancement, and the various participatory tools developed under the three FGD techniques over a three-day period during the 5-day training week from 28 November – 2 December 2010, which was also attended by CARE SHOUHARDO II staff. Data processing took place in January 2011. Data was recorded using flip chart sheets, and handwritten notes using structured reporting templates. In January 2011, the data for each FGD was cleaned and translated from Bangla to English, and then entered into a topline review Excel template for analysis in February 2011. Analysis focused on understanding patterns and themes that emerged in each region; and between strata, where identified.

4.0 BASELINE QUANTITATIVE SURVEY ANALYSIS

The analysis of the baseline quantitative survey data is based on food and livelihood principles. The basis for most of the analysis is the four regions where the project operates. The other stratification used to design the survey – MCHN/PEP and PM2A areas – is not a useful stratification for analysis in the baseline survey because no differences are expected between these two areas prior to project interventions.

For the baseline survey the analysis is very straightforward and employs mostly univariate and bivariate analytical techniques. Data were weighted prior to analysis according to the weights in table 7. Overall the report highlights the differences that are statistically significant and generally provides data in tables and figures by region and by socio-economic well-being category. Well-being categories are developed for each household in each village where SHOUHARDO II works. The process is similar to a wealth ranking exercise whereby every household is slotted into either extreme poor, poor, lower middle, middle, or rich categories according to pre-defined criteria. The categories are relative, so for example a 'rich' household is not necessarily wealthy in a context outside of the village where they reside.

It is important to note that while the survey was not designed to test well-being categories for the general survey population, it certainly can and does provide insight into important differences among the five well-being classes. It is also important to note that direct comparisons cannot be made between the baseline results of SHOUHARDO I and SHOUHARDO II because the baseline for SHOUHARDO I only included poor and extremely poor households while this baseline includes all well-being categories.

Table 7: Weights used in analysis of survey data

Region	Intervention group	Population		Sample		Sample Weight a/
		Number of HHs	Proportion of HHs	Number of HHs	Proportion of HHs	
Coast	PM2A	8674	0.01454	1061	0.12619	0.11520
	MCHN/PEP	14466	0.02424	1056	0.12559	0.19303
Haor	PM2A	40999	0.06871	1008	0.11989	0.57312
	MCHN/PEP	198196	0.33215	1047	0.12452	2.66737
Mid Char	PM2A	17745	0.02974	1051	0.12500	0.23791
	MCHN/PEP	84503	0.14162	1035	0.12310	1.15045
North Char	PM2A	30669	0.05140	1077	0.12809	0.40125
	MCHN/PEP	201451	0.33761	1073	0.12762	2.64548

The survey sample consists of 7,536 (89.6%) male-headed households and 872 (10.4%) female-headed households. This percentage of female-headed households is well within the range reported by other population-based surveys (ranging in general from 9-11 percent) but does vary by region. In the coast region 18.1 percent of household heads were female, the highest of any region. The Haor region had the lowest proportion of female-headed households (9.1%), while the Mid Char and North Char region had 10.4 and 10.9 percent, respectively. As expected, female-headed households are often the poorest, and in this study 42 percent of extreme poor households are headed by a female, compared to only 6 percent for poor households and 5 percent for middle income households.

Figures 2 and 3 below provide the number of households in the analysis of the baseline data by well-being category and region, respectively.

Figure 2: Number of households in the analysis of the baseline data, by well-being category (N=8,408)

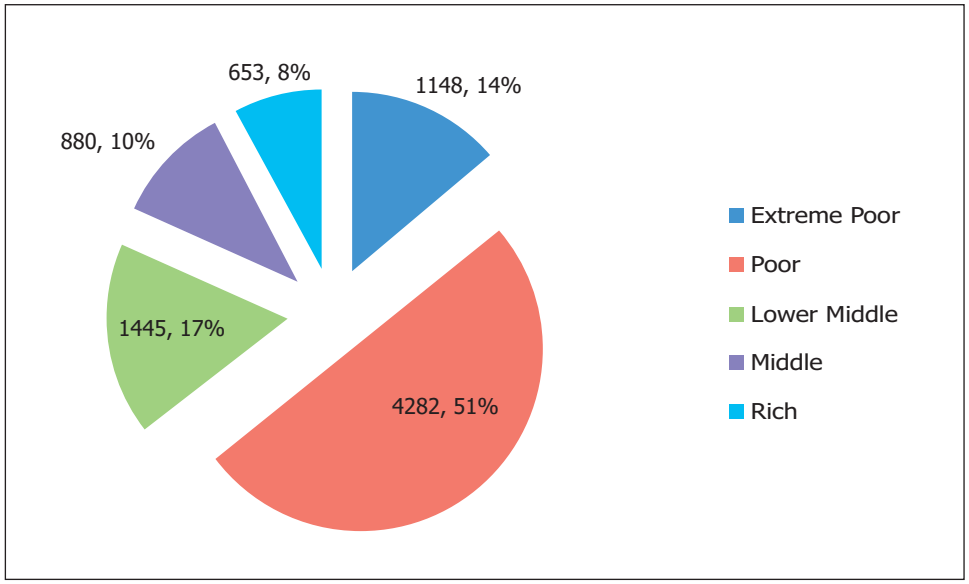
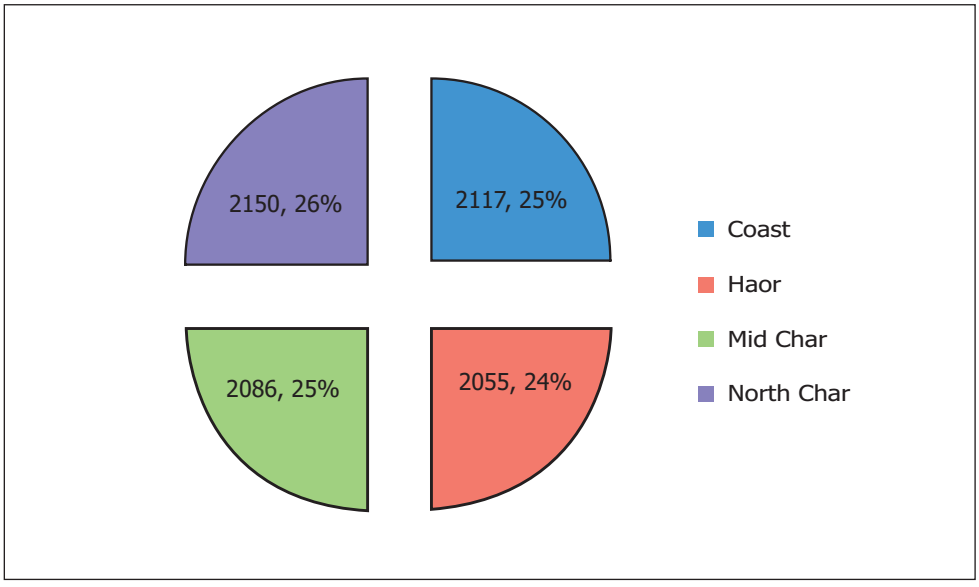


Figure 3: Number of households in the analysis of the baseline data, by region (N=8,408)



5.0 DEMOGRAPHIC CHARACTERISTICS

The SHOUHARDO II baseline survey included basic demographic information on 8,408 households and 40,291 individuals. The proportion of individuals in the sample that are male is 50.8 percent, and that are female is 49.2 percent. This gender ratio is very much in line with national level statistics for the same category (i.e. nationally male-female ratio is 104 males for each 100 females. *Source: Statistical Pocketbook, BBS, 2004*). The distribution of the population by gender for each region is shown in table 8. No significant differences are found among regions in gender ratio.

Table 8: Distribution of survey population, by gender and region

Gender	Region				Overall
	Coast	Haor	Mid Char	North Char	
Male	50.1	51.1	50.2	51.0	50.8
Female	49.9	48.9	49.8	49.0	49.2

Female-heads of household account for 10.4 percent of all household heads (table 9). They range from a low of 9.1 percent in the Haor region to 18.1 percent in the Coast region. Just over 42 percent of extreme poor households are headed by a female as opposed to only 3 percent of Rich households.

For the overall population, the average age of the head of household is 43.8 years (table 9). Heads of household in the Coast region are significantly younger than in the other three regions. Female heads of households are significantly older than are male counterparts within each region, and average 49.5 years of age overall compared to only 43.2 years for males. Many females become heads of household when their spouses die, which is likely to be at an advanced age. In terms of household size the average for the study population is 4.6 people per household, however households in the Coast region are significantly larger with an average size of 5.6 members. Female-headed households are significantly smaller than male-headed households (3.0 and 4.8, respectively) in all regions.

The smaller household size for female-headed households is a function of several factors. First, female heads of household are older, on average, than male headed households, so there is a higher chance that their children have grown up and moved out of the household. Also, female-headed households are less likely to have a counterpart male adult in the household, which reduces the size of a household by one member.

Table 9: Key demographic characteristics of the population, by region

		Region				Overall
		Coast	Haor	Mid Char	North Char	
% Female-headed HHs		18.1	9.1	10.4	10.9	10.4
Average age HH (yrs)	*Overall*	41.8	44.1	44.0	43.6	43.8
	Male HHH	42.1	43.3	43.6	42.9	43.2
	Female HHH	40.4	52.7	47.8	49.2	49.5
Household Size	*Overall*	5.62	4.90	4.35	4.25	4.58
	Male HHH	5.84	5.04	4.53	4.49	4.77
	Female HHH	4.60	3.45	2.82	2.32	2.95

Average household size across all regions and well-being categories is shown in figure 4. Note that Char regions have the same household sizes and are significantly smaller than those in Haor or Coast regions. Larger household sizes in the Coast region may be attributable to social norms (as noted in the SHOUHARDO I baseline survey) but no definitive research was found to explain these differences. Smaller household sizes in Char regions could be due, in part, to the increased risks of living in Char areas. Household size also varies significantly by well-being category. As well-being improves from extreme poor to rich, household sizes become significantly larger. This is consistent with other studies in Bangladesh but goes against conventional wisdom that poorer households tend to be larger. Small household sizes in poorer households could be the result of higher outmigration, high rates of female-heads of household, higher infant and adult mortality, lower life expectancy, conscious decision-making to have fewer children, or any combination thereof.

Figure 4: Average household size, by region and well-being category (N=8,408)

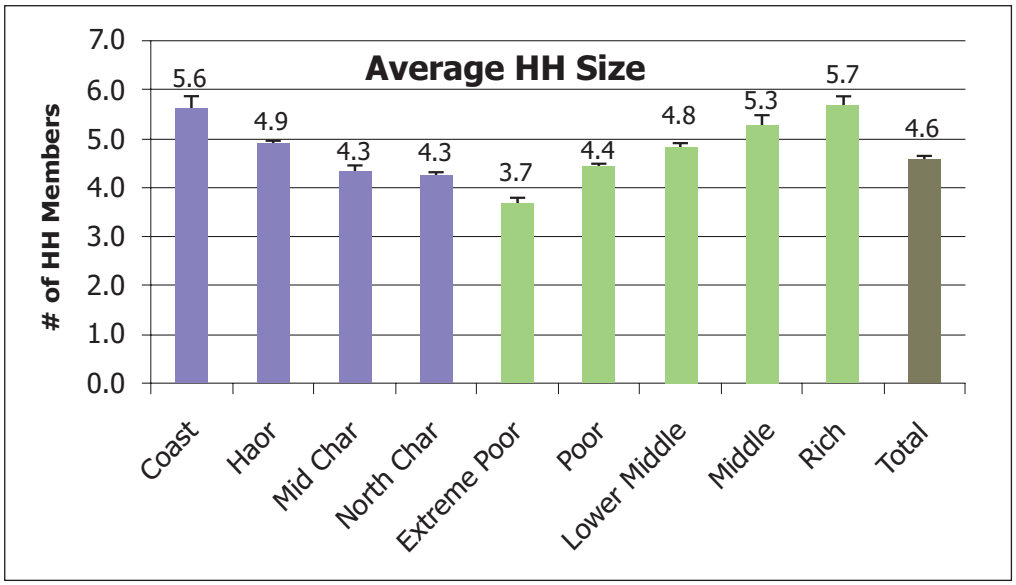
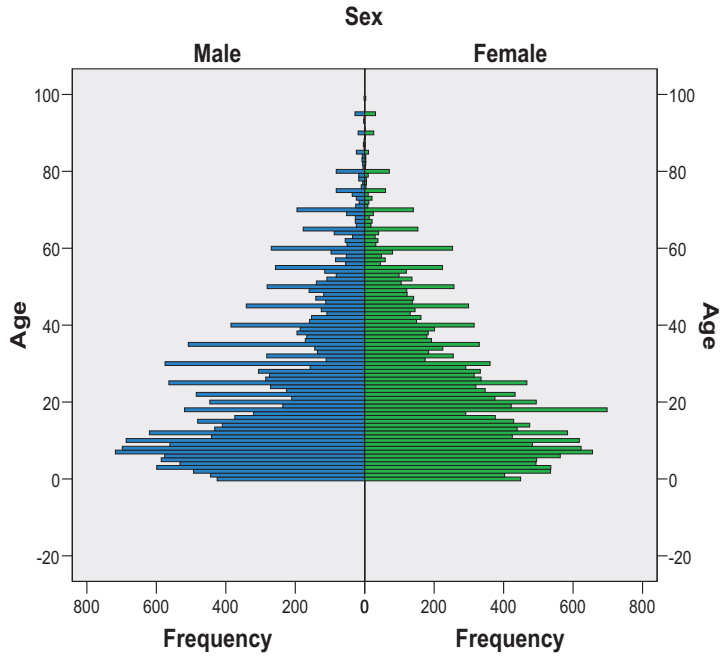


Figure 5 shows the age distribution for the study population. The average age of the study population is 24.9 years old while the median age is 20 (half of the population is below 20 years of age and half of the population is above 20 years of age). Again the Coast region is overall younger than the other three regions. The modal (most common) age is 7. Note the high frequencies around ages such as 30 and 35, 40 and 45. The distribution suggests that many adults likely do not know their exact age and round off in multiples of five. So a person 43 years old may say they are 45. Otherwise the age distribution in such a large survey population would be much smoother than that shown in figure 5. This appears to be more pronounced for males than females. There is a slight but obvious skewness in favor of males between the ages of 18 and 30, and a slight bias for females at around 20 years of age. Other than these two anomalies ages are fairly equally distributed by gender.

Figure 5: Age distribution of study population, by sex



The distribution of the population by age class is provided in table 10. About 12 percent of the study population is under 5 years of age and approximately 25 percent is under 10 years of age. Only about 7 percent of the population is over 60 years of age. In the table one can also see the younger age profile of the Coast region and the similarities between the two Char regions. The Haor region has a younger population than the Char regions but a smaller proportion in the range of 20 to 60 years of age range compared to the Char regions.

Table 10: Distribution of survey population, by age and region and well-being category (N = 38,522)

Age	Region				Overall
	Coast	Haor	Mid Char	North Char	
Under 2s	4.7	4.7	3.7	3.8	4.2
Under 5s	13.1	12.5	11.4	11.3	11.9
0-18 (children)	55.2	48.5	43.9	43.8	46.4
0 - <10	29.9	27.9	25.1	24.3	26.2
10 - <15	14.7	12.1	11.3	11.6	11.9
15 - <20	12.4	9.9	9.3	9.3	9.7
20 - <30	17.0	16.5	17.3	18.1	17.2
30 - <40	10.4	11.8	13.0	12.8	12.3
40 - <50	6.9	8.7	9.8	10.1	9.3
50 - <60	4.3	5.9	7.4	7.4	6.6
60 and above	4.3	7.2	6.9	6.5	6.7

Age	Well-being Category					Overall
	Extreme Poor	Poor	Lower Middle	Middle	Rich	
Under 2s	4.1	4.6	3.8	4.2	3.5	4.2
Under 5s	10.7	13.1	11.0	11.2	9.7	11.9
0-18 (children)	45.9	47.6	46.4	45.8	41.1	46.4

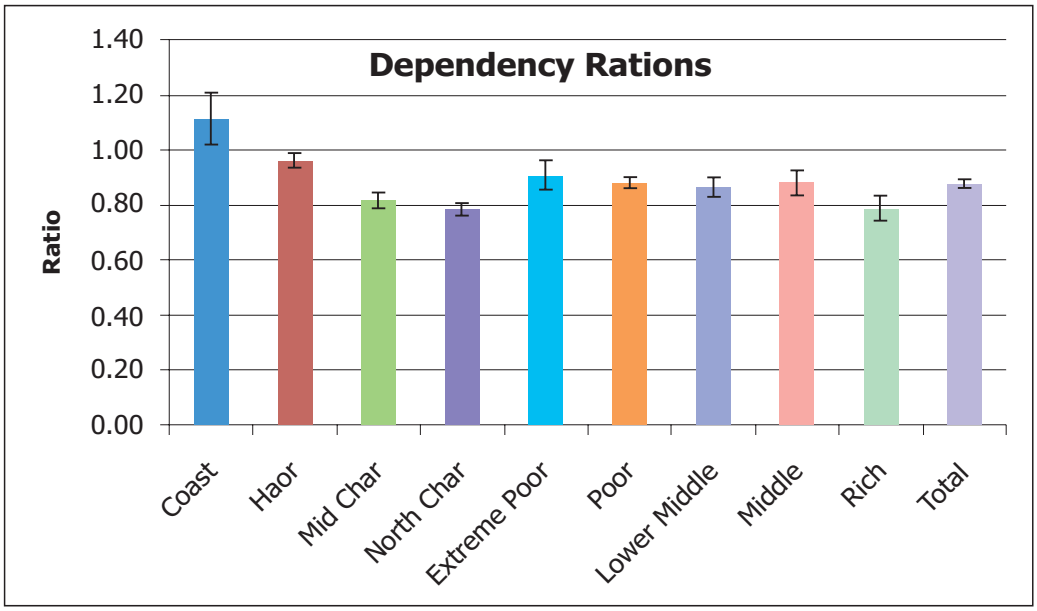
Table 10: Distribution of survey population, by age and region and well-being category (N = 38,522)

Age	Region				Overall
	Coast	Haor	Mid Char	North Char	
Under 2s	4.7	4.7	3.7	3.8	4.2
Under 5s	13.1	12.5	11.4	11.3	11.9
0 - <10	25.4	28.3	25.0	24.3	31.4	26.2
10 - <15	12.0	11.7	13.1	12.0	10.7	11.9
15 - <20	9.5	9.3	9.8	10.7	10.5	9.7
20 - <30	13.8	17.9	16.8	16.9	18.8	17.2
30 - <40	11.9	12.4	12.5	13.0	11.0	12.3
40 - <50	9.2	9.1	10.0	9.1	9.3	9.3
50 - <60	8.1	6.0	6.5	6.6	8.4	6.6
60 and above	10.0	5.3	6.3	7.4	9.8	6.7

Proportions for under2s and under 5s could be inaccurate since age was recorded in years and not months.

Figure 6 shows dependency ratios for the survey population, regions and well-being categories. On average, survey households have about 2.6 adults of working age (15–60 years);[9] 0.6 children under age 5; 1.2 children between the ages of 5 and 14 years, and only 0.3 elderly persons above 60 years. The total dependency ratio shown in figure 6 is defined as the ratio of the number of members in the age groups 0–14 years and above 60 years to the number of members of working age (15–60 years). A dependency ratio greater than 1.0 indicates that there are more non-productive members of the household compared to productive members. High dependency ratios mean a higher burden on household income. For the SHOUHARDO II respondents, the overall dependency ratio is 0.87. Note that dependency ratios are statistically the same for all well-being groups except for the rich. This despite the fact that, as noted earlier, the poorer households are smaller. So while poorer households are smaller they still maintain a similar ratio of working adults to other family members. The Coast region has the highest dependency ratios while the Char regions have the lowest.

Figure 6: Dependency ratios, by region and well-being



9 This is the notion of working age commonly used by demographers (see, for instance, Shryock et al. 1976). The actual working age of individuals of course depends in part on their standard of living and can often be lower, especially for the poor.

6.0 FOOD SECURITY

Food security is at the heart of Title II programming, and SHOUHARDO II objectives aim to improve the food security situation of participating households. Multiple aspects of food security were explored by the survey, including the number of months respondents felt that their household had adequate food and household dietary quality. Table 11 provides data on some key food security indicators used in the baseline study. Each of these indicators will be discussed in detail below.

Table 11: Key food security indicators, by region and area

Food Security indicator	Region				Overall
	Coast	Haor	Mid Char	North Char	
Proportion of HHs with at least 1 month food deficiency	86%	89%	77%	82%	84%
Number of Months of Food Insufficiency	7.0	6.4	5.7	6.1	6.2
Severe Hunger	13.4%	17.8%	13.4%	9.8%	13.8%

	Extreme Poor	Poor	Lower Middle	Middle	Rich	Overall
Proportion of HHs with at least 1 month food deficiency	96%	93%	83%	65%	35%	84%
Number of Months of Food Insufficiency	7.7	6.5	5.2	4.3	3.3	6.2
Severe Hunger	29.5%	15.9%	7.4%	2.5%	1.4%	13.8%

6.1 Months of Insufficient Food

As in previous Title II programs, implementation sites have been pre-screened to focus on geographic areas and populations already known to be highly food insecure. In the survey, respondents were asked in a general manner about their household food supplies during different months of the year. Specifically, in what months of the year did the family have enough food to meet its perceived food needs. Overall, 84 percent of respondents replied there were some months when food was not sufficient. This varied only slightly by Region with Mid Char having the lowest proportion (77%), followed by North Char (82%), Coast (86%) and Haor (89%).

Clearly the majority of households perceive a food security problem. This perception does vary significantly by well-being category. Almost all extreme poor households (96%) report at least some months when food is not sufficient and 93 percent of poor households do as well. For lower middle households, the proportion drops to 83 percent and for middle households it falls to 65 percent. Even rich households are not immune to food shortages as 35 percent of these households report at least some months of food deficiency. The overall average number of months of food insufficiency as perceived by households is 6.2, as shown in figure 7. This equates to 5.8 months of adequate food provisioning. Mid Char households report significantly fewer months (5.7) than households in other regions while households in the Coast region report the highest number of months (7.0). Extremely poor households average 7.7 months of food insufficiency, meaning that they only have 4.3 months of adequate food provisioning. As well-being category changes from extreme poor to rich there is a steady decline in the number of reported months of food insufficiency.

Figure 7: Number of months households reporting insufficient food, by region and area

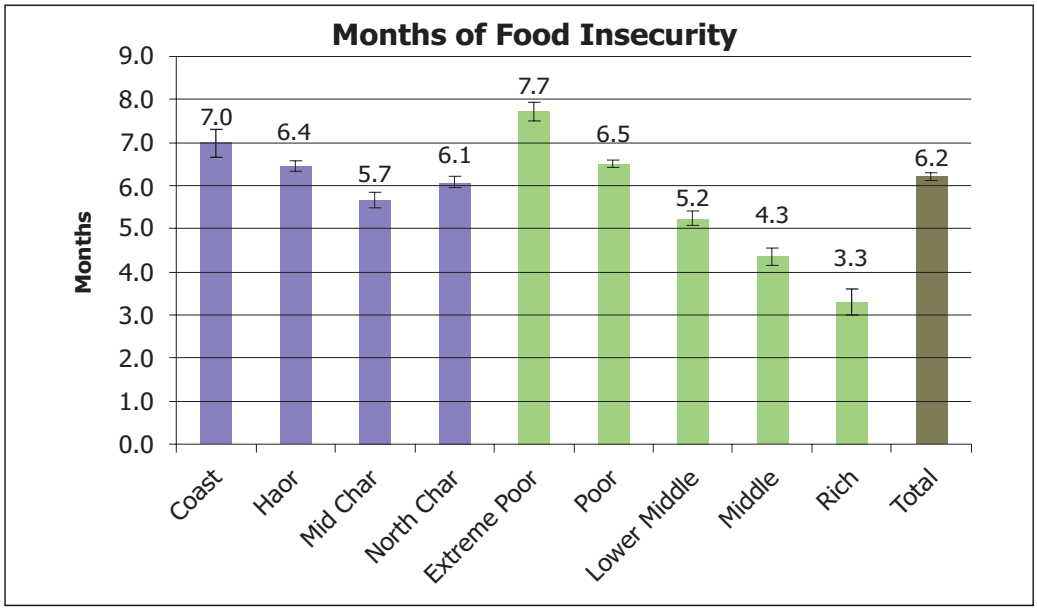
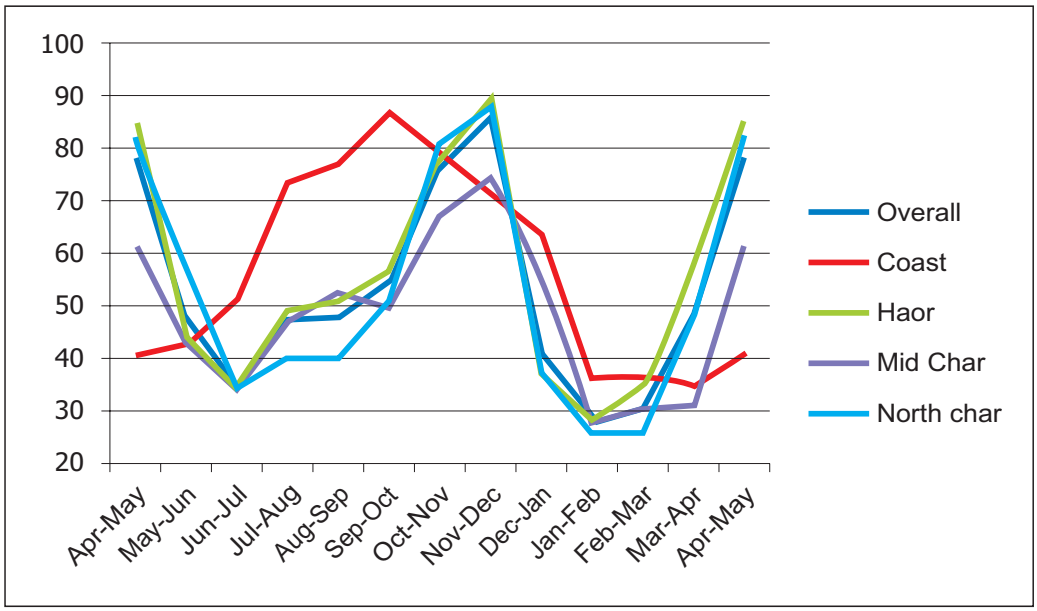


Figure 8 shows the proportion of households reporting insufficient food by month of the year for each region and the survey population. It is important to focus on the overall shape of the curve here, as there will be some respondent variation based on situation and recall relative to the months. First, the figure shows an overall pattern of two distinct lean periods in terms of insufficient food, with the months of food insecurity falling between October-December and March-June. This overall pattern is consistent in Haor, Mid Char and North Char regions although proportions vary slightly. The data also clearly shows differences between the Coast region and the other three regions. In the Coast region there is one pronounced season of favorable food security coming between July-October, and the curve is much smoother and uni-modal, with a more gradual reduction in food security compared to the other three areas.

Figure 8: Proportion of households reporting inadequate food, by region



It is important to note that the lean periods shown here slightly differ from lean seasons in other food insecure areas in Bangladesh, because the harvesting seasons, especially for boro rice, take place at slightly different times throughout the country.

6.2 Household Hunger

To further explore household food security the survey asked respondents three key questions, all of which are summarized in tables 12 and 13 below. The first question was “In the last four weeks, was there a time when there was no food to eat of any kind in the house because of a lack of resources to obtain food?” This question reveals insights into food access. Overall 72 percent of households had this problem and it varied only slightly by region, ranging from a low of 69 percent in the Coast to 75 percent in North Char. Those who responded yes were further asked how frequently this happened in the last month, with 1-10 times termed ‘sometimes’ and more than 10 times termed ‘often’. These frequencies also varied only slightly by region but ‘often’ was most frequent in the Haor region and least frequent in the North Char region. This question, analyzed by well-being category, followed a predictable pattern of extreme poor households having the highest frequency and rich households having the lowest frequency, both for the proportion of households experiencing a food security issue and those experiencing it the most often.

The next question, similar in format, asked if anyone in the household went to sleep hungry at night without eating anything at all because there was not enough food. The overall frequency of this issue was 55 percent of households, lower than that for the first question. This may seem inconsistent because logic would dictate that if there is no food in the household then people would likely go to sleep hungry. It may be, however, that going to sleep hungry is perceived as a more severe situation than no food in the house, and people are habituated to skipping meals. It may also be that households obtain food elsewhere (from relatives, neighbors or friends) when there is no food in the house or even purchase food daily.

Table 12: Key household hunger indicators, by region

Food Security Indicator		Region				Overall
		Coast	Haor	Mid Char	North Char	
Proportion of HHs with no food at any time in last 4 weeks		68.7	70.4	74.1	74.6	72.5
Frequency	*Sometimes*	*70.4*	*67.2*	*73.4*	*80.5*	*73.5*
	Often	*29.6*	*32.8*	*26.6*	*19.5*	*26.5*
Proportion of HHs going to sleep hungry at any time in last 4 weeks		54.7	52.3	58.6	55.3	54.5
Frequency	*Sometimes*	*75.0*	*69.2*	*76.2*	*85.0*	*76.8*
	Often	*25.0*	*30.8*	*23.8*	*14.8*	*23.2*
Proportion of HHs w/ member skipping entire day eating in last 4 weeks		35.0	39.9	41.1	34.4	38.3
Frequency	*Sometimes*	*74.9*	*68.2*	*76.2*	*79.2*	*73.6*
	Often	*25.1*	*31.8*	*23.8*	*20.8*	*26.4*

The third related question asked if any household member went an entire day and night without eating. Here the overall frequency was 38 percent, ranging from a low in the Coast region of 35 percent to a high in the Mid Char region of 41 percent, a rather narrow range. In terms of frequency this was again highest in the Haor region and lowest in the North Char, a pattern that was consistent for all three questions.

Table 13: Key household hunger indicators, by well-being category

Household Hunger Indicators		Well-being Category					Overall
		Extreme Poor	Poor	Lower Middle	Middle	Rich	
Percent HHs with no food at any time in last 4 weeks		83.9	77.5	63.4	49.5	36.3	72.5
Frequency	*Sometimes*	*59.3*	*74.5*	*80.3*	*88.3*	*84.4*	*73.5*
	Often	*40.7*	*25.5*	*19.7*	*11.7*	*15.6*	*26.5*
Percent of HHs going to sleep hungry at any time in last 4 weeks		71.4	59.5	42.4	27.8	16.0	54.5
Frequency	*Sometimes*	*68.6*	*78.0*	*82.1*	*82.9*	*74.8*	*76.8*
	Often	*31.4*	*22.0*	*17.9*	*17.1*	*25.2*	*23.2*
Percent of HHs w/ member skipping entire day eating in last 4 weeks		54.2	41.8	25.8	21.0	9.8	38.3
Frequency	*Sometimes*	*66.7*	*75.1*	*74.9*	*85.1*	*71.9*	*73.6*
	Often	*33.3*	*24.9*	*25.1*	*14.9*	*28.1*	*26.4*

The data collected on the three questions are used to calculate the "Household Hunger Scale" (HHS). Developed by FANTA II and validated through FAO studies, is a measure of whether or not households are actually experiencing hunger, which is a challenging concept to capture through quantitative survey methods. The scale is derived from FANTA II's Household Food Insecurity Access Scale (HFIAS). The HHS is a byproduct of the HFIAS and the scale items are the last three questions in the HFIAS. To calculate the scale, the following point system is used: a "No" response receives 0 points, "Rarely or sometimes (1-10 times)" receives 1 point, and "Often (more than 10 times)" receives 2 points. The frequency responses (0, 1 or 2) for the three questions are summed, with a maximum score of 6. Based on the summed score, households are categorized as follows: 0-1 points is a household with little or no hunger in the past month; 2-3 points is a household with moderate hunger in the previous month; and 4-6 points is a household with severe hunger in the previous month.

Figure 9 shows the results of the HHS by Region. Note that all four regions experience the same patterns among the three hunger classes. Char areas have slightly lower severe hunger and little hunger. The Haor region had the highest proportion of households with severe hunger.

Figure 9: Household Hunger score, by region

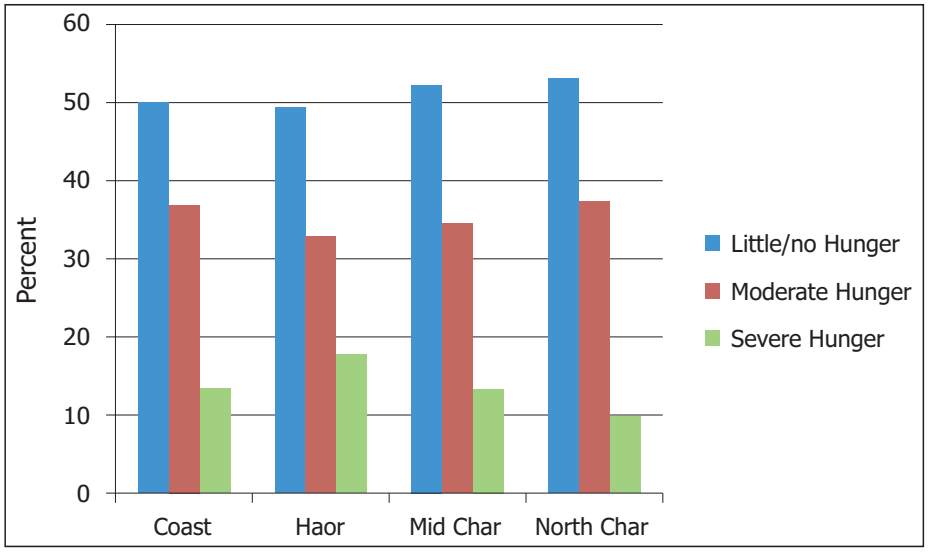
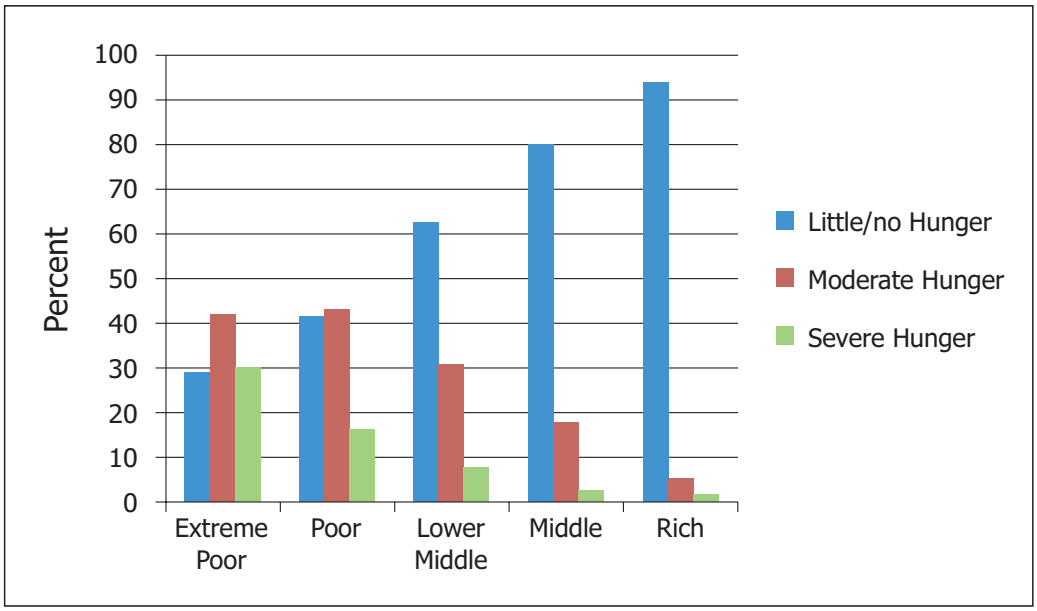


Figure 10 shows the same data by well-being category. Here the results are vividly different. There are strict relationships between hunger classes and well-being category. About 30-40 percent of extreme poor households are found in all three categories, with nearly 40 percent experiencing moderate hunger. Poor households are almost equally represented in little and moderate hunger categories. As socio-economic status improves, the proportion of households with little or no hunger improves dramatically, and there is a concomitant decrease in the proportion of households with moderate or severe hunger.

It is important to bear in mind that food security indicators can be highly seasonal, depending on when data is collected and what types of food access issues households are facing during data collection periods. When food security indicators are incorporated into monitoring systems it is best to collect data at the same time each year or have multiple data collection periods that stratify the monitoring system by season.

Figure 10: Household Hunger score, by well-being category



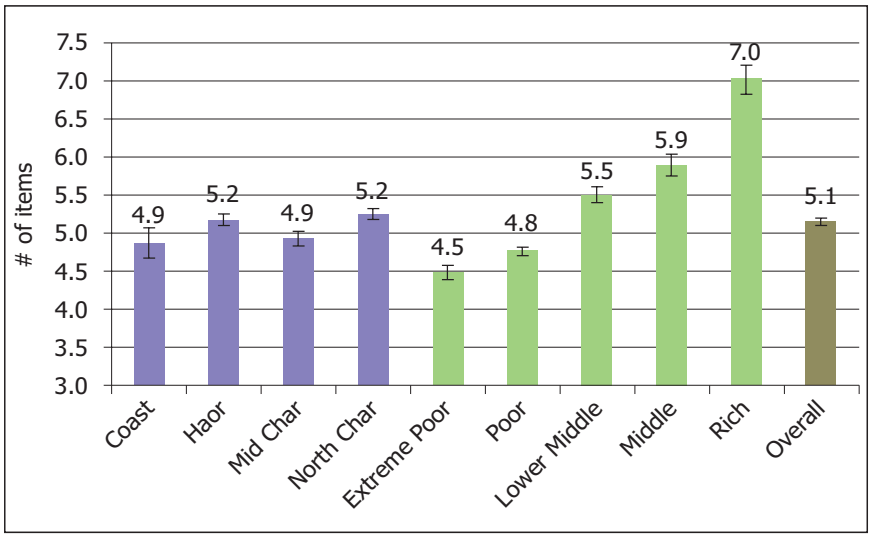
6.3 Dietary diversity

Household food access is defined as the ability to acquire sufficient quality and quantity of food to meet all household members' nutritional requirements for productive lives. So food security includes not only the ability to access food, but to access it in adequate quantities and with a diversity that allows a nutritious diet. A more diversified diet is highly correlated with important nutritional factors such as caloric and protein adequacy, percentage of protein from animal sources (high quality protein), and household income[10]. Even in very poor households, increased food expenditure resulting from additional income is associated with increased quantity and quality of the diet. A diet of low diversity can lead to nutritional problems irrespective of the number of calories consumed. In order to assess aspects of diet diversity and quality the survey asked respondents to recall consumption of specific food groups consumed in the last 24 hours.

10 Swindale, Anne and Paula Belinsky. 2006. Household Dietary Diversity Score (HDDS) for Measurement of Household Food Access: Indicator Guide. Version 2. FANTA.

Figure 11 above shows the dietary diversity scores by region and well-being category. Note that there are significant differences among the four regions, with North Char and Haor areas having the highest number of food items and the Coast and Mid Char having lower values. However, even the values for North Char show that only about one-third of the fifteen food groups queried were consumed, suggesting that the average diet is fairly deficient in nutrition. Poorer households fall significantly below the overall mean and consume the fewest number of food items for any single cohort. The wealthiest households consumed about one-half of the food groups queried, suggesting that even they lack the variety of foods necessary for a sustained and healthy diet.

Figure 11: Dietary diversity scores, by region and well-being category



6.4 Food consumption score

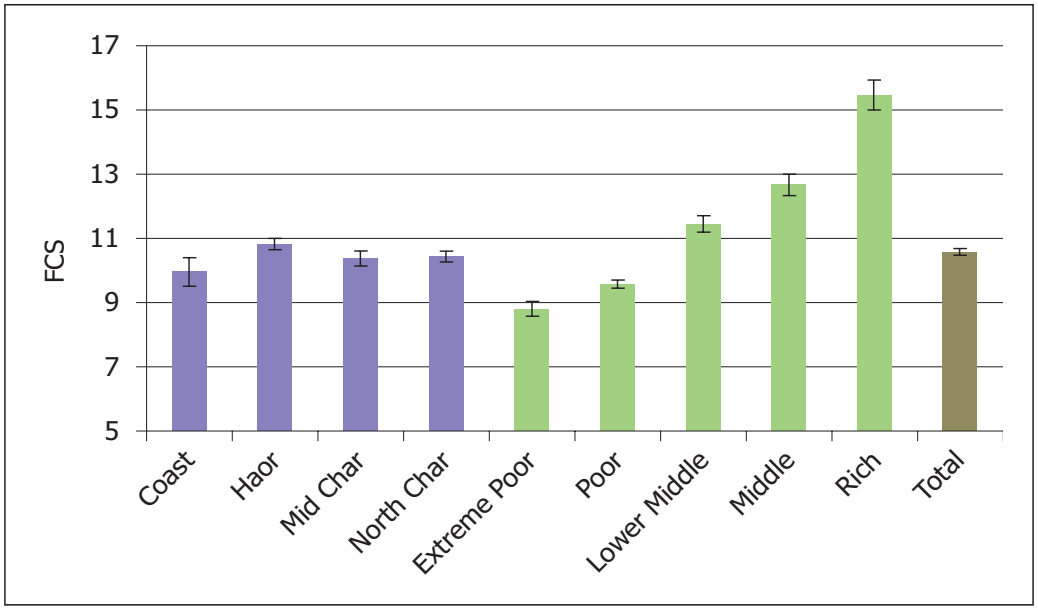
The Food Consumption Score (FCS) is widely used now by the World Food Program and endorsed as a measure of diet diversity and quality, and is derived by weighting various food groups based on their protein value and assigning a score for each food group consumed by the household during the recall period. Points for the SHOUHARDO II baseline study are assigned as follows:

Table 14: FCS categories and weighting

Food Group	Score
Cereals:	2 points
Pumpkin, squash carrots, sweet potatoes :	2 points
White potatoes, white yams:	2 points
Dark green leafy vegetables:	3 points
Other vegetables:	1 point
Papayas, mangoes:	3 points
Other fruits:	1 point
Meat:	4 points
Eggs:	4 points
Fresh or dried fish/shellfish:	4 points
Legumes/pulses:	3 points
Milk/Dairy:	4 points
Oil/fats:	0.5 points
Sugar/honey:	0.5 points
Condiments:	0.5 points
Total Possible:	**34.0 points**

Figure 12 shows the mean FCS values by region and well-being category. As expected, there is a strong correlation between the FCS and the diet diversity scores (Pearson correlation coefficient =.923). The Haor area has the highest FCS, suggesting that diets are slightly more nutritious in this region (but still significantly lower than a well-rounded and nutritious diet should be). The Mid Char and North Char regions scored equally while the Coast scored the lowest. There is an exponential type response by well-being, with extreme poor households scoring below 9 points and the wealthiest households scoring above 15. Only the very affluent households appear to have a diet that is anywhere near as diverse and nutritious as to allow for proper nutrition of household members.

Figure 12: Mean FCS values, by region and well-being category



When analyzing by food group, the responses show that almost all household members (99%) consumed 'cereals'; mostly rice and in fewer cases wheat flour. Second to grains was oils, consumed by 75 percent of households, then 'fresh and dried fish' (57%). This relatively high level of fish consumption can be partly attributed to the timing of data collection, which was undertaken at a time when the water levels were dropping, and fish catch and drying was high. The fourth most frequently consumed food group was potatoes and other starches (45%) and green, leafy vegetables (45%). Green and leafy vegetables and fish are the most nutritious of these food groups. Consumption of other food groups drops rapidly and no other food group was consumed by more than 20 percent of households. Eggs were consumed by 18 percent of households, dairy by 12 percent, and meat by only 9 percent. All three of these food groups have the highest nutritional weighting in the FCS (4 points each), and their low consumption goes a long way in explaining the overall low FCS scores found in the study. The remaining food groups were all < 5 percent.

7.0 LIVELIHOODS AND ECONOMIC SECURITY

7.1 Migration

Migration, both short and long term, is a common strategy in Bangladesh. Much of the internal migration in Bangladesh results from people seeking work, thus there are significant movements of rural inhabitants into urban areas where jobs are more available. Individuals and families also migrate in search of new land, for religious purposes, and occasionally to avoid political or social conflict. Much of the migration within Bangladesh can be characterized as labor migration, but there are also significant numbers that move in search of better schooling or improved access to other services and infrastructure[11].

In the SHOUHARDO II project regions it is still mainly men who migrate temporarily or seasonally for agricultural contract work or short-term labor opportunities. Qualitative data showed that an increasing number of women also migrate for economic purposes, with many young females migrating to work in garment factories. Table 15 shows migration data by region. Almost 30 percent of households had at least one member migrate in the previous year. In the Coast region the rate of migration is fairly modest. However, the proportion of households with a household member migrating in the Haor and Char regions is fairly consistent.

Table 15: Migration data, by region

Characteristic	Region				Overall
	Coast	Haor	Mid Char	North Char	
Proportion of households with migration (%)	10.6	27.1	26.7	31.5	28.1
Average number of migrants	1.1	1.2	1.1	1.1	1.2
Longest period of migration (days)	30.7	58.0	46.7	57.8	55.7
Proportion of households selling labor in advance (%)	4.9	6.0	7.2	11.3	8.2
Proportion of households taking out interest-bearing loan (%)	6.9	21.4	16.8	24.6	21.3

Rarely does more than one member of the household migrate when the household as a whole remains in a village or area. Data confirms this with just over one person migrating per household. While in some households a family member may migrate away for years, either internally or overseas, it is also common to migrate for a short time period to take advantage of seasonal labor opportunities. In the baseline population the average number of days away was 56, ranging from 31 in Coast households to 58 in Haor and North Char households.

11 Buchaneu, Juan. 2008. Migration, Remittances and Poverty Alleviation in Bangladesh. United Nations Development Programme.

Table 16: Migration data, by well-being category

Migration Indicators	Category					Overall
	Extreme Poor	Poor	Lower Middle	Middle	Rich	
Proportion of households with migration (%)	24.3	35.6	25.9	15.3	7.5	28.1
Average number of migrants	1.1	1.1	1.1	1.2	1.5	1.2
Average period of migration (days)	47.2	55.1	59.5	65.0	68.0	55.7
Proportion of households selling labor in advance (%)	8.0	11.0	6.7	3.2	0.7	8.2
Proportion of households taking out interest-bearing loan (%)	17.9	22.5	22.7	21.7	15.6	21.3

It is not only the poor households that have members who migrate. Table 16 above shows migration data by well-being category. Extreme poor, poor and lower middle households do have higher migration than middle or rich households, but all well-being categories use migration for various reasons. There is a direct link to poverty and migration, and for some households the remittances that are returned from migrant workers are a key component of household income. Migration itself may be a factor in transitioning a household from a lower to a higher well-being category. It is interesting to note that those who migrate from wealthier households average more days away than those from extreme poor and poor households. This may be attributable to the types of opportunities available (short-term or seasonal labor versus contract work). More individuals who migrate overseas for longer time periods may also come from better-off households due to the up-front costs required for such migration.

7.2 Occupational patterns

The primary occupations of surveyed household members reflect the principle livelihood strategies of households in their region. The survey collected data on the primary and secondary occupations of all household members fifteen years of age and older, with a recognition that many have access to multiple occupations in rural Bangladesh.

Tables 17 and 18 show the primary occupations for adults aged 18 years and older by region and well-being category, respectively. What the data show is that there are few distinct differences in occupational trends in the across three of the four regions in the sample, especially for females. The Haor, Mid Char and North Char regions follow very similar occupation patterns. They each have about 25 percent of the adult population engaged in agricultural day or contract labor, for example. The Haor and North Char have higher proportions engaged in farming while the Mid Char region has a higher proportion engaged in non-agricultural day and contract labor. Across the sample relatively few households engage in agriculture on their own fields, a result of the extensive degree of landlessness among rural households in Bangladesh.

Table 17: Primary occupations for individuals aged 18 years and older, by region and overall (N=38,522)

Occupational Categories	Adults 18 years and older Region									
	Coast		Haor		Mid Char		North Char		Overall	
	M	F	M	F	M	F	M	F	M	F
Farming	9.5	0.3	27.0	0.2	15.5	0.2	21.3	0.3	22.2	0.2
Agricultural day/contract labor	12.8	0.7	25.0	0.4	24.6	0.5	26.6	1.9	25.0	1.0
Fishing	5.8	0.0	0.9	0.0	0.5	0.0	0.3	0.0	0.5	0.0
Poultry/livestock raising	0.0	0.2	0.1	0.1	0.2	0.7	0.0	0.6	0.1	0.4
Non-agr day/contract labor	22.9	1.6	8.1	0.3	14.7	1.6	11.8	2.7	11.2	1.5
Casual labor	3.4	0.2	2.7	0.6	2.5	0.6	2.6	0.5	2.7	0.6
Regular salaried employment	7.9	0.6	8.7	1.3	6.1	1.3	7.7	1.6	7.9	1.4
Self-employment in business	16.9	0.9	9.7	0.4	14.0	1.0	13.7	0.5	12.2	0.6
Paid volunteers	0.6	0.2	0.4	0.0	0.4	0.2	0.2	0.1	0.3	0.1
House work	0.3	78.7	0.2	80.7	0.4	79.1	0.2	79.1	0.2	79.7
Servant/maid	0.1	3.1	0.1	1.4	0.0	0.9	0.1	3.4	0.1	2.2
Student	3.8	2.1	3.7	1.8	3.3	1.8	4.8	1.7	4.1	1.8
Begging	0.1	0.4	0.2	1.0	0.2	0.3	0.5	1.1	0.3	0.9
Unemployed	5.5	4.7	3.4	2.5	3.3	2.0	2.3	0.5	3.0	1.7
Other	3.2	0.7	3.6	0.1	7.2	1.1	1.8	0.3	3.5	0.4
Unable to work	7.1	5.8	6.0	9.2	6.7	8.5	5.0	5.7	5.8	7.6

The majority of respondents reported having no secondary occupation. This would be expected for livelihoods such as salaried employees, business owners, many skilled laborers, etc., but not for those who rely heavily on day labor opportunities. However, only about 15 percent of agricultural and non-agricultural day laborers have any secondary occupation/activity, suggesting that these individuals and households have very low resiliency and could benefit greatly from diversifying their basic livelihood skills.

Table 18: Primary occupations for male individuals aged 18 years and older, by well-being category (N=38,522)

Occupational Categories	Male Adults 18 Years and Older Well-being Category									
	Extreme Poor		Poor		Lower Middle		Middle		Rich	
	M	F	M	F	M	F	M	F	M	F
Farming	7.8	0.5	11.7	0.1	28.8	0.5	40.9	0.3	48.1	0.2
Agricultural day/contract labor	33.9	2.6	33.9	1.2	21.4	0.4	9.8	0.1	2.2	0.0
Fishing	0.6	0.0	0.7	0.0	0.2	0.0	0.2	0.0	0.0	0.0
Poultry/livestock raising	0.1	0.5	0.1	0.4	0.0	0.4	0.0	0.4	0.1	0.0

Table 18: Primary occupations for male individuals aged 18 years and older, by well-being category (N=38,522)

Occupational Categories	Male Adults 18 Years and Older Well-being Category									
	Extreme Poor		Poor		Lower Middle		Middle		Rich	
Non-agricultural day/contract labor	16.5	4.0	16.5	2.0	5.8	0.2	4.4	0.1	0.6	0.0
Casual labor	3.1	2.3	3.4	0.5	2.2	0.3	1.5	0.0	1.2	0.0
Regular salaried employment	2.9	0.6	6.4	1.0	9.3	1.4	10.8	1.4	12.6	4.0
Self-employment in business	10.5	1.0	11.3	0.6	15.9	0.5	12.0	0.5	12.1	0.0
Paid volunteers	0.8	0.2	0.2	0.0	0.4	0.2	0.3	0.0	0.4	0.0
House work	0.7	61.4	0.2	82.4	0.3	82.5	0.1	84.8	0.0	79.6
Servant/maid	0.3	8.1	0.1	1.7	0.0	1.4	0.0	0.1	0.0	0.1
Student	2.0	0.1	2.3	0.7	4.6	2.9	6.1	2.7	10.4	5.7
Begging	2.1	5.0	0.3	0.5	0.0	0.1	0.0	0.0	0.0	0.0
Unemployed	2.3	2.6	2.0	1.8	3.8	1.7	5.0	1.4	4.6	0.8
Other	6.2	1.2	4.5	0.2	2.4	0.2	1.5	0.0	1.4	0.8
Unable to work	9.8	9.7	5.1	6.9	4.5	7.3	7.0	7.9	6.2	8.5
No secondary occupation	82.4	90.2	79.3	92.5	75.7	95.1	80.9	94.0	82.5	96.4

Among those with secondary occupations, agricultural and non-agricultural day labor opportunities are the most common occupational categories for those whose primary activities are in areas such as petty trade, sharecropping, and fishing. Livestock husbandry is slightly more important as a secondary occupation in the Haor areas, but again there is very little difference in livelihood patterns between the four regions. When comparing among well-being classes, table 18 above shows important differences in how households make a living. Qualitative data showed that while men primarily earn income through agricultural and non-agricultural day labor, fishing and petty trade; the majority of women do so through homestead activities such as fish processing / preparation of goods for market, making handicrafts, and livestock and poultry rearing.

7.3 Household employment and income/expenditure

Closely linked to occupations and livelihoods are economic indicators of households, such as income, other cash sources, asset ownership, debt and savings. Together these elements of economic security reveal how resilient households are to economic shocks and natural disasters.

One of the first indicators of economic resiliency is the number of income earners per household. For the survey population, each household had on average only 1.2 income earners. This can be considered quite low but there could be seasonality factors due to the timing of the survey. As expected, female-headed households averaged less than one income earner per household.

The data show that the main household income sources align closely with the primary occupations, as was expected based on number of income earners and main occupations (table 19). Agricultural day labor is the main income source across regions, followed by non-agricultural day labor. The Coast region has much lower proportions of individuals earning income from agricultural day labor but a much higher proportion

earning income from non-agricultural day labor as well as from petty trade and business. There are fewer distinct differences in income sources among the other regions, with the following exceptions. Agricultural contract labor was a more important source of income in the Mid Char area compared to other regions. Non-agricultural day labor opportunities were relatively low in the haor region. All of these cases could have a strong seasonal dimension.

Table 19: Income sources for previous year, by region

Income Sources (multiple response)	Region							
	Coast		Haor		Mid Char		North Char	
	Months	%	Months	%	Months	%	Months	%
Agricultural day labor	7.3	9.4	8.2	25.5	7.2	17.7	6.9	28.0
Agricultural contract labor	7.3	8.4	8.6	10.5	7.1	14.0	7.3	9.5
Non-agricultural day labor	7.6	16.6	8.5	8.7	8.3	12.9	7.4	14.2
Non-agricultural contract labor	8.8	8.5	8.4	3.0	8.0	6.3	6.8	2.6
Casual labor	8.7	3.9	7.6	5.2	7.5	3.5	7.7	3.1
Regular salaried employment	11.4	7.5	11.2	9.6	11.5	5.4	11.8	8.0
Self-employment business/ service	10.0	14.1	10.5	12.4	10.0	13.9	10.2	13.8
Petty trade/business	9.7	6.0	10.2	3.9	9.3	4.2	9.1	2.4
Business w/ hired labor	11.1	0.2	11.4	0.2	11.4	0.2	11.8	0.1
Paid “volunteer”	10.3	1.0	9.5	0.6	9.0	0.6	9.7	0.4
Rickshaw/van pulling	8.9	3.9	9.4	4.3	9.0	4.8	8.2	3.8
Boatman	7.4	2.4	6.2	1.4	8.9	0.4	9.7	0.6
Working as servant/maid	8.4	2.8	9.5	1.0	8.6	1.0	8.7	2.1
Begging	8.8	0.6	12.0	0.8	10.8	0.6	10.7	1.8
Cash-for-work	4.5	0.1	8.3	0.4	7.8	0.5	3.5	0.2

Table 20 shows the same information by well-being category. Agricultural day laborer is the primary source of income for all classes except for the rich. After that, income source is quite varied according to socio-economic status. The extreme poor and poor are also very dependent on agricultural contract labor as well as non-agricultural day labor. Better-off households are more dependent on salaried employment and business opportunities. Lower middle well-being households truly do fall in the middle, depending in large part on day labor opportunities but having more households that engage in salaried employment and business than extreme poor and poor households.

Table 20: Income sources for previous year, by well-being category

Income Sources (multiple response)	Well-being Category									
	Extreme Poor		Poor		Lower Middle		Middle		Rich	
	Months	%	Months	%	Months	%	Months	%	Months	%
Agricultural day labor	7.4	23.8	7.4	31.5	7.8	20.1	7.8	14.2	7.6	4.2
Agricultural contract labor	8.1	11.7	7.6	12.7	7.2	9.5	7.7	4.0	8.3	1.3
Non-agricultural day labor	7.9	12.8	8.0	15.8	7.6	7.8	8.2	5.6	6.7	1.5
Non-agricultural contract labor	7.3	4.7	8.0	5.0	8.3	2.0	6.6	0.9	6.6	0.1
Casual labor	7.1	5.1	7.8	4.8	7.8	3.1	7.9	2.9	6.0	1.4
Regular salaried employment	10.6	2.4	11.2	5.9	11.6	10.8	11.8	14.1	12.0	19.6
Self-employment business/ service	9.9	7.4	10.3	10.7	10.1	18.5	10.3	17.8	10.8	32.8
Petty trade/business	8.7	2.5	9.6	3.4	10.6	4.4	9.6	3.1	9.1	3.2
Business w/ hired labor	12.0	0.2	11.6	0.2	11.2	1.0	11.7	0.8	12.0	4.6
Paid “volunteer”	11.6	0.8	7.0	0.3	12.0	0.5	9.2	0.2	9.1	2.4
Rickshaw/van pulling	9.2	5.1	8.9	6.0	8.1	2.0	8.5	1.1	--	0.0
Boatman	7.2	1.3	7.3	0.8	7.6	1.0	7.4	1.1	--	0.0
Working as servant/maid	8.9	6.4	8.4	1.0	11.00	0.6	--	0.0	--	0.0
Begging	11.0	6.1	11.3	0.7	--	0.0	--	0.0	--	0.0
Cash-for-work	8.4	1.0	5.0	0.2	8.0	0.1	8.3	0.7	--	0.0

Households in general have diversified strategies for generating income, but one of the problems in rural Bangladesh is the lack of depth of income diversification within a household. Overall, households only average 9.9 months of employment for the entire household (table 21). This alone makes it likely that households will experience serious food security issues for significant time periods each year. Coastal and Haor regions averaged the highest number of income months, but still relatively low for an entire household.

Table 21: Key income data for households, by region

Income Variable (Taka/month)	Region				Overall
	Coast	Haor	Mid Char	North Char	
Mean number of months of HH employment	10.5	10.4	9.7	9.4	9.9
Mean monthly household income (Taka)	3,585	3,442	3,137	3,015	3,229
Mean number of PC months of employment	2.1	2.4	2.5	2.6	2.5
Mean monthly per capita income (Taka)	667	745	756	741	742
Mean annual agr. input expenditures (Taka)	11,139	10,763	10,419	10,160	10,472
Mean annual animal input expenditures (Taka)	3,943	3,800	5,362	3,092	8,573

Average monthly household income is Taka 3,229, and ranges from a low of Taka 3,015 in the North Char to a high if Taka 3,585 in the Coast. Per capita income averages Taka 742 per month, but is lowest in the Coast due to its larger average household size. These low levels of monthly income have a profound impact on food access as well as other aspects of livelihood security, and are one of the main contributing factors of food insecurity.

Table 22: Key income data for households, by well-being category

Income Data	Category					Overall
	Extreme Poor	Poor	Lower Middle	Middle	Rich	
Estimated mean number of months of HH employment	10.6	10.6	9.5	8.5	8.3	9.8
Mean monthly household income (Taka)	1,875	2,687	3,348	4,540	7,134	3,229
Estimated mean number of PC months of employment	3.2	2.7	2.2	1.7	1.5	1.5
Mean monthly per capita income (Taka)	556	650	767	934	1,364	742

The extreme poor average only Taka 1,875 per month (table 22). Poor households average almost Taka 800 more per month but still have very low income levels. Even the middle well-being group is low at only Taka 4,540 per month. Female-headed households reported income of less than Taka 1,200 per month and are clearly the most vulnerable sub-group. The extreme poor, while having the lowest income, have the highest employment months per capita. So not only are they poor, they have to work significantly longer to obtain their measly incomes. Figures 13 and 14 shows the mean values of household and per capita monthly income for all groups. For the survey population overall, the mean household income is 3,229 Taka. There is no difference between MCHN/PEP and PM2A areas, as one would expect, because there have been no project interventions that would make these two areas distinguishable.

Figure 13: Mean values of monthly household income, by region, well-being category and area

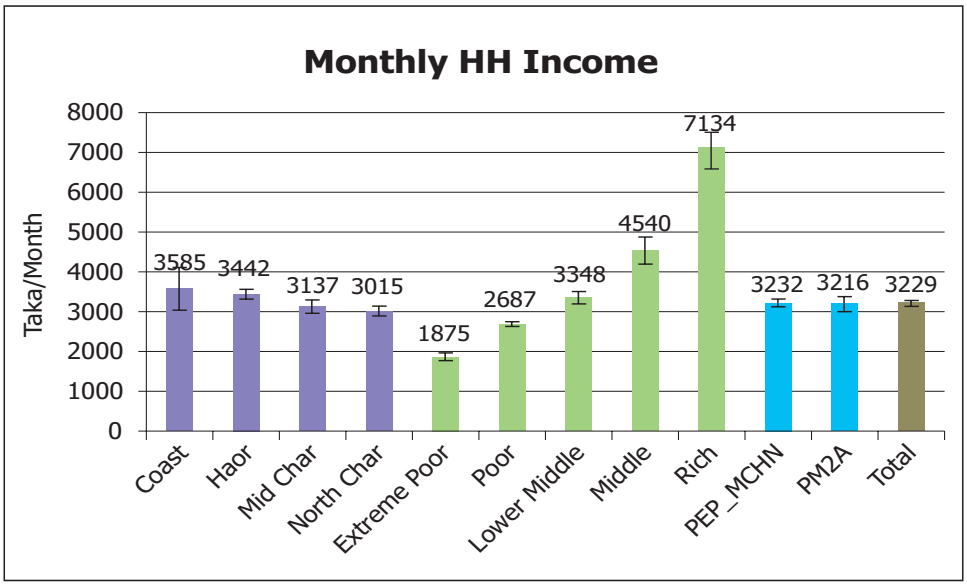
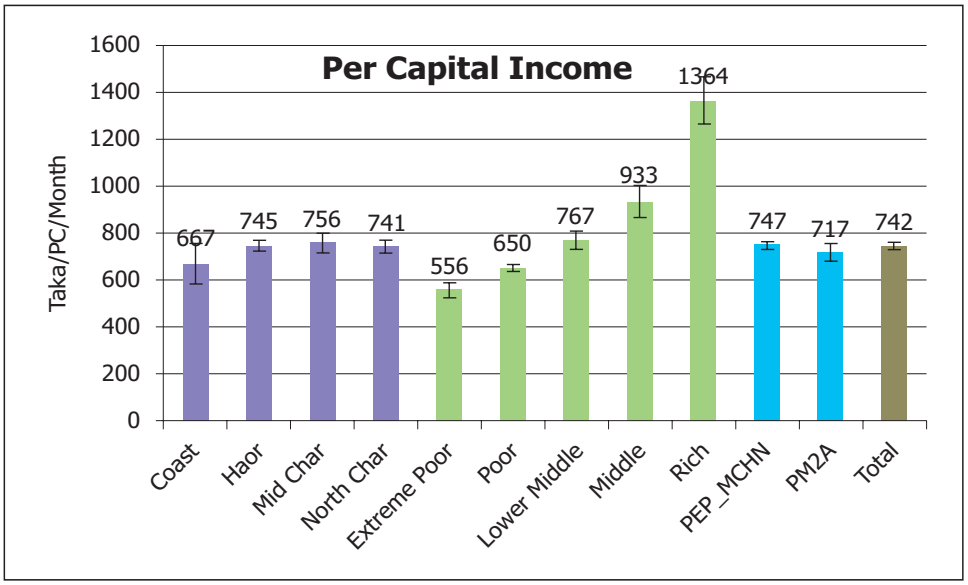


Figure 14: Mean values of per capita monthly household income, by region, well-being category and area



Other income sources for households are reported in the following two tables (table 23 and 24). The important points here are that the better-off households derive a significant amount of their income from remittances and pensions/retirement plans. The extreme poor and poor only derive about 5 percent of their income from remittances, whereas for the rich households it is more in the order of 10 percent. The better-off households also enjoy considerable earning from the sales of agricultural and animal products, which the extreme poor and poor usually supply the bulk of the labor to produce, only at very low (one could say 'non-living') wages.

Table 23: Other income and sources for households, by region (N=8,408)

Other Income Sources (Taka/month)	Region				Overall
	Coast	Haor	Mid Char	North Char	
Remittances	6,934	2,870	3,115	1,494	2,534
Gifts	110	187	143	72	132
Pensions/retirement funds	8	210	203	371	264
Leases	312	524	1,139	494	610
Sales of agricultural products	3,419	5,503	4,053	5,143	5,034
Sales of animals/animal products	841	1,253	1,589	1,743	1,486
Total Other Income	11,624	10,547	10,242	9,317	10,060

Table 24: Other income and sources for households, by well-being category (N=8,408)

Income Variable (Taka/year)	Well-being Category					Overall
	Extreme Poor	Poor	Lower Middle	Middle	Rich	
Remittances	944	1,377	3,191	5,540	7,417	2,534
Gifts	154	92	168	190	197	132
Pensions/retirement funds	218	53	166	295	1,900	264
Leases	71	279	775	1,405	2,287	610
Sales of agricultural products	680	1,664	5,094	12,094	25,129	5,034
Sales of animals/animal products	586	703	2,102	2,784	5,085	1,486
Total Other Income	2,068	3,464	9,394	19,525	36,932	10,060

7.4 Loans

Table 25 shows that only 38 percent of households overall held at least 1 current loan over the last 12 months. This is much lower than in some other surveys[12]. When comparing across regions, a significantly higher number of households in Haor and Char regions held loans compared to households in the Coast region (20%). The average number of loans per household overall was 1.3, and this did not vary significantly across the regions.

The average loan amount was 14,927 Taka. When comparing across regions, the average loan amount per household was significantly higher in Mid Char (17,335 Taka) and Coast households (17,612) compared to Haor and North Char households.

Table 25: Key loan data for households, by region

Loan Variable		Region				Overall
		Coast	Haor	Mid Char	North Char	
N		2,117	2,005	2,086	2,150	8,408
Households with a loan (%)		19.6	40.9	37.5	37.5	38.4
Average number of loans per HH*		1.2	1.3	1.2	1.3	1.3
Sex of loan holder	Male	31.3	58.3	37.9	42.2	48.2
	Female	68.7	41.7	62.1	57.8	51.8
Average loan amount (Taka)		17,612	14,551	17,335	14,228	14,927
Average outstanding loan amount (Taka)		13,114	13,471	13,191	11,147	12,507
Outstanding as a % of average loan amount		74.5%	92.6%	76.1%	78.3%	83.8%
Rate of interest (%)		15.8%	23.1%	20.3%	18.7%	20.8%

12 For example, CARE Bangladesh's FSUP baseline survey found almost 70 percent of households had a current loan.

Overall, sex of the loan holder was fairly evenly divided between males and females but varied greatly by region. Only in the Haor region was the proportion of loan takers higher in males. In terms of loan repayment, it appears from the data that loan takers in the Haor region are struggling more with payment, as 93 percent of loan balances remain outstanding.

There are also significant differences in loan source among regions (table 26). The majority of loans (62%) taken from NGOs and CBOs. Formal financial institutions accounted for 26 percent of loan source, but it is not clear how institutions such as Grameen Bank fit into this category. Just over 18 percent of loans were taken from money lenders, who often give loans without collateral but instead charge higher interest rates. This figure is lower than in other recent studies but still a significant loan source for many households. Other sources, such as informal savings groups and merchants, were relatively uncommon loan sources.

Table 26: Detailed loan source data, by region and well-being category.

Loan Source	Region				Overall
	Coast	Haor	Mid Char	North Char	
N	2,117	2,005	2,086	2,150	8,408
NGOs/CBOs	79.1	48.9	67.4	74.5	62.4
Banks/formal institutions	29.2	31.6	17.0	23.1	26.3
Moneylenders	3.0	26.3	10.7	12.8	18.3
Friends/relatives	9.1	14.1	12.1	11.4	12.6
Informal Savings Group	1.6	4.7	2.9	7.7	5.5
Other	0.3	1.3	2.3	0.5	1.2
Trader/Grocer	0.7	0.2	0.2	0.9	0.5

Loan Variable		Well-being Category					Overall
		Extreme Poor	Poor	Lower Middle	Middle	Rich	
N		1,197	4,569	1,280	826	536	8,408
Households with a loan (%)		29.8	40.1	41.9	38.2	34.7	38.4
Average number of loans per HH*		1.3	1.2	1.3	1.3	1.3	1.3
Sex of loan holder	Male	46.2	43.1	49.2	56.0	75.2	48.2
	Female	53.8	56.9	50.8	44.0	24.8	51.8
Average loan amount (Taka)		10,291	10,566	15,244	24,435	39,488	14,927
Average outstanding loan amount (Taka)		10,026	9,850	12,481	19,556	33,182	12,507
Outstanding as a % of average loan amount		97.4%	93.2%	81.2%	80.0%	84.0%	83.8%
Rate of interest (%)		22.3%	21.9%	18.0%	19.0%	20.0%	20.8%

Table 27: Detailed loan source data, by well-being category

Loan Source	Well-being Category					Overall
	Extreme Poor	Poor	Lower Middle	Middle	Rich	
N	1,197	4,569	1,280	826	536	8,408
NGOs/CBOs	58.5	68.3	63.9	52.4	34.6	62.4
Banks/formal institutions	22.6	15.4	29.9	47.9	73.0	26.3
Moneylenders	20.3	20.4	14.7	16.7	11.6	18.3
Friends/relatives	20.5	13.8	10.7	7.1	5.4	12.6
Informal Savings Group	3.0	6.0	6.0	3.4	1.3	5.5
Other	1.8	1.1	1.4	1.1	0.0	1.2
Trader/Grocer	0.0	0.4	1.1	0.4	0.3	0.5

Table 28: Top reasons for taking out a loan, by region

Reason for Loan (multiple response)	Coast	Haor	Mid Char	North Char	Overall
	% of Responses	% of Responses	% of Responses	% of Responses	
N	2,117	2,005	2,086	2,150	8,408
Consumption (food, clothes, etc.)	15.6	35.5	14.9	22.4	26.5
Purchase agricultural inputs/tools	8.5	21.1	17.7	21.1	20.3
Start/support small business	28.5	13.7	18.7	19.0	16.8
House construction/repair	10.3	12.0	10.7	14.1	12.5
Loan repayment	9.3	10.5	8.6	9.6	9.8
Medical treatment/medicine	16.1	7.9	9.9	7.6	8.3
Land purchase	3.6	5.8	3.8	6.5	5.7
Livestock purchase	4.8	4.2	8.6	5.5	5.5
Wedding[13]	5.4	2.8	5.6	5.2	4.2
Education	1.5	3.9	3.0	3.7	3.7

Qualitative data clearly showed the impact that high interest rates are having on households. These high rates perpetuate the household debt cycle, which leads to use of loans for day-to-day consumption purposes and prevents productive investments – as can be seen from the very high debt burden in Table 26 and loan uses described in Tables 28 and 29.

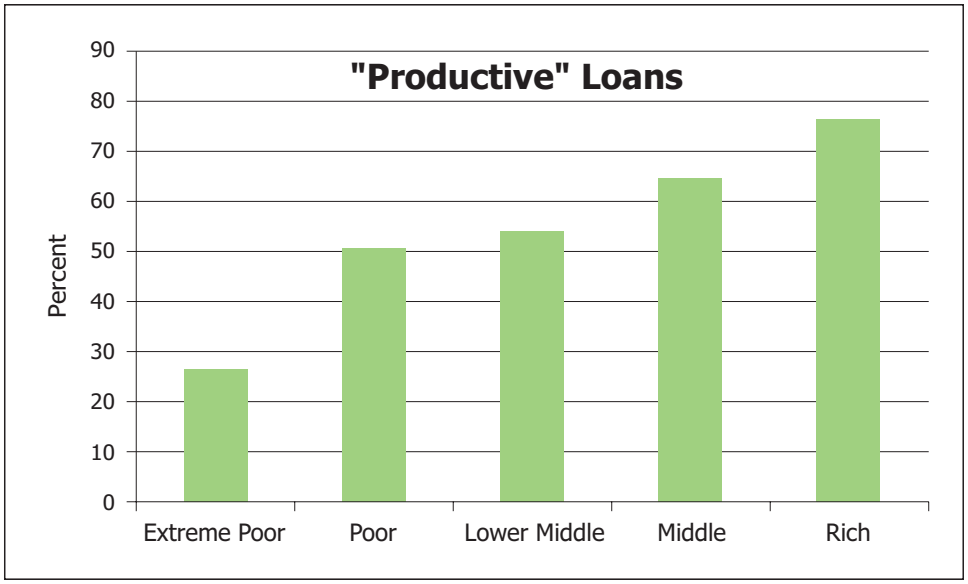
13 Wedding here could include the costs of weddings and also dowry.

Table 29: Top reasons for taking out a loan, by region

Reason for Loan (multiple response)	Well-being Category				
	Extreme Poor	Poor	Lower Middle	Middle	Rich
N	1,197	4,569	1,280	826	536
Consumption (food, clothes, etc.)	31.7	31.6	22.0	14.4	10.9
Purchase agricultural inputs/tools	9.3	13.5	27.1	35.9	46.4
Start/support small business	10.3	15.6	19.1	21.5	23.0
House construction/repair	11.5	12.7	15.9	10.3	7.2
Loan repayment	11.5	12.6	4.2	5.0	5.8
Medical treatment/medicine	17.1	8.6	6.3	4.7	2.5
Land purchase	1.8	5.1	6.6	7.4	11.0
Livestock purchase	5.3	6.0	5.5	4.0	4.4
Wedding	7.3	4.9	1.3	4.7	1.7
Education	1.7	2.0	7.4	6.0	5.9

Figure 15 represents the proportion of loans that are were taken for a productive purpose by well-being category. The purposes that were considered as productive included taking a loan to purchase agricultural or animal-related inputs, to purchase land, to purchase livestock or poultry, to purchase other productive assets such as tools and equipment, to start or improve a business, and to provide for education. Unproductive loans include loans taken out to purchase food or household goods, repay another loan, pay for a wedding or funeral, repair a house, or pay for medical expenses (which arguably could be either productive, if it keeps a family member working, or unproductive if it does not produce more income for the household). As the figure shows, only 20 percent of the loans taken by extreme poor households were considered productive loans, compared to half of the loans taken by poor households and almost 80 percent of the loans taken by rich households.

Figure 15: Proportion of 'productive' loans by well-being category



Loan data is very revealing when exploring vulnerabilities and resiliencies of households. Data from the baseline study suggests that extreme poor households are already in a debt spiral, taking 80 percent of their loans for non-productive purposes.

7.5 Assets

Assets are an integral component of livelihoods, and the accumulation and sale of assets reflect important economic characteristics of households. Each respondent was questioned about ownership of fifty-four different assets, divided into five asset classes – domestic, productive, land, animal, and resource. Asset ownership is a powerful economic indicator to monitor over time as it reflects household-level decision-making regarding where to invest additional resources.

Table 88 in Annex II gives detailed results for domestic assets. Relatively few domestic assets vary significantly by Region, suggesting that household domestic asset ownership is rather standard throughout the project area. Productive assets, shown in table 89 in Annex II, include various types of transportation and livelihood equipment, and are an important indicator of a household's investment in livelihood opportunities. Overall the ownership of productive assets in the survey population was very low, with the exception of agricultural tools. Generally, far less than one out of ten households owned any of the productive assets. Productive assets related to fishing (boats and nets) were not significantly more common in the Coast region.

Land assets, measured in decimals, are provided in table 30. Land ownership varies greatly among sampled households, so differences between Regions must also be large to be significantly different. Homestead land is significantly larger in the Coast region than in the other three regions, averaging 18.3 compared to an overall average of only 10.3. Agricultural land, averaging 48 decimals per household overall, is smallest of the four regions and highest in the Haor and North Char regions. Overall land ownership is low, as it is throughout rural Bangladesh. Households have, on average, access to about 85 decimals of land each. This is highest in the Haor at 104 decimals per household and lowest in the Coast at only 49 decimals per household.

Table 30: Average number of land assets owned, by region

Land assets (in decimels/HH)	Region				Overall
	Coast	Haor	Mid Char	North Char	
N	2,117	2,005	2,086	2,150	8,408
Homestead land	18.3	11.1	7.4	10.0	10.3
Agricultural land	20.5	58.5	35.9	44.5	47.7
Land lease - IN	4.3	7.3	4.0	2.3	4.7
Land lease - OUT	1.9	2.3	1.4	1.8	1.9
Mortgage - IN	1.3	5.7	3.3	4.2	4.5
Mortgage - OUT	0.7	8.8	5.1	8.7	7.8
Haor land (extended marsh)	0.2	0.5	0.1	0.2	0.5
Pond/ditch	0.5	2.6	0.9	1.6	1.8
Other land	1.3	7.4	7.1	2.7	5.3
Total	49.0	104.2	65.2	76.0	84.5

Analysis of land assets by well-being category shows consistency in patterns of ownership according to wealth of the household (table 31). It is interesting to note that total land almost doubles between well-being categories from extreme poor to poor, poor to lower middle, etc. The largest differences in ownership are in agricultural land, with extreme poor households averaging only 7.3 decimals. Just under 30 percent of extreme poor households do not own any homestead land, and 87 percent own no agricultural land.

Table 31: Average number of land assets owned, by well-being category

Land assets (in decimels/HH)	Well-being Category					Overall
	Extreme Poor	Poor	Lower Middle	Middle	Rich	
N	1,148	4.282	1,445	880	653	8,408
Homestead land	5.9	7.5	11.3	15.7	27.3	10.3
Agricultural land	7.3	16.3	47.5	101.3	252.4	47.7
Land lease - IN	1.9	3.6	7.4	10.0	3.6	4.7
Land lease - OUT	0.5	0.4	1.3	5.4	11.4	1.9
Mortgage - IN	1.8	2.6	6.4	11.3	8.1	4.5
Mortgage - OUT	2.5	3.0	7.9	18.1	34.2	7.8
Haor land (extended marsh)	0.0	0.1	0.4	0.8	3.8	0.5
Pond/ditch	0.2	0.3	2.3	4.4	9.6	1.8
Other land	0.7	7.3	3.4	5.4	3.7	5.3
Total	20.8	41.1	87.9	172.4	354.1	84.5

Chickens were the most common animal asset owned, averaging 3.2 per household (table 90, Annex II). Ownership of chickens was also significantly higher in the Coast where it averaged 5.7 per household and in the Haor region where it averaged 3.6 chickens per household. Cows and ducks were the second most common animal asset and averaged 0.93 per household, but both were significantly less common in the Coast region.

Ownership of some resource assets, which included timber and fruit trees, bamboo, and medicinal plants (mostly for use against cough and fever, used in lieu of adequate health care service), was fairly common in surveyed households (table 32). Bamboo trees were the most commonly owned resource asset and averaged over 40 trees per household, but were significantly more common in the North Char region as well as in Haor areas. Timber trees were also common but only in the Coast region where they averaged 35 trees per household. Fruit trees and medicinal plants were fairly rare. Extreme poor households only owned one timber tree on average, compared to 29 owned by wealthy households. Similarly, extreme poor households only owned 14 bamboo trees compared to over 163 owned on average by rich households.

Table 32: Average number of Tree/plant assets owned, by region

Tree/plant assets	Region				Overall
	Coast	Haor	Mid Char	North Char	
N	2,117	2,005	2,086	2,150	8,408
Timber trees	34.7	4.8	3.9	7.0	6.7
Fruit trees	13.4	3.7	3.0	4.8	4.4
Bamboo trees	9.0	38.5	19.5	55.5	40.7
Medicinal plants	0.2	0.4	0.1	0.4	0.34

Individual ownership of assets is useful to monitor as programs are implemented to improve livelihoods and food security, but a more useful measure than individual assets are composite measures that create asset indices. For the SHOUHARDO II survey individual asset indices were generated for domestic, animal, productive, and resource assets. These were then summed into an overall asset score. Each asset was assigned an associated weight based on its relative value. For each household, each item owned was multiplied by its weight, then all assets were summed to generate the indices for each household.

Figure 16: Average Total Asset Index score for regions and well-being categories

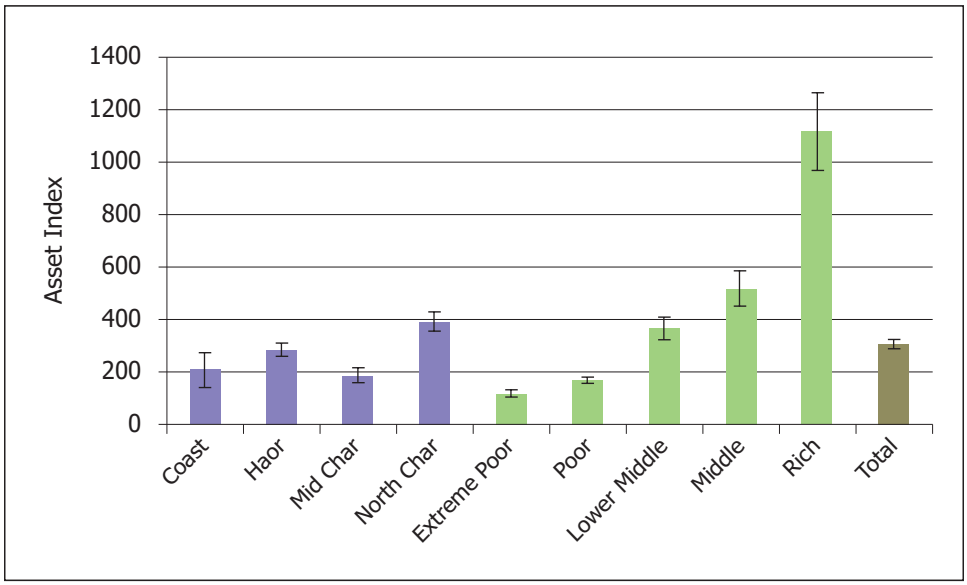


Figure 16 above shows the composite total asset score by region and well-being category. There are significant differences to note among regions. The Mid Char region had the lowest mean index value, but statistically it is no different than the Coast region. The Haor region scores higher than the Coast and Mid Char regions but not as high as the North Char. There is an exponential relationship with the total asset index and well-being categories. Extreme poor and poor households fall considerably below the mean. Their lack of productive assets and tree resources are of particular importance, but they lag behind other groups in domestic and animal assets as well.

Assets are liquid capital, in that they can normally be sold for cash. Many households routinely sell assets as a form of generating income (e.g., tree and animal assets). Assets can also be sold and replaced as they wear out or improved items come on the market. Many vulnerable households sell their assets when their household revenues fall short of their needs. If the assets that are sold are non-productive assets, such as jewelry or household goods, the impact of these sales are not grave. If, however, households sell productive assets in order to meet their needs the impact can be negative because the household normally uses these assets to generate income (e.g., animals, land).

In the surveyed households, 12.5 percent had sold assets in the previous year. It is difficult to ascertain how many of these sales were of productive versus non-productive assets, and how many were distress sales. However, data shows that 23 percent of rich households sold assets versus only 8 percent of extreme poor households sold assets. It is likely that the vast majority of asset sales of rich households were of an income-generating nature, while many of those from poor households were distress sales used to purchase basic needs or pay for a household emergency.

7.6 Housing

Housing is another important asset and also an indicator that serves as a useful proxy for wealth when other indicators are not available. It is not included in the asset calculations because it is too difficult to assess a proper value. Here only three characteristics of housing were explored – materials used for wall construction, materials used for roof construction, and the number of rooms in the house. Data are summarized in tables 33 and 34 below.

Table 33: Housing characteristics, by region (N=8,408)

Housing Characteristic		Region				Overall
		Coast	Haor	Mid Char	North Char	
Wall materials (% HHs)	C.I. sheet/wood	7.1	51.0	77.5	47.1	52.3
	Straw/jute stick/leaves	2.7	21.9	17.3	30.0	23.5
	Mud	40.2	16.6	0.4	2.5	9.3
	Thatched bamboo/ polythene	19.9	4.7	1.1	7.5	5.7
	Brick	10.4	4.4	3.0	6.0	5.0
	Bamboo	19.7	0.8	0.4	6.5	3.7
	Other	0.2	0.7	0.3	0.4	0.5
Roof materials (% HHs)	C.I. Sheet/wood	38.8	87.9	97.6	94.2	90.1
	Straw/jute stick/leaves	29.2	8.5	1.4	4.1	6.4
	Thatched bamboo/ polythene	15.1	1.8	0.2	0.9	1.7
	Other	13.9	0.3	0.1	0.1	0.7
	Concrete	1.9	0.5	0.4	0.4	0.5
	Bamboo	0.9	0.7	0.0	0.3	0.4
	Tiles	0.1	0.3	0.2	0.1	0.2
Number of rooms/household		2.2	1.6	1.6	1.7	1.6

Table 34: Housing characteristics, by well-being category (N=8,408)

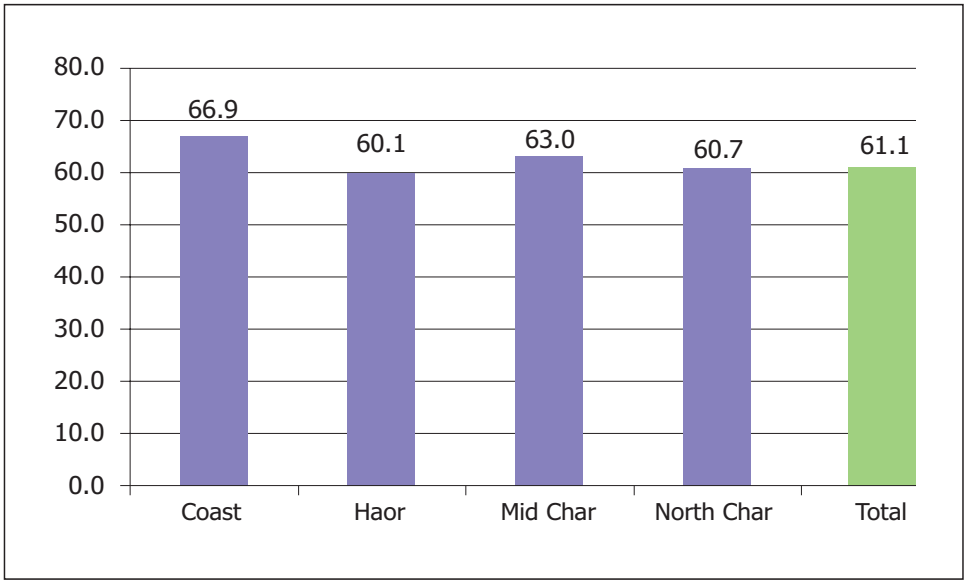
Housing Characteristic		Category					Overall
		Extreme Poor	Poor	Lower Middle	Middle	Rich	
Wall materials (% HHs)	C.I. sheet/wood	39.0	48.4	61.7	67.3	60.6	52.3
	Straw/jute stick/leaves	35.6	30.1	13.8	6.5	3.7	23.5
	Mud	13.0	9.7	8.8	7.9	2.3	9.3
	Thatched bamboo/ polythene	6.3	6.6	6.1	2.4	2.5	5.7
	Brick	0.8	1.3	4.6	11.0	30.0	5.0
	Bamboo	4.3	3.3	5.0	4.6	0.7	3.7
	Other	0.9	0.6	0.0	0.3	0.2	0.5
Roof materials (% HHs)	C.I. Sheet/wood	81.0	89.1	94.8	96.5	93.9	90.1
	Straw/jute stick/leaves	14.7	7.0	3.6	1.6	0.0	6.4
	Thatched bamboo/ polythene	2.1	2.3	0.7	0.5	0.5	1.7
	Other	1.2	1.0	0.2	0.0	0.0	0.7
	Concrete	0.1	0.1	0.1	0.6	4.4	0.5
	Bamboo	0.5	0.4	0.4	0.5	0.7	0.4
	Tiles	0.2	0.2	0.1	0.3	0.5	0.2
Number of rooms/household		1.3	1.5	1.8	2.1	2.8	1.7

8.0 WATER AND SANITATION

8.1 Drinking water sources

Access to clean drinking water is essential for good hygiene and health. In the surveyed areas, however, only about 60 percent of households have access to an improved water source (figure 17).

Figure 17: Percent of households with access to an improved drinking water source, by region



Note: All sources except pond and river or canal (surface water) are considered "improved". A household is not classified as using such a water source unless the respondent indicates that 1) water is normally available from the source and 2) it was not unavailable for a day or longer over the previous two weeks (see text).

As table 35 shows, hand tube wells are by far the most common water source for all regions, followed distantly by deep and shallow tube wells. Overall, 98 percent of households depend on the various types of tube wells for drinking water. Almost no households draw drinking water from open water sources such as ring wells, ponds and rivers/canals.

Table 35: Access to clean drinking water, by region

Drinking Water Details	Region				Overall
	Coast	Haor	Mid Char	North Char	
Main source of drinking water (percent of house-holds)					
Hand tube well	88.9	91.5	95.9	95.8	93.8
Tara pump	0.3	2.5	0.1	0.3	1.2
Deep tube well	2	4.8	1.2	1.5	2.8
Shallow tube well	2.5	0.3	2.3	1.2	1.1
Ring well/indara	3.9	0.4	0.1	0.2	0.4

Table 35: Access to clean drinking water, by region

Drinking Water Details	Region				Overall
	Coast	Haor	Mid Char	North Char	
Piped water	0.7	0.2	0.3	0.6	0.4
Pond sand filter	0	0	0	0.1	0
Rainwater harvesting system	0	0	0	0	0
Pond	0.6	0.3	0	0.1	0.2
River or canal	0.7	0.1	0.1	0	0.1
Percent of households with access to an improved drinking water source a/	66.9	60.1	63	60.7	61.1
Percent of households using an improved source but water availability is a problem	31.9	39.7	36.9	39.1	38.7
Time taken by households (%) to fetch water from an improved source					
0 minutes (source at house)	55.2	55.4	77.3	89.6	72.4
30 minutes or less	39.5	40.9	22.4	10.2	25.7
30 minutes to 1 hour	5.1	3.5	0.3	0.2	1.7
1 hour or more	0.2	0.2	0	0	0.1
Percent of households spending < 30 minutes to collect drinking water from an improved source	94.8	96.3	99.7	99.8	98.2

a/ All sources except pond and river or canal (surface water) are considered "improved". A household is not classified as using such a water source unless the respondent indicates that 1) water is normally available from the source and 2) it was not unavailable for a day or longer over the previous two weeks. Note that the presence of arsenic could not be included in this indicator as most tube wells have not been tested.

Sample sizes for "total" column: Sources of drinking water: 8,407; Percent of households with a tubewell who have had water tested for arsenic: 7,637; Percent of households that tested positive: 3,107.

Hand tube wells are most common in Char regions and least common (although still widely used) in the Coast region. In the Coast region ring wells (indara) are used more commonly but still by only 4 percent of households in the sample. In the Haor region almost 5 percent of households were found to be using deep tube wells, significantly more than in the other three regions. No information was asked on source of water used for cooking or bathing.

While the majority has access to tube wells and other improved sources, only 61 percent have true access. A household is not classified as having secure access to a water source unless the water is normally available from the source and it was not unavailable for a day or longer over the previous two weeks.[14] Just above 89 percent of respondents report that their water is normally available from their stated source. This is highest in the North Char Region and lowest in the Coast region. The dominance of hand tube wells suggests a relatively reliable water source for most households. However, almost one-third of households reported that water was unavailable at least some time during the previous two weeks. This was highest in the North Char regions (37%) and lowest in the Coast region (22%). So either the survey was conducted at a time of the year when water availability is not so certain, or recall and interpretation of what constitutes 'normally available' needs to be considered. The presence of arsenic could not be factored into the "improved drinking water source" measure as most tube wells have not been tested for arsenic (see below).

14 The definition and method of calculating the indicator "Percent of households that use an improved drinking water source" is in Hernandez, Orlando and Scott Tobias (2010). *Access and behavioral outcome indicators for water, sanitation and hygiene*. USAID Hygiene Improvement Project, Academy for Educational Develoment.

As can be seen in table 35, the large majority of households spend less than 30 minutes to collect their drinking water. Thus, distance of water from the home and/or limitations on the amount of time available for collecting it are not issues.

8.2 Arsenic testing

Arsenic is another important factor to consider when considering safe water sources. Overall only about 40 percent of tube wells have been knowingly tested for arsenic (about 7 percent of respondents reported 'not knowing') (table 37). Testing is most prevalent in the Haor region and least prevalent in the North Char region. These are very similar results as those in the SHOUHARDO I baseline, suggesting that testing is not any more prevalent now than five years ago. Areas with the highest confirmed presence of arsenic in tested tube wells include Mid Char (22%) and North Char (16%).

Table 36: Tube wells/tara pumps tested for arsenic, by region

Drinking Water (% of HHs)		Region				Overall
		Coast	Haor	Mid Char	North Char	
Tested for arsenic (%)	Yes	36.6	59.8	48.5	25.2	43.1
Has Arsenic (%)		10.5	6.6	22.2	15.6	11.9
No Arsenic (%)		87.9	92.7	76.3	84.0	87.2
Percent of wells with positive arsenic test that have a red mark		57.8	49.0	83.0	56.8	67.0

When wells test positive for arsenic, they are supposed to be marked red either red or green. A red mark indicates that the well has arsenic above the tolerance level (>0.05 mgs per liter) and the water is thus unsafe for drinking. A green mark indicates that it is below the tolerance level and is safe for drinking. Only 67.2 percent of the tested wells actually had a marking on them. Among those, 67 percent had a red marking, with the highest percent by far being in Mid Char. Taking all of these numbers into account, approximately eight percent of tube wells have unsafe levels of arsenic, which is close to the nine percent found from testing during the SHOUHARDO I project.

It is important to also know if arsenic testing and presence is influenced by socio-economic status of the household. Unfortunately, results show that the poorer the household, the less likely they are to have had their well tested (table 37). While almost half of all rich households with tube wells have had testing, only 30 percent of extreme households have had their wells tested. Well-being category appears to have little to do, however, with the incidence of positively tested wells.

Table 37: Tube wells/tara pumps tested for arsenic, by well-being category

Drinking Water (% of HHs)		Category					Overall
		Extreme Poor	Poor	Lower Middle	Middle	Rich	
(%) Tested	Yes	30.5	37.2	44.1	47.9	49.5	39.8
	No	54.5	54.4	50.8	46.0	48.8	52.5
	Do not know	12.1	8.0	4.5	5.4	1.9	7.2
Has Arsenic (%)		10.3	12.4	9.7	13.2	12.6	11.8
No Arsenic (%)		88.8	86.9	87.8	86.2	87.3	87.2

8.3 Sanitation

Approximately 80 percent of households in the survey have access to some kind of toilet facility (see table 38). Access is highest in the Mid Char region and lowest in the Haor region. For those households without access to a latrine it is not clear where they defecate, but many would use open fields or perhaps waterways.

The most common type of latrines used by adult men and women are ring slab/offset latrines (with the seals broken) and hanging/open latrines, followed by uncovered pit latrines and then open defecation. Overall, the use of hygienic latrines such as ring slab/offset latrines with the seal intact, septic-tank latrines, covered pit latrines and locally adapted hygienic latrines is very low in the project area. There is variation by region, but the order of importance of the various latrine types remain the same. The exception to this is hanging/open latrines, which are utilized the most in the Coast region but by less than 10 percent of households in the North Char, where pit latrines, both covered and uncovered, are more common.

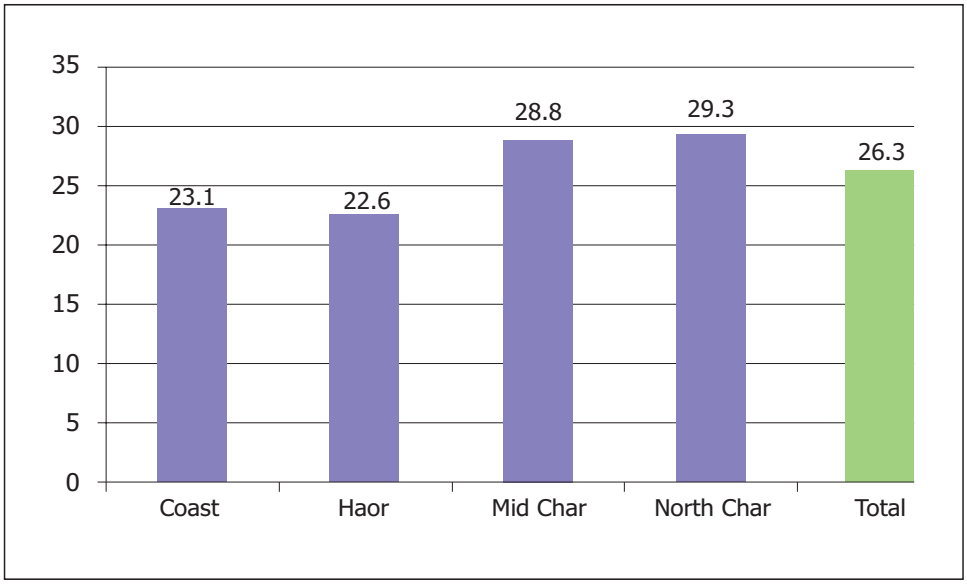
Table 38: Access to toilet facilities, by region

Toilet Facility Indicators	Region				Overall
	Coast	Haor	Mid Char	North Char	
Percent of households with access to a toilet facility	82.7	74.7	88.0	79.7	79.2
Type of toilet facility used					
Ring-slab/offset latrine (water seal)	13.0	16.6	20.6	21.7	19.2
Ring-slab/offset latrine (water seal broken)	38.6	39.1	41.3	42.4	40.8
Pit latrine (covered)	6.1	7.0	6.9	11.2	8.6
Pit latrine (uncovered)	7.0	6.5	4.9	12.5	8.5
Septic latrine	3.9	1	2.1	1.8	1.7
Hanging/open latrine	26.4	24.2	21.1	8.4	17.5
Local adapted hygienic latrine	4.9	5.6	3.1	2.1	3.7
Percent of households with access to an improved sanitation facility a/	23.1	22.6	28.8	29.3	26.3
Percent of households with a latrine that is					
Functioning	58.2	57.3	69.1	75.5	66.7
Shows signs of use	86.7	86.3	88	93.2	89.3
Clean (including surrounding area)	24.7	25.7	31.9	36.9	31.2
Percent of households with a latrine for which there is a hand-washing station inside the latrine or within 10 paces	31	27.8	50	30.8	33.3
Percent of households with a hand-washing station for which there is a cleansing agent at the station (soap, detergent, ash or clay)	82.6	61.7	73.5	62.5	66.1

a/ An improved sanitation facility is defined as a flush or pour/flush facility connected to a piped sewer system, septic system or pit latrine; or a pit latrine with a slab; or a composting toilet; or a ventilated improved pit latrine.
Sample sizes ("total" column): Percent of households with access to a toilet facility and with access to an improved facility: 8,407; Type of toilet facility used and other characteristics of toilet facilities: 6,769-6,772; Final indicator in table: 2,308;

While the majority of households have access to a sanitation facility, only 26 percent have access to a hygienic, improved facility (figure 18).[15] Thus approximately 3 out of 4 households use a method of disposing waste that is unhygienic. This factor is likely to be one of the important underlying causes of many of the poor health and nutrition outcomes documented in all four regions.

Figure 18: Percent of households with access to an improved sanitation facility, by region



Note: See text for definition of indicator. The number of observations is 8,407.

Even if a household has an improved facility, it may not be functioning. Only two-thirds of toilets in the survey were functioning and only one-third were viewed as clean by the enumerators. In addition, only one-third of latrines had a hand-washing station inside the latrine or within 10 paces, and only two-thirds had soap, detergent, or other cleansing agents available.

15 See definition in notes to table above. The definition and calculation method for this indicator is from Hernandez and Tobias, Ibid.

9.0 AGRICULTURE

As data shows, the majority of households are engaged in some type of agricultural activity, whether growing crops, raising livestock, or providing labor. Thus agricultural activities represent the key livelihood activity in the four regions. SHOUHARDO II will be providing assistance in improving agriculture so the survey collected information on key aspects in four areas: cultivation of field crops, vegetable production in gardens, livestock rearing and fish production.

9.1 Field crops

Less than one half of households noted growing field crops in the previous year (table 39 and 40). While half of households in the Haor region cultivated crops, only 20 percent in the Coast region did likewise. While crop production is not limited to the better-off households, it does require land. Only 18 percent of extreme poor household and 33 percent of poor households grew crops while over 60 percent of non-poor households grew crops.

Local rice is by far the most popular crop to cultivate across all four regions. This is followed by high-yielding rice varieties, jute (except for the coast where it is virtually absent), local improved variety (LIV) rice and commercial vegetables. Poorer households grow these crops in about the same proportions as other households with the exception of commercial vegetables.

Table 39: Data for field crop production, by region

Field Crops		Region				Overall
		Coast	Haor	Mid Char	North Char	
% of households cultivating crops in previous year		19.4	50.4	42.9	43.2	45.1
Top 5 crops grown overall by households engaged in agriculture	Local rice	73.2	77.1	63.4	77.5	75.0
	Rice (HYV)	5.5	26.9	30.7	45.6	34.1
	Jute	0.8	24.7	36.1	31.6	28.7
	Rice (LIV)	2.7	27.8	23.0	17.5	22.8
	Vegetables*	10.5	14.1	4.6	17.1	13.6
Top 5 improved practices used by households	Organic fertilizer	55.3	65.0	59.1	65.6	64.1
	High-quality seed	12.2	45.2	42.4	52.5	46.9
	Balanced fertilizer use	12.5	33.6	29.4	35.4	33.2
	Green manure[16]	15.9	23.9	27.8	29.4	26.4
	2-3 seedlings/hill	9.2	20.0	28.2	26.1	23.7

Use of improved practices is important for obtaining favorable yields, conserving soil and protecting the environment. About 64 percent of farmers reported using organic fertilizer and 26 percent use green manure. Almost half are using high-quality seed for at least one crop, and one-third are using balanced

16 Green manure is a cover crop, usually grown to add nutrients and organic matter to the soil. The 2-3 seedlings/hill practice is exclusively for rice.

fertilizer use to save costs and improve plant performance. For those growing rice about one-quarter use the recommended 2-3 seedlings per hill. The Coast region has the lowest overall use of improved cropping practices, and there is considerable potential for increases in this through proper training and outreach. It should be noted that these usages appear quite high, and the survey did not specify what constituted usage. In reality the habitual use of these practices may be lower.

Table 40: Data for field crop production, by well-being category

Field Crops		Region					Overall
		Extreme Poor	Poor	Lower Middle	Middle	Rich	
N (for crops)		203	1,411	917	697	567	3,795
% of households cultivating crops in previous year		17.7	32.9	63.4	79.1	86.8	45.1
Top 5 crops grown overall by households engaged in agriculture	Local rice	62.9	75.3	77.0	77.3	72.3	75.0
	Rice (HYV)	31.0	25.9	32.1	39.9	51.7	34.1
	Jute	25.3	25.9	25.4	33.6	36.3	28.7
	Rice (LIV)	21.3	17.7	23.5	26.7	29.9	22.8
	Vegetables*	6.6	11.3	13.5	14.8	20.6	13.6
Top 5 improved practices used by households	Organic fertilizer	52.8	61.3	67.1	65.3	68.9	64.1
	High-quality seed	46.9	40.1	46.4	49.6	61.8	46.9
	Balanced fertilizer use	33.2	33.3	31.0	33.2	36.8	33.2
	Green manure[17]	22.7	23.8	27.0	28.1	31.1	26.4
	2-3 seedlings/hill	19.3	22.5	21.9	27.4	24.8	23.7

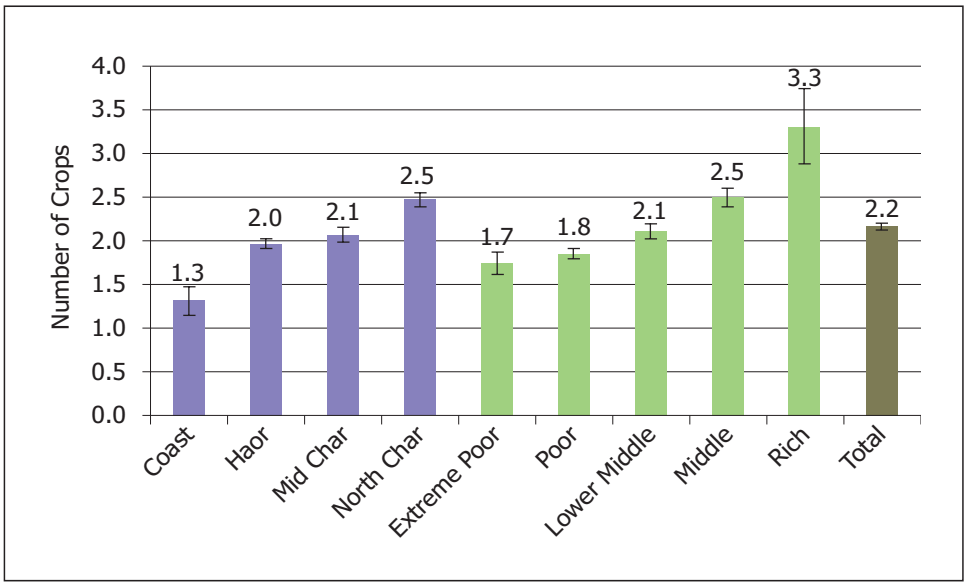
It is of interest to note that each of the five cropping practices listed in the above table are used fairly equally in extreme poor and poor households and in non-poor households. Non-poor households tend to have slightly higher rates of usage, but the differences are not great, suggesting that poorer households have had more or less equal exposure to training or learning from others, and their capacity to adapt is high. This could be a reflection of the emphasis that Government and NGOs have placed on training the more disadvantaged households.

Despite the use of improved practices, almost 80 percent of farmers claim they use pesticides and half claim to use weedicides in their fields. Only 3 percent of farmers have an agricultural loan but one-third used government subsidies in the previous year. Finally, less than 5 percent of farmers participated in any type of training.

Figure 19 shows the average number of crops grown by farmers. Note that the overall average is just above 2, so farms in the SHOUHARDO II project area are not very diversified. Crop diversity is an important aspect of resiliency and a protection against disasters and climate change. Coastal farmers are particularly limited with respect to crop diversity.

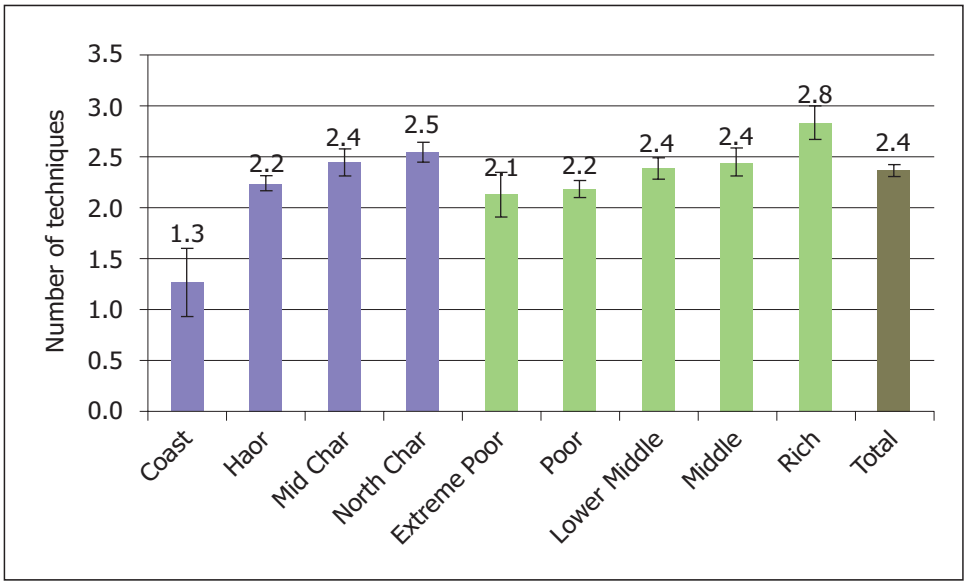
17 Green manure is a cover crop, usually grown to add nutrients and organic matter to the soil. The 2-3 seedlings/hill practice is exclusively for rice.

Figure 19: Average number of crops grown by households engaged in crop production, by region and well-being category



The average number of improved practices is low as well (2.4 for all farmers) (figure 20). Training experiences have been limited, so one way to increase the number of improved practices is to offer more training during the implementation of SHOUHARDO II. Again the Coast region has the lowest number of improved practices in use.

Figure 20: Average number of improved practices used by households engaged in crop production, by region and well-being category



9.2 Vegetable production

Vegetable production in gardens is practiced by less than one in four households (table 41 and 42). Only 10 percent of extreme poor and 16 percent of poor households engage in vegetable production versus 35 percent of non-poor households. Home vegetable production is an effective means for improving household nutrition and diversifying diets. A significant amount of vegetables for home consumption can be grown on a modest piece of land. Unfortunately, many rural households in Bangladesh do not even have adequate land for modest-sized gardens.

The most common vegetables grown by households in the survey were bottle gourd, beans, radish, egg plant and red amaranth. Production of each of these vegetables varies by Region and no clear pattern emerges, except that the Coast region lags behind in four of the top five vegetables grown. About one-third of Coastal households do grow red amaranth. With the exception of bottle gourd, fewer poorer households grow the top five vegetables than the non-poor households.

Vegetable growers engage in a number of improved techniques. The most common practice is use of organic fertilizer (57%) followed by water management (47%) and use of quality seed (31%). There is ample scope for providing assistance on vegetable crop selection for improving home nutrition as well as for providing training in improved practices.

Table 41: Data for vegetable production, by region

Vegetables		Region				Overall
		Coast	Haor	Mid Char	North Char	
% of households growing vegetables in previous year		14.4	23.5	14.5	26.7	22.9
Top 5 vegetables grown overall by households engaged in gardening	Bottle gourd	36.2	53.6	47.4	62.7	56.7
	Beans	35.5	45.3	27.0	42.6	41.9
	Radish	41.1	41.1	30.7	39.6	39.3
	Eggplant	26.1	42.2	23.7	33.2	35.8
	Red amaranth	33.3	27.8	18.6	32.8	29.2
Top 6 improved practices used by households	Organic fertilizer	59.3	61.7	55.0	54.1	57.5
	Water management	41.2	38.9	40.2	56.0	46.9
	Quality seed	13.2	33.3	32.2	29.3	30.9
	Weed management	31.3	25.8	37.7	28.8	28.6
	Composting	12.7	25.9	16.9	16.7	20.4
	Improved beds	3.6	14.9	10.2	12.6	13.1

Table 42: Data for vegetable crop production, by well-being category

Vegetables		Region					Overall
		Extreme Poor	Poor	Lower Middle	Middle	Rich	
N (for vegetables)		120	680	429	342	349	1,920
% of households growing vegetables in previous year		10.4	15.9	29.7	38.9	53.6	22.9
Average # of vegetables grown		2.7	3.5	4.7	5.4	5.8	4.7
Top 5 vegetables grown overall by households engaged in gardening	Bottle gourd	53.3	56.8	51.6	58.0	62.7	56.7
	Beans	39.3	37.6	38.4	49.1	48.3	41.9
	Radish	23.8	27.1	42.8	49.2	54.5	39.3
	Eggplant	24.6	25.9	39.5	40.1	49.9	35.8
	Red amaranth	18.8	22.2	29.3	37.5	38.2	29.2
Top 6 improved practices used by households	Organic fertilizer	48.5	47.9	63.1	63.8	65.7	57.5
	Water management	39.4	45.9	41.8	55.0	49.5	46.9
	Quality seed	22.2	26.7	29.5	33.2	41.2	30.9
	Weed management	16.2	26.7	26.0	32.5	35.6	28.6
	Composting	8.3	16.2	22.4	26.3	24.3	20.4
	Improved beds	10.1	8.0	10.5	18.6	21.7	13.1

9.3 Livestock

Livestock and poultry production are the most common practice of the four discussed in this section and are practiced by about 68 percent of surveyed households (table 43 and 44). The question asked if livestock or poultry was raised and about even proportions replied livestock (37%) and poultry (31%). What is not known is what proportion of households raise both. The North Char region has the highest proportion of households engaged in livestock or poultry production at 76 percent. All three other regions are around 61 percent. The proportion of households raising livestock or poultry is very similar among well-being classes, averaging 68 percent for each class from extreme poor to rich. It is likely, though, that the extreme poor and poor households engage more in poultry production while the middle and rich classes engage more in livestock production or both.

Table 43: Data for livestock production, by region

Livestock		Region				Overall
		Coast	Haor	Mid Char	North Char	
% of households raising livestock or poultry		61.7	62.9	60.4	76.3	67.6
Top 3 improved practices used by households	Vaccination	3.8	11.4	14.0	10.7	11.3
	Supplementary cattle feed	1.2	10.6	3.3	2.1	4.9
	Supplementary poultry feed	2.0	5.7	12.2	3.1	5.3

Table 44: Data for livestock production, by well-being category

Livestock		Region					Overall
		Extreme Poor	Poor	Lower Middle	Middle	Rich	
	N (for livestock)	427	1,577	529	320	248	3,101
	% of households raising livestock or poultry	68.5	67.9	67.5	65.6	67.5	67.6
Top 3 improved practices used by households	Vaccination	4.3	8.4	14.4	19.4	24.9	11.3
	Supplementary cattle feed	2.7	3.7	7.9	9.1	10.0	4.9
	Supplementary poultry feed	4.1	3.0	6.6	8.4	10.7	5.3

9.4 Fish raising

Fish raising is only practiced by 6 percent of households in the survey (table 45 and 46). It is most common in the Haor region (7%) followed by North Char (6%), Mid Char (2%) and Coast (2%). It is very rare for extreme poor and poor households to engage in fish raising (less than 2%), likely due to the fact they have virtually no available access to water bodies. However, one out of four rich households raise fish while about 13 percent of middle households do so. The most common practices, in order of frequency of use, are liming, pond cleaning, providing fish seed, providing supplementary feed, and testing the water to determine if there is adequate food.

Table 45: Data for fish raising, by region

Fish-raising		Region				Overall
		Coast	Haor	Mid Char	North Char	
	% of households raising fish	1.8	7.4	2.0	5.7	5.6
Top 5 improved practices used by households	Liming	37.6	55.8	60.6	57.6	56.4
	Pond cleaning	37.6	48.9	66.4	51.0	50.6
	Provide fish seed	30.9	47.2	53.3	48.0	47.7
	Supplementary fish feed	28.9	25.1	54.9	30.3	29.0
	Testing water color	13.4	14.5	28.7	20.2	17.6

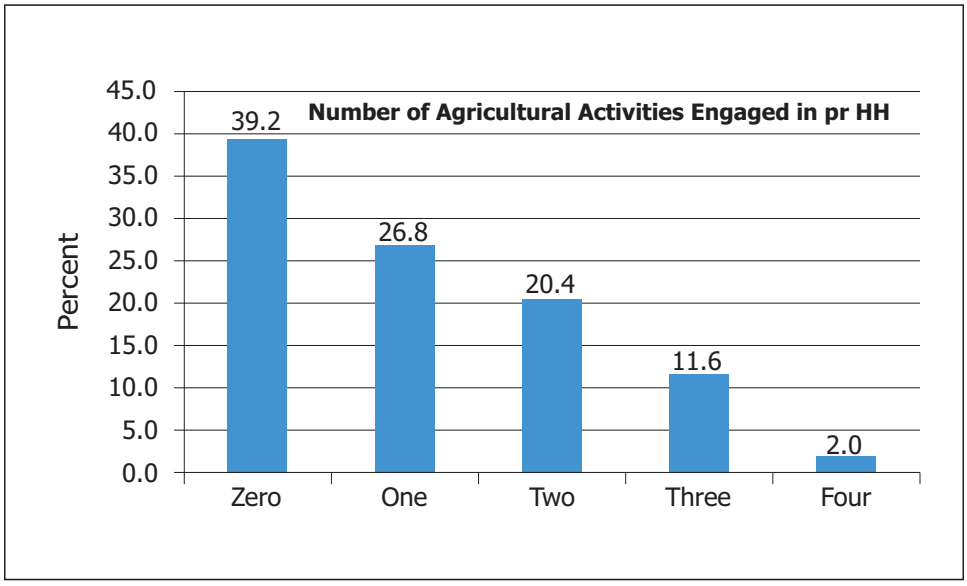
Table 46: Data for fish raising, by well-being category

Livestock		Region					Overall
		Extreme Poor	Poor	Lower Middle	Middle	Rich	
N (for livestock)		5	75	114	109	167	470
% of households raising fish		0.5	1.8	7.9	12.3	25.5	5.6
Top 5 improved practices used by households	Liming	21.9	29.7	45.3	60.0	75.4	56.4
	Pond cleaning	21.9	33.4	37.5	54.7	65.6	50.6
	Provide fish seed	2.2	29.1	35.5	55.7	60.7	47.7
	Supplementary fish feed	21.9	13.8	22.2	23.3	44.3	29.0
	Testing water color	0.0	11.2	7.1	18.3	27.8	17.6

9.5 Diversity of production

Livelihood diversity promotes resilient households and communities. However, due to land availability, lack of technical training, insufficient capital to invest in inputs, and perhaps low risk-taking behavior, very few survey households have diverse livelihood strategies. Figure 21 shows the proportion of households engaging in one or more of the four agricultural activities described here. Note that nearly 40 percent do not engage in any agricultural activities. There is a steady decline in proportions until only 2 percent of households are engaged in all four activities.

Figure 21: Number of agricultural activities per household



10.0 HOUSEHOLD ACCESS TO SERVICES AND RESOURCES

10.1 Availability of services

Availability of basic social services is integral to community development. Surveyed households were asked which social services were available within their communities and unions, as well as the frequency with which they use these basic social services. Virtually all surveyed villages had access to primary schools and Union Parishad services within their communities. Respondents from the Haor region have limited access to primary health care services and pre-schools relative to the other regions, indicating substantial gaps in provision of basic social services in this region.

Government immunization and family planning services were the two most prevalent government services available in the communities (table 47), although 71 and 75 percent of respondents reported utilizing these services respectively (see table 49 below on utilization). Respondents from the Mid Char and North Char regions have greater access to government sponsored services than their counterparts from the Coast and Haor regions, due to their relative accessibility, particularly when compared with the Haor region.

Table 47: Availability of services in the village, by region

Services (% of HHs)\	Region				Overall
	Coast	Haor	Mid Char	North Char	
Type of service :					
Primary school	99.1	97.6	98.8	99.1	98.4
Union Parishad	96.8	97.0	98.2	97.6	97.4
Family planning services	87.7	82.8	95.3	97.2	90.7
Grammo Shalish	88.6	81.5	96.0	95.4	89.6
Primary health care services	89.5	79.1	95.1	95.7	88.7
Pre-school	87.1	68.4	77.5	93.7	80.5
Gov't services provided by:					
Government immunization services	95.3	88.1	95.2	94.3	92.0
Government Family Planning	87.7	76.5	93.1	92.6	86.1
Government Land Office	43.1	41.2	70.8	58.5	53.1
Department of Livestock (DOL)	9.9	15.2	38.9	21.0	21.3
Department of Agriculture Extension (DAE)	10.7	13.6	15.0	20.7	16.5
BADC seed department	8.8	9.3	8.2	18.8	12.8
Department of Social Services	11.5	7.9	8.9	19.4	12.7
Department of Fisheries (DOF)	9.1	10.4	7.4	14.5	11.4
Department of Women's Affairs	8.7	5.3	10.8	16.5	10.7
Department of Cooperatives	7.3	6.2	6.6	11.3	8.3
Department of Youth Development	7.2	4.8	6.5	12.6	8.2

Table 48: Availability of services in the Union, by region

Services (% of HHs)	Region				Overall
	Coast	Haor	Mid Char	North Char	
Type of service :					
Primary school	99.2	98.1	99.1	99.3	98.8
Union Parishad	97.5	97.5	98.8	98.6	98.8
Grammo Shalish	88.7	84.6	96.6	95.7	91.1
Family planning services	89.5	83.3	96.4	97.4	91.0
Primary health care services	90.5	79.7	96.6	96	89.0
Pre-school	87.6	69.5	78.2	94	81.2
Gov't services provided by:					
Government immunization services	95.3	88.4	95.3	94.3	92.2
Government Family Planning	87.9	77.2	93.5	92.8	86.5
Government Land Office	43.1	41.4	70.9	58.6	53.2
Department of Livestock (DOL)	9.9	15.3	39.5	21.1	21.5
Department of Agriculture Extension (DAE)	10.7	13.7	15.3	20.9	16.7
Department of Social Services	11.6	8.1	9.4	19.4	12.8
BADC seed department	8.8	9.3	8.2	18.8	12.8
Department of Fisheries (DOF)	9.1	10.5	7.7	14.5	11.5
Department of Women's Affairs	8.7	5.5	11.1	16.7	10.9
Department of Cooperatives	7.4	6.3	6.7	11.7	8.5
Department of Youth Development	7.2	4.9	6.6	12.8	8.3

Availability of these resources is only part of the equation – if households are unable to utilize them due to lack of resources or other constraining factors, the benefits are not felt by the most vulnerable populations. Not surprisingly, primary health care services and primary schools are the most commonly utilized social services across all regions. Households from the Haor region are more likely than their counterparts to interact with the government land offices, despite a lack of availability in this area. This is likely due to the predominance of agro-pastoralism as a primary livelihood activity in this area, which is also reflected in heightened utilization of the BADC seed department, DAE and DOL.

Table 49: Utilization of services, by region[1]

ervices (% of HHs)	Region				Overall
	Coast	Haor	Mid Char	North Char	
Type of service :					
Primary health care services	83.6	84.9	86.0	88.0	86.4
Primary school[2]	77.3	84.7	83.7	83.0	83.6
Union Parishad	75.2	80.8	73.2	74.5	76.8
Government Family Planning	70.3	76.4	77.8	73.3	75.2
Family planning services	69.8	76.2	76.6	73.8	75.0
Government immunization services	76.8	76.1	69.8	65.9	70.9
Grammo Shalish	56.9	69.6	72.8	60.8	66.1
Government Land Office	47.7	73.1	57.2	48.6	58.2
BADC seed department	30.8	49.2	37.3	37.2	40.5
Pre-school[3]	44.9	39.5	42.8	35.9	38.9
Department of Livestock (DOL)	37.9	40.5	19.8	28.4	29.3
Department of Agriculture Extension (DAE)	33.2	42.9	16.6	23.2	28.9
Department of Social Services	37.6	38.1	25.2	19.1	25.3
Department of Women's Affairs	29.9	31.7	16.9	17.1	20.4
Department of Cooperatives	29.5	29.5	32.2	11.6	20.3
Department of Youth Development	23.4	25.4	24.5	12.6	17.5
Department of Fisheries (DOF)	25.0	22.2	10.0	9.0	14.5

[1]These numbers combine responses of "Frequently" and "Sometimes" for utilization of services.
[2,3] Frequency of utilization of primary and pre-school services were limited only to households that reported having children of school age

While there was only slight variation between well-being groups with regards to knowledge about availability of various social services, a consistent trend that better off households have greater awareness of social services is observable. In particular, the most remarkable differences were regarding knowledge of production-related departments such as the Government land office, DAE, DOF and department of cooperatives. This suggests that well off households are more likely to take advantage of these resources, based simply on the fact that they are aware of what resources are at their disposal. Utilization rates confirm this (table 50 and 51).

Table 50: Availability of services in the village, by well-being group

Services (% of HHs)	Well-being group					Overall
	Extreme Poor	Poor	Lower Middle	Middle	Rich	
Type of service :						
Primary school	97.3	98.3	99.6	98.3	98.9	98.4
Union Parishad	96.4	96.9	98.5	98.7	98.2	97.4
Primary health care services	85.5	88.5	89.6	90.1	91.7	88.7
Family planning services	86.7	90.7	94.2	89.6	91.7	90.7
Grammo Shalish	89.5	89.2	90.8	88.8	91.4	89.6
Pre-school	79.8	81.4	82.3	76.0	78.2	80.5
Gov't services provided by:						
Government immunization services	88.7	91.6	94.0	93.4	93.6	92.0
Government Family Planning	79.0	85.7	89.8	89.1	88.3	86.1
Government Land Office	47.6	50.9	57.7	57.0	61.3	53.1
Department of Livestock (DOL)	19.2	19.2	24.6	24.7	27.1	21.3
Department of Social Services	7.5	12.1	13.7	15.3	19.9	12.7
Department of Agriculture Extension (DAE)	12.9	15.1	19.6	20.6	19.4	16.5
BADC seed department	9.5	12.1	13.4	15.4	18.5	12.8
Department of Fisheries (DOF)	7.3	10.9	13.3	13.9	15.0	11.4
Department of Women's Affairs	7.6	10.4	11.1	13.0	14.7	10.7
Department of Youth Development	6.0	7.5	8.5	10.8	13.0	8.2
Department of Cooperatives	5.8	7.9	8.6	10	12.2	8.3

Table 51: Availability of services in the Union, by well-being group

Services (% of HHs)	Well-being group					Overall
	Extreme Poor	Poor	Lower Middle	Middle	Rich	
Type of service :						
Primary school	97.7	98.8	99.6	98.7	99.3	98.8
Union Parishad	97.5	97.6	99.2	99.1	99.2	98.8
Grammo Shalish	91.7	90.4	92.6	90.3	93.1	91.1
Family planning services	87.1	91.1	94.8	90.4	92.6	91
Primary health care services	86.7	89.2	90.3	90.4	91.9	89
Pre-school	80.4	81.9	83.5	77.1	79.3	81.2
Gov't services provided by:						
Government immunization services	89.2	91.9	94	93.4	98.9	92.2
Government Family Planning	79.7	86.2	90.1	89.5	88.4	86.5
Government Land Office	47.7	51	57.7	57.3	61.7	53.2
Department of Livestock (DOL)	19.5	19.3	24.7	24.7	27.8	21.5
Department of Social Services	7.6	12.3	13.9	15.4	19.9	12.8
Department of Agriculture Extension (DAE)	13.2	15.3	19.6	20.6	19.9	16.7
BADC seed department	9.5	12.1	13.4	15.4	18.5	12.8
Department of Women's Affairs	7.8	10.6	11.4	13	15.2	10.9
Department of Fisheries (DOF)	7.7	11	13.3	13.9	15	11.5
Department of Youth Development	6.2	7.6	8.6	11.1	13	8.3
Department of Cooperatives	6.2	8	9	10.7	12.2	8.5

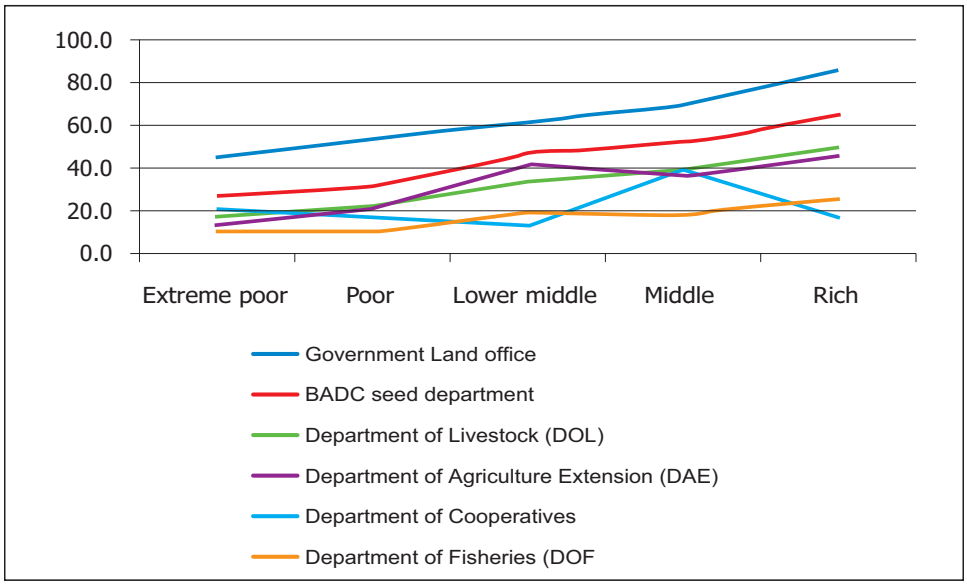
Better off households are more likely to take advantage of government sponsored social services, in particular better off households are more likely to utilize services associated with production (see table 52 and figure 22 below). Interestingly, households from the middle class are more likely than any other group to utilize services from the Department of Cooperatives, indicating that better off households do not benefit as greatly from the cooperative structure and worse off households are not in the position to benefit from these organizations. Similar trends are found among social services regarding health, education and civil society, that is, better off households are more likely to utilize and benefit from these services than their worse off counterparts.

Table 52: Utilization of services, by well-being group[1]

Services (% of HHs)	Well-being group					Overall
	Extreme Poor	Poor	Lower Middle	Middle	Rich	
Type of service :						
Primary health care services	83.5	85.9	89.6	85.5	87.9	86.4
Primary school[2]	73.8	82.8	90.7	86.9	82.1	83.6
Union Parishad	69.5	75.7	78.8	81.1	86.6	76.8
Government Family Planning	57.2	76.8	77.9	82.1	77.2	75.2
Family planning services	60.0	75.7	79.7	80.1	78.3	75.0
Government immunization services	56.6	72.1	73.8	76.3	73.6	70.9
Grammo Shalish	59.3	64.1	67.1	73.2	79.6	66.1
Government Land Office	44.8	52.3	62.0	69.4	86.1	58.2
BADC seed department	27.1	32.2	46.6	52.2	65.5	40.5
Pre-school[3]	39.2	36.9	40.7	43.9	42.1	38.9
Department of Livestock (DOL)	18.0	23.0	34.0	40.1	49.7	29.3
Department of Agriculture Extension (DAE)	13.7	21.3	41.8	37.1	45.6	28.9
Department of Social Services	18.8	25.7	26.2	16.3	36.2	25.3
Department of Women's Affairs	11.0	19.4	23.2	16.7	33.3	20.4
Department of Cooperatives	20.9	18.2	13.7	39.0	17.4	20.3
Department of Youth Development	24.4	13.2	17.5	20.4	25.2	17.5
Department of Fisheries (DOF)	10.6	10.3	18.8	17.8	25.3	14.5

[1]These numbers combine responses of "Frequently" and "Sometimes" for utilization of services.
[2,3] Frequency of utilization of primary and pre-school services were limited only to households that reported having children in these age groups.

Figure 22: Utilization of social services related to production, by well-being group



10.2 Participation in Social Safety Nets

Bangladesh has several government and non-government sponsored social safety net programs throughout the country. Overall, 15 percent of households participate in any social safety net program. Households from the Mid Char and North Char region are more actively targeted for these programs than their counterparts, indicating a greater level of development resources flowing to these regions.

The most common social safety net deployed in surveyed communities was the allowance for the aged, a monthly stipend given to persons who meet the criteria of being aged over 60 years old (table 53 and 54). Vulnerability group feeding and VGD programs were the second and third most commonly deployed safety net. Less than two percent of households overall were currently participating in more than one social safety net at the time of the survey, indicating little to no overlap of resources.

Table 53: Participation in social safety nets, by region

Safety nets (% of HHs)		Region				Overall
		Coast	Haor	Mid Char	North Char	
Participate (%)	Yes	8.0	10.3	16.9	19.3	14.9
	No	92.0	89.7	83.1	80.7	85.1
Number of safety nets engaged in (mean)		.09	.12	.20	.22	.17
Safety net:						
	Aged allowance	3.3	4.2	4.9	4.2	4.3
	Government VGF	2.0	1.8	4.7	4.3	3.5
	Government VGD	1.3	0.9	4.7	5.8	3.3
	Widow allowance	0.7	1.3	1.9	2.2	1.8

Table 53: Participation in social safety nets, by region

Safety nets (% of HHs)	Region				Overall
	Coast	Haor	Mid Char	North Char	
100 days work	0.5	1.2	0.7	2.7	1.7
Other	0.2	1.2	0.8	1.0	1.0
Disability allowance	0.1	0.3	0.5	0.5	0.4
Govt. cash-for-work	0.1	0.3	0.4	0.7	0.4
Non-Govt food-for-work	0.1	0.3	0.7	0.2	0.3
Non-Govt cash-for- work	0.2	0.2	0.5	0.3	0.3
Community based savings group	0.1	0.0	0.2	0.1	0.1

Table 54: Participation in social safety nets, by well-being category

Safety nets (% of HHs)	Category					Overall
	Extreme Poor	Poor	Lower Middle	Middle	Rich	
Safety net:						
Aged allowance	8.7	4.6	2.5	2.5	0.7	4.3
Government VGF	5.5	3.9	2.3	0.8	0.3	3.5
Government VGD	6.1	3.8	2.9	1.9	0.2	3.3
Widow allowance	6.6	1.3	0.6	0.4	0.8	1.8
100 days work	1.7	2.0	1.8	1.0	0.0	1.7
Other	0.4	1.0	1.5	0.7	0.8	1.0
Disability allowance	0.9	0.5	0.0	0.7	0.1	0.4
Govt. cash-for-work	1.3	0.4	0.0	0.5	0.0	0.4
Non-Govt food-for-work	0.3	0.3	0.2	0.3	0.0	0.3
Non-Govt cash-for- work	1.1	0.3	0.0	0.0	0.0	0.3
Community based savings group	0.1	0.0	0.0	0.4	0.0	0.1

10.3 Availability of resources

Common property resources allow landless or households with little land access to land for fishing, agricultural production, grazing or other activity they normally would not be able to engage in due to land access constraints. The most common form of common property are rivers and canals, most frequently utilized for fishing (table 55). The Haor region was the most limited in terms of average number of common property resources, indicating that vulnerable households from these regions are at a greater disadvantage than households from areas with more common property resources available.

Table 55: Availability of common property resources, by region

Common property	Region				Overall
	Coast	Haor	Mid Char	North Char	
Mean number of common property resources available (mean)	3.4	1.3	3.3	2.6	2.3
Type of common property (% of HHs):					
River/Canal	70.8	43.4	84.3	62.6	58.9
Roadside sloping	43.4	22.9	44.0	58.1	41.0
Beel/Haor	27.7	33.3	54.9	42.9	40.6
Embankments	11.8	8.5	43.4	43.0	28.0
Khas land	26.1	5.4	47.7	21.4	19.7
Grazing land	19.4	5.3	25.9	26.2	9.7
Khas pond	10.5	2.9	18.9	11.3	9.2
Railway grounds	0.7	3.5	3.6	9.1	5.6
Hills	79.4	3.1	0.4	0.6	4.6
Forest land	47.8	1.2	1.4	2.2	3.5
CBO water body	1.5	3.0	1.9	4.3	3.3

Households overall are likely to use at least one common property resource and in the case of Mid Char, more than one. The most frequently utilized common properties were rivers/canals, beel/haors, and in the Coast region, hills (table 56). They are used for various activities, mostly associated with raising animals and gathering natural products.

Table 56: Utilization of common property resources, by region

Common property	Region				Overall
	Coast	Haor	Mid Char	North Char	
Mean number of common property resources utilized per household (mean)	1.0	0.7	1.4	1.0	1.0
Type of common property (% of HHS):					
River/Canal	22.4	37.7	56.7	49.3	46.4
Beel/Haor	23.2	41.4	47.0	44.3	43.4
Hills	51.3	21.5	0.0	0.0	40.0
Grazing land	22.8	22.8	41.9	34.3	34.4
Forest land	40.4	42.5	44.4	12.7	34.1
Embankments	12.0	6.6	55.5	30.3	33.8
Roadside sloping	8.5	31.3	32.6	25.5	27.4
Khas land	21.2	11.4	22.1	22.2	20.9
Khas pond	22.8	12.8	22.2	17.5	18.8
CBO water body	21.5	5.8	20.6	13.0	11.2
Railway grounds	27.1	7.2	19.1	10.1	10.4

As stated above, common property resources are most often used for fishing or other purposes. In the Mid Char and Haor region, common property resources constitute an important source of water while in the Coast they are an important source of firewood as well (table 57).

Table 57: Activities engaged in using common property resources, by Region

Activities	Region				Overall
	Coast	Haor	Mid Char	North Char	
Activity (% of HHS):					
Fishing	27.2	65.9	66.8	70.0	65.8
Other	22.4	9.3	61.3	30.2	32.3
Grazing	13.4	18.8	24.3	15.8	18.7
Collecting water	8.6	16.0	23.4	10.4	15.3
Crop cultivation	4.5	9.4	7.2	21.6	13.6
Collecting firewood	81.5	2.8	2.0	8.2	8.9
Tree plantation	2.5	3.1	8.4	7.6	6.4
Collecting soil	11.0	2.4	3.0	10.2	6.2
Irrigation	1.2	7.1	1.8	6.0	4.9
Collecting aquatic animals	1.2	2.5	3.5	4.6	3.5
Collecting aquatic foods	0.8	1.4	3.5	3.6	2.8
Fish culture	1.8	2.3	2.5	2.6	2.5
Collecting fruit	0.5	0.9	2.2	0.8	1.2

When comparing well-being categories, very little variation is seen with regard to number or type of common property available (table 58). Important differences emerge, however, with regard to which common property resources are utilized and how.

Table 58: Availability of common property resources, by well-being group

Common property	Well-being group					Overall
	Extreme Poor	Poor	Lower Middle	Middle	Rich	
Mean number of common property resources available	2.2	2.3	2.4	2.2	2.1	2.3
Type of common property(% of HHs):						
River/Canal	61.8	58.0	59.9	57.6	60.0	58.9
Roadside sloping	33.6	40.9	46.3	41.3	42.8	41.0
Beel/Haor	39.8	39.3	43.8	43.6	38.9	40.6
Embankments	27.1	29.3	28.9	25.4	22.9	28.0
Khas land	20.8	19.2	21.1	18.3	19.6	19.7
Grazing land	9.4	10.5	10.1	7.9	6.6	9.7
Khas pond	11.4	7.8	10.8	9.1	11.1	9.2
Railway grounds	5.4	5.4	5.8	7.1	5.0	5.6
Hills	4.0	6.0	3.9	1.8	2.1	4.6
Forest land	2.3	4.4	3.4	1.7	1.7	3.5
CBO water body	3.0	4.3	2.4	1.1	1.7	3.3

Regardless of well-being status, households are likely to use at least one common property resource (table 59). Better off households are more likely to utilize rivers/canals, beels/haors, grazing land and roadside embankments than worse off households. The better off households in general use the grazing land for livestock and roadside embankments for crop cultivation, constituting an important food and income source for these households (table 60). Extremely poor and poor households generally utilize hills and khas land more than their better off counterparts.

Table 59: Utilization of common property resources, by well-being group

Common property	Well-being group					Overall
	Extreme Poor	Poor	Lower Middle	Middle	Rich	
Mean number of common property resources utilized	0.8	1.0	1.1	1.1	1.1	1.0
Type of common property (% of HHs):						
River/Canal	37.4	46.4	52.4	49.3	46.2	46.4
Beel/Haor	35.0	42.0	45.1	52.9	49.8	43.4
Hills	48.8	42.1	33.2	22.3	19.4	40.0
Grazing land	28.5	32.0	36.0	49.6	43.7	34.4
Forest land	26.1	35.9	36.0	36.0	11.1	34.1
Embankments	34.1	33.6	33.5	31.3	40.1	33.8
Roadside sloping	17.6	24.0	28.9	38.3	44.0	27.4
Khas land	23.1	22.5	16.6	18.3	19.9	20.9
Khas pond	16.4	19.0	22.1	20.6	12.7	18.8
CBO water body	9.9	11.4	7.0	5.3	28.9	11.2
Railway grounds	16.8	10.3	9.0	6.9	10.1	10.4

Table 60: Activities using common property resources, by well-being group

Activities	Well-being group					Overall
	Extreme Poor	Poor	Lower Middle	Middle	Rich	
Activity (% of HHS):						
Fishing	61.4	68.5	66.7	63.4	57.4	65.8
Other	43.3	36.4	27.0	19.0	22.3	32.3
Grazing	12.6	18.4	21.5	21.0	20.6	18.7
Collecting water	17.6	17.1	11.6	15.1	9.4	15.3
Crop cultivation	5.4	8.1	19.6	22.3	32.8	13.6
Collecting firewood	9.5	11.5	6.5	6.0	2.2	8.9
Tree plantation	5.5	4.8	9.4	6.5	9.7	6.4
Collecting soil	4.2	6.8	6.1	7.5	4.4	6.2
Irrigation	2.0	3.6	6.4	9.1	8.3	4.9
Collecting aquatic animals	3.6	4.2	3.3	3.2	0.5	3.5
Collecting aquatic foods	2.2	1.9	2.9	6.3	4.5	2.8
Fish culture	2.8	1.1	2.9	3.9	7.2	2.5
Collecting fruit	0.6	1.2	1.4	1.9	0.1	1.2

Figure 23 below compares the mean number of common property resources available versus the mean number utilized. Across all comparison groups it is clear that common property resources are not being used to their full capacity. This is likely due to government restrictions regarding sustainable use of common property resources.

Figure 23: Availability versus utilization of common property resources

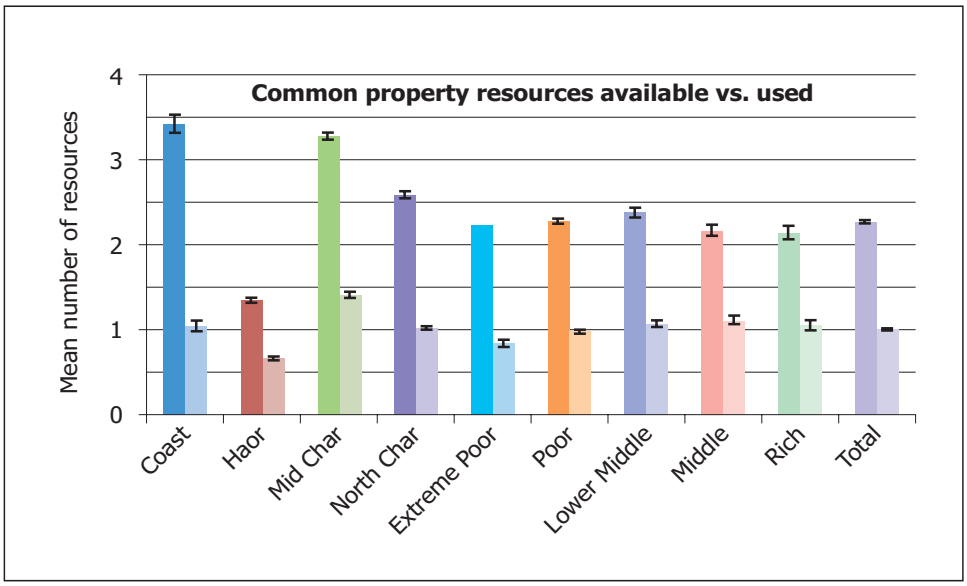
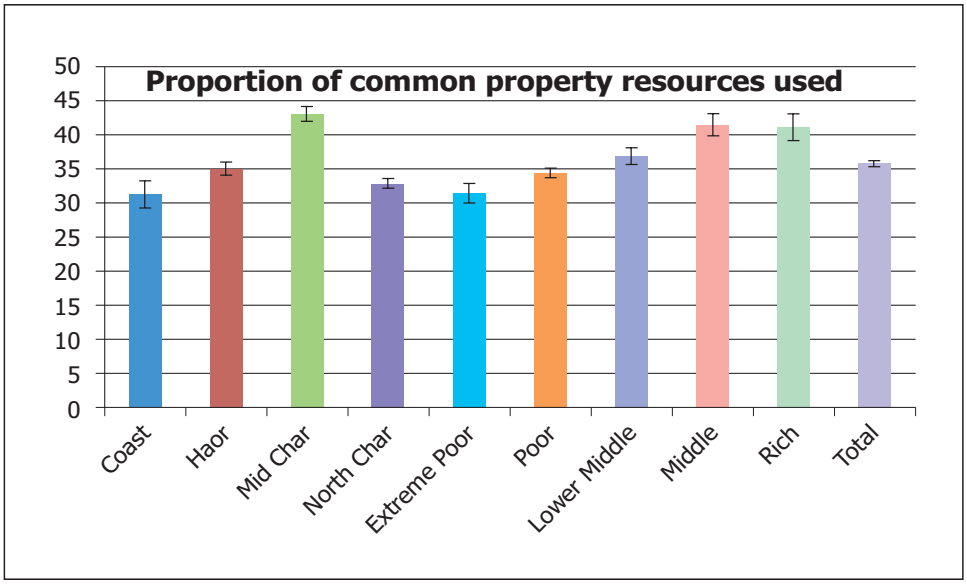


Figure 24 below compares the proportion of common property resources used versus the amount available. Across all comparison groups it is clear that common property resources are not being used to their full capacity. This is likely due to government restrictions regarding sustainable use of common property resources.

Figure 24**: Proportion of available common property resources that are utilized**



11.0 NATURAL DISASTERS: OCCURRENCE, EFFECTS AND COPING

11.1 Occurrence of natural disasters

Overall, 35 percent of households reported that they did not experience a natural disaster in the previous year. In the Haor, 50 percent of households did not experience a disaster while in the coastal region almost all households experienced a disaster in the last 12 months (table 61). On average, households experienced one disaster in the last 12 months. It is important to note that the number of disasters in the coastal region is higher and is almost 2 disasters experienced in the last 12 months. The most recent disaster in the last 12 months in the coastal region is heavy rains followed by flooding.

The second part of table 61 provides data for those households that did experience a natural disaster. Overall, the highest proportion of disasters experienced in the last 12 months were floods, wind damage and heavy rains. Floods are also the most common disaster in three out of the four regions; only in the coastal region are heavy rains the most common disaster, followed by floods and wind storms, which are experienced to a similar degree. Wind damage is locally called 'Aphal'; strong winds that damage standing crops, cause soil erosion and uproot trees.

Table 61: Disasters experienced in the last 12 months, by region and overall

Disaster	Region				Total
	Coast	Hoar	Mid-Char	North Char	
Households that experienced any disaster in last 12 months (% of HHs)	94.1	50.2	72.9	73.3	64.8
Mean number of disasters experienced in last 12 months(mean)	1.9	0.7	1.1	1.3	1.1
Type of disaster experienced (% of HHs):					
Floods	43.9	27.3	49.9	42.4	37.7
Wind storms	43.1	18.8	15.7	37.8	26.6
Heavy rains	82.4	18.9	26.6	18.0	22.3
Earthquake	4.9	2.7	1.1	15.3	7.4
Cold wave	1.2	1.3	9.8	6.0	4.6
Lightning strike	9.6	3.5	2.6	3.3	3.5
Erosion (river, wind)	3.3	0.9	5.2	2.2	2.2
DNK	0.2	1.6	0.3	0.4	0.9
Other	2.7	0.4	3.0	0.2	0.8
Cyclone	2.6	0.3	0.1	0.2	0.4

Table 62 shows that extreme poor households were more likely to experience a disaster than households in the other well-being categories. This is likely due to the fact that extreme poor households have greater exposure and sensitivity to disasters due to their more limited choices with regards to shelter (location, materials) and livelihood options (location, type of livelihood).

Table 62: Disasters ever experienced, by well-being group

Disaster	Well-being group					Total
	Extreme poor	Poor	Lower Middle	Middle	Rich	
Households that experienced any disaster in last 12 months (% of HHs)	73.3	63.4	66.2	63.0	58.0	64.8
Mean number of disasters experienced in last 12 months (mean)	1.2	1.1	1.0	1.0	0.9	1.1
Type of disaster experienced (% of HHs):						
Floods	42.4	37.0	38.3	37.4	32.7	37.7
Wind storms	30.8	27.3	25.2	23.2	22.5	26.6
Heavy rains	25.5	22.2	22.6	21.3	18.0	22.3
Earthquake	7.4	8.1	6.3	6.0	7.4	7.4
Cold wave	3.5	4.5	5.0	5.1	4.9	4.6
Lightning strike	4.5	3.1	4.3	2.9	3.1	3.5
Erosion (river, wind)	2.7	2.5	1.8	1.6	1.6	2.2
DNK	0.8	0.9	0.5	1.5	0.6	0.9
Other	1.1	0.9	0.7	0.9	0.4	0.8
Cyclone	0.8	0.3	0.1	0.5	0.1	0.4

11.2 Effects and coping

Respondents, who reported experiencing a natural disaster in the last 12 months, were subsequently asked what the effect of that particular disaster was on their household. The highest proportion of households lost their home, which includes partial and full damage to their shelter, followed by loss of assets (table 63). A higher proportion of households in the coastal region lost their home than in the other regions.

Table 63: Impact of most recently experienced disaster, by region

Impact of Disaster	Region				Total
	Coast	Hoar	Mid-Char	North Char	
Percent of households affected by the most recent disaster (% of HHs)	76.4	76.0	68.5	75.7	74.4
Impact of disaster on household (% of HHs):					
Loss of home	61.7	46.4	44.3	53.4	49.8
Loss of assets	36.6	44.6	39.6	32.5	37.9
Stress/anxiety/fear	21.0	3.1	8.2	21.7	13.2
Loss of water supply	10.3	0.8	7.6	1.4	2.9
Loss of livelihood	9.9	1.3	3.0	1.9	2.4
Other	2.7	2.4	1.3	1.0	1.6

Table 63: Impact of most recently experienced disaster, by region

Impact of Disaster	Region				Total
	Coast	Hoar	Mid-Char	North Char	
Physical disability/injury	3.8	0.2	1.6	0.4	0.7
Additional household members	1.5	0.0	0.5	0.2	0.3
DNK	0.1	0.0	0.3	0.5	0.3
Loss of family member	0.2	0.3	0.3	0.0	0.2
Having to care for others	0.3	0.0	0.3	0.0	0.1

Table 64 shows that a higher proportion of middle income and rich households were affected by the most recent disaster, largely determined by loss of assets in these well-being categories. This is likely due to the higher number and greater value of their assets, and thus greater perceived loss following a disaster.

Table 64: Impact of most recently experienced disaster, by well-being group

Impact of Disaster	Well-being group					Total
	Extreme poor	Poor	Lower Middle	Middle	Rich	
Percent of households affected by the most recent disaster (% of HHs)	74.3	72.1	75.7	79.4	79.7	74.4
Impact of disaster on household (% of HHs):						
Loss of home	57.9	52.0	48.3	40.9	34.9	49.8
Loss of assets	24.9	31.8	43.7	55.9	65.1	37.9
Stress/anxiety/fear	13.7	13.8	12.9	12.6	9.9	13.2
Loss of water supply	3.3	3.8	1.1	1.8	1.5	2.9
Loss of livelihood	1.7	2.5	2.6	2.0	2.6	2.4
Other	1.1	1.7	0.8	2.6	1.8	1.6
Physical disability/injury	1.1	0.8	0.5	0.3	0.6	0.7
Additional household members	0.0	0.3	0.7	0.0	0.0	0.3
DNK	0.1	0.4	0.3	0.1	0.0	0.3
Loss of family member	0.4	0.1	0.4	0.0	0.0	0.2
Having to care for others	0.1	0.0	0.1	0.0	0.0	0.1

The most common coping strategies used by respondents to recover from a natural disaster were: taking out a loan from friend/neighbor (15.1%), accepting help from others (12.7), accepting aid (11.7), purchasing good on credit (10.1), and reduction in quantity of meals (8.1).

Table 65: Coping strategies for most recently experienced disaster, by region

Impact of Disaster	Region				Total
	Coast	Hoar	Mid-Char	North Char	
Mean number of coping strategies employed	1.3	1.0	1.1	1.0	1.0
Type of coping strategy (% of HHs):					
Loan from neighbors/relatives	11.6	18.7	14.6	13.3	15.1
Other*	19.0	15.1	10.9	11.1	12.7
Accepted help from others	16.1	10.1	9.3	14.5	12.2
Accepted aid	19.9	6.6	11.1	14.7	11.7
Purchased goods on credit	6.9	8.0	6.9	13.5	10.1
Reduced # or quantity of meals	18.8	7.3	13.0	5.1	8.1
Loan from NGO	2.2	6.7	6.1	7.7	6.8
Used savings	7.6	4.2	11.0	4.7	6.0
Loan from money lender	1.0	8.8	4.9	2.5	4.8
Sold productive assets	1.0	2.4	3.0	3.1	2.7
DNK	4.3	2.1	2.6	2.6	2.5
Loan form bank	1.0	3.5	1.4	1.3	2.0
Sold advance male labor	3.7	0.5	3.9	1.8	1.9
Mortgaged farmland out	0.1	2.3	1.0	2.0	1.8
Ate famine foods	3.8	0.6	1.3	2.2	1.6
Sold agricultural products in advance or low price	0.5	0.5	1.0	2.0	1.2
Postpone medical treatment	1.0	1.0	1.2	1.3	1.2
Migrated	5.8	0.2	0.9	0.5	0.8
Sold farmland	0.1	0.6	0.4	0.3	0.4
Sent child to work	0.3	0.5	0.3	0.1	0.3
Sold advance female labor	0.9	0.0	0.3	0.3	0.3
Sold other household assets	0.0	0.2	0.0	0.3	0.2
Sold homestead land	0.1	0.0	0.0	0.0	0.0
Leased farmland out	0.0	0.0	0.0	0.0	0.0

*other includes the following response categories: '*did nothing*' (68%, n=635), '*with our own effort*' (21%, n=199), '*loan from others*' (4%, n=40), '*remittance from abroad*' (3%, n=25), '*others*' (4%, n=36)

The number of coping strategies employed is similar across the well-being categories. It is interesting to note that extreme poor households are more likely to accept help from others than the other well-being categories.

Table 66: Coping strategies for most recently experienced disaster, by well-being category

Impact of Disaster	Well-being category					Total
	Extreme poor	Poor	Lower Middle	Middle	Rich	
Mean number of coping strategies employed (mean)	1.0	1.1	1.0	1.1	1.0	1.0
Type of coping strategy (% of HHs):						
Loan from neighbors/relatives	13.5	16.0	15.9	14.2	12.0	15.1
Other	12.0	11.7	12.9	12.2	20.5	12.7
Accepted help from others	20.5	12.8	11.1	5.6	2.9	12.2
Accepted aid	13.9	13.5	10.8	8.5	2.0	11.7
Purchased goods on credit	10.0	11.1	9.4	9.4	7.0	10.1
Reduced # or quantity of meals	9.5	9.7	5.3	5.4	4.6	8.1
Loan from NGO	2.8	5.3	7.3	9.1	8.8	6.8
Used savings	4.5	7.1	8.5	7.6	3.7	6.0
Loan from money lender	3.7	5.4	4.8	5.2	3.3	4.8
Sold productive assets	1.1	1.4	3.3	6.2	9.2	2.7
DNK	0.1	0.5	2.2	5.6	7.6	2.5
Loan form bank	1.3	1.0	1.9	5.8	4.6	2.0
Sold advance male labor	2.4	2.4	2.4	3.6	2.3	1.9
Mortgaged farmland out	0.9	0.4	1.4	2.5	5.3	1.8
Ate famine foods	2.8	1.8	1.4	0.5	0.0	1.6
Sold agr products in advance/low price	1.4	2.9	1.1	0.6	0.1	1.2
Postpone medical treatment	2.2	1.4	0.1	1.5	0.0	1.2
Migrated	1.5	0.7	0.4	0.8	1.0	0.8
Sold farmland	0.2	0.0	0.6	0.5	2.3	0.4
Sent child to work	0.2	0.2	0.4	0.2	0.6	0.3
Sold advance female labor	0.0	0.2	0.3	0.0	0.6	0.3
Sold other household assets	0.2	0.3	0.2	0.0	0.0	0.2
Sold homestead land	0.0	0.0	0.0	0.0	0.2	0.0
Leased farmland out	0.0	0.0	0.0	0.1	0.0	0.0

Families and communities will significantly decrease their vulnerability to disasters if: 1) they are aware of potential hazards, threats and shocks (including local impacts of global climate change); 2) they have taken steps to plan ahead (i.e., early warning systems, flood-resistant livelihood options) so as to mitigate disaster effects, and; 3) they have prepared adequately for the safety, security and functionality of all family members in the event of a disaster.

The majority of respondents (by region and by well-being category) expressed that they could do nothing to prevent the impacts of the disaster, followed by 'do not know'. At a distance, the third and fourth mitigation measures were structural improvements to their home and a community disaster response plan. These responses are indicative of a low level of resilience to disasters in the project areas.

Table 67: Perceived mitigation measures that could reduce impact of future disasters, by region

Mitigation measure	Region				Total
	Coast	Hoar	Mid-Char	North Char	
Mitigation measures (% of HHs):					
Nothing	49.1	62.2	70.2	67.2	65.3
DNK	29.1	21.2	18.5	18.8	20.0
Structural improvement to home	3.9	4.9	5.1	5.0	4.9
Community disaster response plan	1.5	8.3	1.6	4.2	4.8
Increased collaboration/coordination w/ neighbors	6.1	0.5	4.2	4.0	3.1
Improvement to infrastructure	10.5	1.5	1.5	2.2	2.3
Food stocks	4.7	1.8	1.8	2.5	2.3
Increased collaboration /coordination w/ local govt	4.1	0.0	0.4	1.9	1.1
Better forecasting	3.2	0.4	2.6	0.3	0.9
Earlier/better warning	3.0	0.2	1.1	0.8	0.8
Increased collaboration/coordination w/ communities	0.9	0.0	0.4	1.3	0.7
Other	0.6	0.1	0.6	0.4	0.4
First aid training	0.1	0.4	0.1	0.4	0.3
Water stocks	0.4	0.3	0.2	0.2	0.3
More diversified/alternative income	0.1	0.0	0.6	0.2	0.2
Improved modes of communication	0.9	0.0	0.0	0.1	0.1
Medical supplies stocks	0.1	0.0	0.1	0.0	0.0
Evacuation routes/plans	0.2	0.0	0.1	0.0	0.0

11.3 Vulnerability of livelihood resources

Tables 68-71 below provide an overview of the vulnerability matrix findings for the four regions. The vulnerability matrices show which hazards have the most serious impact on important livelihoods resources, and – thereby – which livelihoods resources are most vulnerable.

Table 68 shows that coastal respondents primarily identified physical and natural resources as their most important livelihood resources. Floods, including flash floods, and cyclones are the main hazards to impact the livelihood resources in this region. Findings indicate that the resources most affected by these hazards are cattle and trees/forest resources.

Coastal respondents indicated that their main strategy prior and during disasters was to take shelter in other people's homes, cyclone shelters or the Madrasha, and to move animals to higher ground. After the disaster, some respondents indicated that their main coping strategy was to take was to take loans from friends, neighbors and relatives. Some indicated that they migrated to earn income to rebuild their homes,

others received some assistance like plastic sheeting from their UP while most indicated general despair at their high vulnerability to disasters and limited capacity to recover.

When asked whether they could adopt new or different strategies that would reduce the impact of hazards on their livelihoods, most respondents answered no. Some respondents indicated that they could do more soil cutting to further raise their houses or build dikes around their homes. These respondents indicated that they have the necessary man power and access to soil and trees to do this. The main constraints to adopting these strategies were mainly money, as they would lose income-earning days, and lack of technical skills to improve dike building and home raising.

Table 68: Coastal vulnerability matrix, by well-being category

Participants: females, Teknaf | extreme poor well-being category					
Resources	**Hazard**				
	Flood	Cyclone	Flash Flood	Tide	
Cattle	3	3	3	3	
Salt	3	2	3	2	
Land	2	2	3		
Betel leaf field	3	3			
Crops	3	3	2	2	
Participants: males, Ukhia | extreme poor well-being category					
Resources	**Hazard**				
	Cyclone	Cold wave	Flash Flood	Drought	
Fish cultivation	3	3	3		
Forest	3		3		
Rearing cattle	3		3		
Homestead			3		
Participants: females, Ukhia | poor well-being category					
Resources	**Hazard**				
	Flood	Cyclone	Earth quake	Tide	
Trees	3	2			
Rearing cattle/poultry	3	2	1	3	
Houses/homestead	3	2			
Betel leaf field	3	2		3	
Participants: males, Teknaf | poor well-being category					
Resources	**Hazard**				
	Flash Flood	Cyclone	Drought	Heavy Rain	Cold wave
Rearing cattle	3	3		2	1
Forest	3	3	2		
Homestead	3	2		1	
Cultivate salt	3	2		1	
Labor	3	2		1	

3 = high impact on the resource, 2 = medium impact on the resource, 1 = low impact on the resource, blank = no impact on the resource

Table 69 shows that respondents in the Haor region primarily identified a combination of physical, natural and human resources as their most important livelihood resources. Heavy rain, floods and river erosion are the main hazards to impact the livelihood resources in this region. Findings indicate that the resources most affected by these hazards are physical and natural resources such as livestock and land/trees. It is interesting to note that respondents in the haor region also identified impacts of hazards on human resources such as education, children and health.

Haor respondents indicated that their main disaster preparedness strategies were to work together to build dikes to protect homes and crops, to organize committees to build barriers that protect embankments from river erosion, to teach children how to swim, to raise their houses and latrines or move them to higher ground, to raise roads, and to harvest crops before disasters strikes. After the disaster, respondents indicated that their main coping strategy was to take was to sell assets, take loans from friends, neighbors and relatives, while some others migrated. Community cohesiveness directly after the disasters appeared strong.

When asked whether they could adopt new or different strategies that would reduce the impact of hazards on their livelihoods, respondents indicated the construction of more durable dikes, the permanent moving of homes to higher ground, the raising of roads and stopping river erosion. It was highlighted that the government should play a major role in improving the roads and addressing river erosion. Respondents indicated that they have the necessary man power and access to soil and trees to do this. The main constraint to adopting these strategies was money. To raise the necessary funds, respondents indicated that they could sell their (primarily animal) assets. Other constraints to adopting new/different strategies were lack of education and cooperation among community members, internal conflict, laziness and illness.

Table 69: Haor vulnerability matrix, by well-being category

Participants: females, Fulbaria | extreme poor well-being category					
Resources	**Hazard**				
	Storm	Drought	Heavy Rain	Frost	Flood
Education		3	3	3	2
Trees	3		2	1	3
Cattle/poultry	3		3	1	3
Land			2		1
Pond	2	3	1		1
Participants: females, Mymensingh | extreme poor well-being category					
Resources	**Hazard**				
	River erosion	Fog	Flood	Drought	Storm
Land	3			2	
Cattle	3	2	3	1	2
Trees	3	2	3	2	3
Children	3	2	3	3	2
Vegetable land	3	2	3	3	3

Participants: males, Mymensingh | poor well-being category					
Resources	**Hazard**				
	Drought	Flood	Cyclone	River erosion	
Crops land	3	3	3	3	
Cow/goat	3	3	3	3	
Homestead		3		3	
Sound health	3	3	2		

Participants: males, Fulbaria | poor well-being category					
Resources	**Hazard**				
	Drought	Cyclone	Stone storm	Flood	Heavy Rain
Education		2		3	3
Houses/homestead		2		3	
Trees	2	3		3	
Cattle/poultry	2			3	2
Cultivated land	3		3	3	2

3 = high impact on the resource, 2 = medium impact on the resource, 1 = low impact on the resource, blank = no impact on the resource

Table 70 shows that respondents in the North Char region identified a combination of physical, natural and human resources such as labor as their most important livelihood resources. Cyclones, floods, drought and storms are the main hazards to impact the livelihood resources in this region. Findings indicate that the resources most affected by these hazards are physical and natural resources such as livestock, homes and land/crops. It is interesting to note that respondents in the North Char specifically mentioned labor as a key livelihood resource.

North Char respondents indicated that their main disaster preparedness strategies were to strengthen/ repair their homes, move animals to higher ground, improve drainage and irrigation to better deal with floods and droughts respectively, and organize shelter in other people's houses. After the disaster, respondents indicated that their main coping strategy was to sell animal assets, take loans from friends, neighbors and relatives, use savings, and take less food.

When asked whether they could adopt new or different strategies that would reduce the impact of hazards on their livelihoods, respondents indicated the construction of dikes, bridges and culverts, the raising of roads, improvement of homes with banana leaves and plastic sheets, planting trees around the home, and taking loans from NGOs instead of from informal sources. It was also mentioned that the government should play a bigger role in preparedness and rehabilitation. Respondents indicated that they have the necessary man power and can undertake livelihood activities, sell assets or take loans to raise money. The main constraints were lack of cooperation among community members and support from land owners. For those taking loans, the strict repayment conditions were also a major constraint often resulting in selling of animal assets and things like tin roofing to repay the loan.

Table 70: North Char vulnerability matrix, by well-being category

Participants: males, Gharmgat | extreme poor well-being category					
Resources	**Hazard**				
	Storm	**Drought**	Flood	Heavy rain	Frost
Cultivated land	**1**	**2**	1	3	1
Rearing poultry	**1**	**2**	3		
Homestead	**3**		1	2	
Labor	**1**	**1**	2	3	1
Trees	**3**				2
Participants: males, Kurigram | extreme poor well-being category					
Resources	**Hazard**				
	Flood	**Cyclone**	Drought	Hail storm	Cold wave
Houses	**1**	**3**		2	
Cattle/poultry	**3**	**1**	1		2
Trees	**2**	**3**	1	1	
Bamboo bush	**1**	**2**	3		
Crops from land	**3**	**1**	3	2	1
Participants: females, Kurigram | poor well-being category					
Resources	**Hazard**				
	Flood	Cyclone	Hail storm	Sickness	Drought
Houses/homestead	**2**	3	2		
Tube well					2
Labor	**3**	1	1	3	2
Cattle/poultry	**1**	1	1	2	1
Crops (agricultural)	**2**	2	3		3
Participants: females, Gharmgat | poor well-being category					
Resources	**Hazard**				
	Flood	Cyclone	Drought	Fog	Hail storm
Cattle/poultry	3	1	1	2	
Houses/homestead	2	3			1
Trees		3		2	1
Own labor	3	1	2	1	2
Van	3				2

3 = high impact on the resource, 2 = medium impact on the resource, 1 = low impact on the resource, blank = no impact on the resource

Table 71 shows that respondents in the Mid Char region identified a combination of physical, natural and human resources as their most important livelihood resources. Heavy rain, floods and storms are the main hazards to impact the livelihood resources in this region. Similar to the other regions, findings indicate that the resources most affected by these hazards are physical and natural resources such as livestock, homes and land/crops. Similar to the North Char region, it is interesting to note that respondents in the Mid Char region also identified labor as a key livelihood resource that is affected by hazards.

Mid Char respondents indicated that their main disaster preparedness strategies were to raise their homes, strengthen/repair their homes, move animals to higher ground, and improve irrigation to better deal with drought. After the disaster, respondents indicated that their main coping strategy was to sell animal assets, take loans from friends, neighbors and relatives, take loans from NGOs and use savings. When asked whether they could adopt new or different strategies that would reduce the impact of hazards on their livelihoods, respondents indicated the improvement of shelter through concrete pillars and tin roofs, the provision of doctors and medicine for people and animals, and storage of firewood and fuel. Respondents indicated that they have their main resources to undertake thses strategies are their own labor, their coordinated community response and natural resources such as bamboo and trees. The main constraints were lack of money, doctors/medicine, land (including to keep animals), food and resistant seed varieties. Respondents also mentioned strict repayment conditions as a major constraint.

Table 71: Mid Char vulnerability matrix, by well-being category

Participants: females, Bera | extreme poor well-being category					
Resources	**Hazard**				
	Flood	Storm	Drought	Heavy rain	Diseases
Cultivated land (Crops)	1	3	2	1	
Livestock	3	1	2	2	
Husband	1		3		2
Labor	2	1	1	3	
Trees	2	3	1	1	
Participants: females, Kazipur | extreme poor well-being category					
Resources	**Hazard**				
	Rain fall	Flood	Drought	Storm	
Homestead	2	1			
House		2		3	
Cattle		2			
Labor	3				
Paddy	1	3	3	2	
Participants: males, Bera | poor well-being category					
Resources	**Hazard**				
	Drought	Flood	Storm	Insect attack	Cattle diseases
Land	3	2	1	2	
Livestock	2	3	1		1
Labor	2	1	3		
House	2	1	3		
Trees	1	2	3		
Participants: males, Kazipur | poor well-being category					
Resources	**Hazard**				
	Rain fall	Flood	Drought	Cyclone	Cold wave
Homestead		3		3	
Cattle	2	2		1	3
Cultivated land (crops)	2	3		1	2
Van	1		1		
Labor	3	2		1	1

3 = high impact on the resource, 2 = medium impact on the resource, 1 = low impact on the resource, blank = no impact on the resource

12.0 CLIMATE CHANGE

12.1 Climate change perceptions

Overall, the majority of households (63%) believe that the climate is changing. Tables 72 and 73 show the percentage of households that believe the climate is changing, by region and well-being category respectively. The highest percentage of households that believes climate is changing is in the Mid Char region and the lowest in the Haor.

When comparing across both regions and well-being categories, the most common perceived climate changes are that it is becoming colder, and temperatures and rains are becoming more unpredictable. It is important to note that seasonal calendar findings described in section 12.2 suggest that winters are also perceived as becoming milder in some regions.

Table 72: Perceived changes in climate, by Region

Climate Change	Region				Total
	Coast	Hoar	Mid Char	North Char	
Percent of households that believe climate is changing (% of HHs)	70.2	47.5	88.8	65.9	62.6
Perceived changes in climate (% of HHs):					
It is becoming colder	52.4	49.1	52.9	57.8	53.7
Temperatures are more unpredictable	41.2	24.6	53.0	49.3	42.4
Rains are more unpredictable	40.6	21.3	43.1	35.9	33.4
Rains are beginning later	14.2	22.5	21.1	23.0	22.0
Rains are coming earlier	23.7	20.3	22.3	16.6	19.4
It is becoming warmer	28.1	22.5	21.7	7.3	16.3
It is becoming dryer	9.8	9.0	4.5	12.3	9.3
Strong winds are more common	4.3	1.9	10.0	7.1	6.1
Rains are stopping later	10.2	5.1	9.4	3.5	5.7
Rains are stopping earlier	9.0	2.5	8.7	5.9	5.7
It is becoming wetter	2.8	1.5	4.7	3.3	3.1

When comparing across well-being category, the highest percentage of households that believe the climate is changing are in the middle and rich well-being categories. This is likely due to greater access to information on climate change than the other well-being categories.

Table 73: Perceived changes in climate, by well-being group

Climate change	Well-being group					Total
	Extreme poor	Poor	Lower Middle	Middle	Rich	
Percent of households that believe climate is changing (% of HHs)	59.4	60.9	61.8	71.7	68.9	62.6
Perceived changes in climate (% of HHs):						
It is becoming colder	53.4	55.6	54.3	51.5	45.4	53.7
Temperatures are more unpredictable	44.7	43.1	41.5	38.5	41.8	42.4
Rains are more unpredictable	32.8	33.3	31.1	32.7	40.7	33.4
Rains are beginning later	23.1	20.2	23.3	23.2	27.0	22.0
Rains are coming earlier	19.5	20.7	18.7	14.9	19.9	19.4
It is becoming warmer	15.6	14.9	20.6	18.3	14.5	16.3
It is becoming dryer	6.5	9.7	8.8	6.7	15.5	9.3
Strong winds are more common	7.0	6.4	5.1	6.6	4.2	6.1
Rains are stopping later	7.7	6.0	4.1	4.5	6.2	5.7
Rains are stopping earlier	7.0	5.2	6.0	5.6	6.0	5.7
It is becoming wetter	2.5	3.1	3.7	2.3	3.9	3.1

12.2 Seasonal trends and climate change

Tables 91-94 in Annex III show the seasonal calendar findings from the focus group discussions in the four regions, organized by seasonal variables. Seasonal calendars are very useful means of generating information about seasonal trends within the community and identifying periods of particular stress and vulnerability. The visualization of seasonal trends is useful for probing on climate change. Moreover, if organized on a regular basis over longer periods of time, these calendars can be used to track climatic changes in seasonal patterns.

Coastal region

Table 91 shows the seasonal calendar for the Coast region. The heaviest rainfall occurs in the period June to August, which coincides with the main period of extreme flooding and to a lesser degree storms. March-May is characterized by drought, as would be expected of the period directly prior to the rains. The main planting season of irri/boro rice is from July to September, and the harvesting season runs from October to December. As would be expected, the planting and harvesting seasons coincide with the periods of greatest intensity of work. It is interesting to note that while migration occurs throughout the year, there appears to be some indication of slightly higher migration during planting and harvesting seasons, which could be due to migration for agricultural day labor for poor and extreme poor individuals who do not own their own land.

The main period of food scarcity in the Coast region is from July to October, between the planting and harvesting periods. There is some indication of a less severe period of food scarcity in December to March. This aligns with the household survey findings in section 6 on the months in which the highest proportion of coastal households report inadequate food. It is interesting to note from the seasonal calendar that disease occurs throughout the year, except during the period of most intense rainfall and food scarcity. Instead, it appears that disease coincides more with periods of drought.

The main periods for income earning coincide with the planting and harvesting seasons, which supports earlier analysis around agricultural day labor as a main income source during those periods. The months immediately following harvesting season are also characterized by higher income. This is likely also due to increased day agricultural labor opportunities during that period. Coastal respondents indicated that in addition to agricultural day labor as an important livelihood activity, males also undertake a wide range of other day labor activities, which is in line with household survey findings, such as working in salt fields, rickshaw/van driving, collecting and selling firewood, working in the seaport areas, soil cutting and factory work. Similarly, female respondents also indicated a range of livelihood activities such as agricultural work, factory work, collecting/selling wood, soil cutting and other day labor as their main livelihood activities.

When asked whether there were any seasonal changes in the last 10-30 years, coastal respondents indicated that the amount of rainfall has decreased and has also become more irregular. Winter temperatures are also more irregular, and winters are increasingly becoming colder. Although there is general agreement that this has impacted livelihoods, in some coastal areas the opportunities for work appear to have increased while in others they have decreased. Where these opportunities have decreased, respondents are trying to diversify their livelihoods through activities like collecting and selling firewood. Decisions around how to cope with seasonal changes that impact livelihoods appear to be made mainly in consultation with other community members.

Haor region

Table 92 shows the seasonal calendar for the Haor region. The heaviest rainfall occurs in the period June to November, which coincides with the main period of extreme flooding. Storms appear to be most intense directly prior to and at the beginning of the rainy season. The period from February to May is characterized by drought, as would be expected of the period directly prior to the rains. The main planting season of irri/boro rice runs from June to February. There are two harvesting seasons: one around June and one from December to February. It is interesting to note that extreme poor respondents only mention one planting and harvesting season. As would be expected, the planting and harvesting seasons coincide with the periods of greatest intensity of work. It is interesting to note that while migration occurs throughout the year, there appears to be some indication of slightly higher migration during planting and harvesting seasons, which could be due to migration for agricultural day labor for poor and extreme poor individuals who do not own their own land.

Food scarcity is common in the Haor region throughout the year, with the exception of the period June-July, which coincides with the first harvesting season. There are two distinct periods of higher food scarcity; September to November and February to May. Food scarcity appears most severe in the period October-November. This aligns with the household survey findings in section 6 on the months in which the highest proportion of haor households report inadequate food. It is interesting to note that the disease pattern coincides closely with the food scarcity pattern in the haor region.

The main periods for income earning coincide with the planting and harvesting seasons, which supports the analysis above around agricultural day labor as a main income source during those periods. While agricultural day labor appears to be the most common livelihood activity for males, male respondents also undertook other day labor and animal rearing. Female respondents indicated a relatively broad range of livelihood activities, including: fishery, van/rickshaw driving/pulling, livestock rearing, factory work, petty business, brick work and soil digging/cutting. Both males and females mentioned migration for work as a specific livelihood activity.

When asked whether there were any seasonal changes in the last 10-30 years, Haor respondents indicated that the amount of rainfall has decreased and has also become more irregular. At the same time, seasonal flooding appears to have become severe – although an important contributing factor to this appears to be siltation. Respondents also indicated that drought has become more severe and winters have become milder. Weather patterns also appear to have become more erratic with increased/decreased fog and storms in different areas of the haor.

While Haor respondents acknowledged that seasonal changes had an impact on agriculture practice (i.e., lower crop yield, less opportunity for day labor due to irregular rain and fog), it is interesting to note that haor respondents described the livelihood impacts of these seasonal changes as minor, largely due to the fact that they own no land. Although no clear coping strategies for seasonal changes emerged, decisions around how to deal with livelihood impacts appear to be made mainly in consultation with family and other community members, and with guidance from village leaders.

North Char region

Table 93 shows the seasonal calendar for the North Char region. The rainfall period runs from April to November, with the heaviest rainfall occurring in the period June to August. As expected, the most intense flooding also falls within this period – the most severe flooding occurs after the most severe rains. Storms appear to be most intense directly at the beginning and the end of the rainy season. The period from February to May is characterized by drought, as would be expected of the period directly prior to the rains. The main planting season of irri/boro rice runs from May to September, with a second planting period from January to March. There are also two harvesting seasons: one around May to June and one from October to January. As would be expected, the planting and harvesting seasons broadly coincide with the periods of greatest intensity of work. It is interesting to note that while migration occurs throughout the year, there appears to be some indication of slightly higher migration during planting and harvesting seasons, which could be due to migration for agricultural day labor for poor and extreme poor individuals who do not own their own land.

Food scarcity in the North Char region is most intense in the months between the planting and harvesting periods, as would be expected; September to November and February to May. This aligns with the household survey findings in section 6 on the months in which the highest proportion of North Char households report inadequate food. As was the case in the Haor region, the disease pattern coincides closely with the food scarcity pattern in the North Char region, particularly in the period September to November.

The main periods for income earning coincide with the planting and harvesting seasons, which supports the analysis above around agricultural day labor as a main income source during those periods. Other livelihood activities for males include construction, working in brick fields, petty business and van/rickshaw driving. Females mainly undertook domestic work, collecting/selling firewood, and broom and cloth making, but also undertook petty business and day labor. Migration for work was also mentioned as a specific livelihood strategy for both males and females.

When asked whether there were any seasonal changes in the last 10-30 years, North Char respondents indicated that the amount of rainfall has decreased and rain has also become more irregular. Flooding has become less severe but more frequent. Hail storms and fog/mist have also become more frequent. Respondents also indicated that drought has become more severe and winters have become milder.

North Char respondents indicated a mixed impact of seasonal changes on agriculture productivity. While some mentioned a decrease in the cultivation of crops due to decreased rainfall, the majority of respondents indicated that crop productivity has increased.

Mid Char region

Table 67 shows the seasonal calendar for the Mid Char region. The rainfall period runs from April to October, with the heaviest rainfall occurring in the period June to August. As expected, the most intense flooding also falls within this period; the most severe flooding occurs after the most severe rains. Storms appear to be most intense directly at the beginning and the end of the rainy season. The period from February to May is characterized by drought, as would be expected of the period directly prior to the rains.

The first planting season of irri/boro rice runs from May to June and there is a second more intense planting period from December to February May to September. There are also two harvesting seasons: April to July, and November to December. As would be expected, the planting and harvesting seasons broadly coincide

with the periods of greatest intensity of work. It is interesting to note that in contrast to the other regions, migration does not coincide as strongly with the harvesting/planting seasons but instead appears to be most intense between planting and harvesting. The main periods for income earning do coincide with the planting and harvesting seasons.

Food scarcity in the North Char region is most intense in the months between the planting and harvesting periods, as would be expected; September to November and February to May. This aligns with the household survey findings in section 6 on the months in which the highest proportion of Mid Char households report inadequate food. Diseases appear a regular occurrence throughout the year but are most intense between July and December, which coincides with the period of food scarcity.

The main income earning periods are from April to July and from November to January, coinciding with the planting/harvesting seasons. Similar to the haor and North Char regions, agricultural day labor is the most common livelihood activity for males, followed by other day labor such as working in brick fields, construction and soil cutting. Male respondents also mentioned rickshaw/van pulling, fishery and weaving as livelihood activities. Females primarily did housework, sewing, animal rearing, vegetable growing and handicrafts.

When asked whether there were any seasonal changes in the last 10-30 years, Mid Char respondents indicated that the amount of rainfall has decreased and rain has also become more irregular. Severity of flooding and frequency of storms has decreased. Respondents also indicated that temperatures have increased, drought has become more severe and winters have become milder.

Mid Char respondents indicated a mixed impact of seasonal changes on agriculture productivity. While some mentioned a decrease in the cultivation of crops due to decreased rainfall, others indicated that crop productivity has increased. The water flow of streams has also decreased, which has affected irrigation.

13.0 INSTITUTIONAL CAPACITY ASSESSMENT OF UNION PARISHADS

The MSS, which was used to measure the institutional capacity of the UPs in the SHOUHARDO II program, includes 14 weighted indicators with specified means of verification, such as regular conduction of various types of meetings, meeting attendance, participation of women in UP planning and activities, participation of vulnerable people in standing committees, UP capacity building, community engagement by the UP, DRM activities undertaken by the UP. The total weighted score that can be achieved is 100 percent. The ranges for the ranking of UP institutional capacity were defined by SHOUHARDO II in the existing MSS tool: scores in the range 0-49 percent were ranked as 'poor', 50-74 percent were ranked as 'moderate' and 75-100 percent were ranked as 'good'.

The mean score of all 172 UPs in the SHOUHARDO II project was 45 percent, indicating overall poor institutional capacity. When disaggregated by region, the means are also below 50 percent, ranging from 42 percent in the Mid Char region to 46 percent in the coastal region (figure 25).

Figure 25: MSS mean score, by region and overall

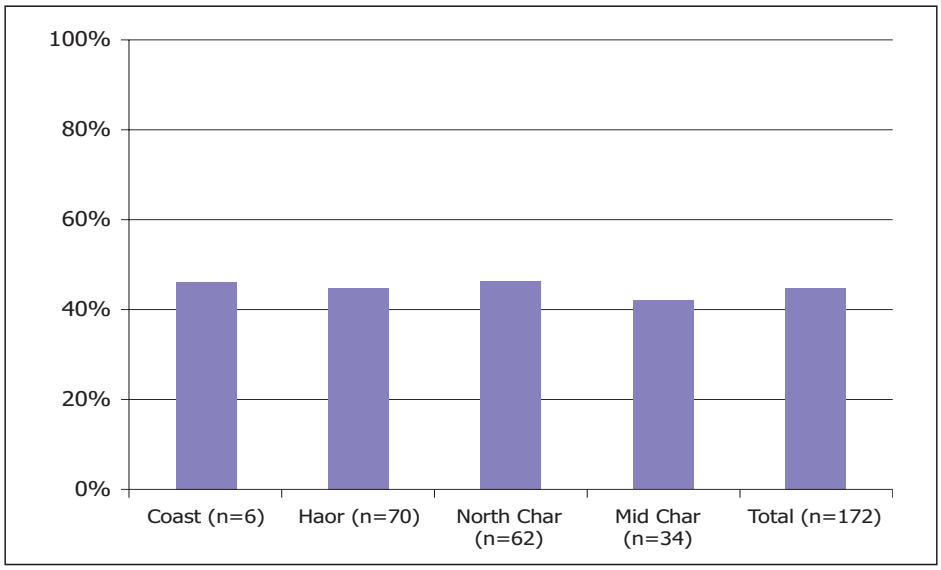


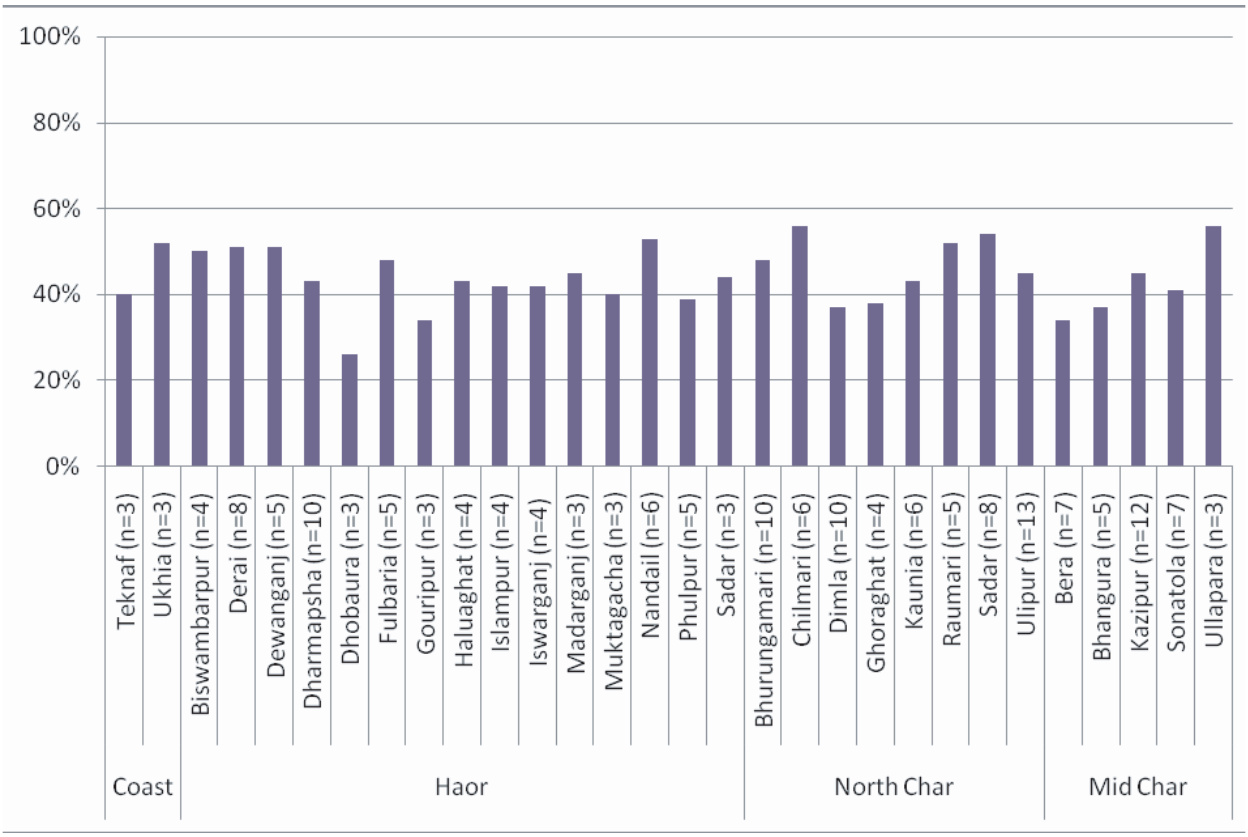
Figure 26 shows the means of the UPs in a particular Upazilla, by region, In the coastal region, 5 out of 6 UPs rank as moderate, including all 3 UPs in Ukhia. Lowest score is 32 percent in Teknaf Union, Teknaf Upazilla. In the coastal region, the highest score is 54 percent in Haldia Palong Union in Ukhia Upazilla.

In the Haor region, 23 out of 70 UPs (one-third) rank as moderate. In Derai, Dewanganj, Fulbaria and Nandail Upazillas (4 out of 15 Upazillas in the Haor), 50 percent or more of the interviewed UPs ranked as moderate. The lowest score is Pora Kandulia UP in Dhobaura Upazilla with 12 percent. The highest score is Sherpur UP in Nandail Upazilla with 58 percent.

In the North Char region, 28 out of 62 UPs (almost half) rank as moderate. In Bhurungamari, Chilmari, Raumari, Sadar Upazillas (4 out of 8 upazillas in the North Char), 50 percent or more of the interviewed UPs ranked as moderate. The lowest score is Khoga Kharibar UP in Dimla Upazilla with 14 percent. The highest score is Kanthalbari UP in Sadar Upazilla with 62 percent

In the Mid Char region, 11 out of 34 UPs (one third) rank as moderate. Kazipur and Ullapara are the only 2 Upazillas in the Mid Char region where 50 percent or more of the interviewed UPs ranked as moderate. The lowest score is Dhalar Char UP in Bera Upazilla with 15 percent. Two UPs share the highest score of 58 percent (Sonatola UP in Sonatola Upazilla, and Udhunia UP in Ullapara Upazilla.

Figure 26: MSS mean score, by region and Upazilla



The mean scores by indicator for all 172 UPs are presented in figure 27. Question 1 focuses on the regular conduction of planning, progress review and special meetings by the UP. Organization of each of these meetings once per quarter is considered regular. The overall mean score is 6.1 out of 12, indicating moderate performance on this indicator. Findings show that the majority of UPs organized between 1-2 out of the 3 types of meetings in the last quarter, as verified by meeting minutes and attendance sheets. Very few UPs organized no meetings at all in the last quarter.

Question 2 focuses on the organization of monthly UP coordination meetings and attendance at these meetings. Good attendance is considered two-thirds of members and executives and at least 1 NBD member attend. The overall mean score is 2.4 out of 6, indicating poor performance on this indicator. Only one-fourth of UPs organized coordination meetings every month in the last quarter. Among those that did, the majority of UPs did not have good attendance.

Question 3 focuses on the regular participation of women (at least 2) in planning meetings regarding the current UP annual work plan and the incorporation of women's issues (meaning activities targeted directly at improving the well-being of women) in that work plan. The overall mean score is 8.1 out of 10. It is important to note that UPs appear to be performing well on this indicator.

Question 4 focuses on the establishment of UP standing and other committees and the participation of vulnerable people (defined as VGF/VGD card holders) in these committees at the time of the assessment. In particular, the question focused on the following three standing committees: women and child welfare, water and sanitation; and the two other committees: disaster management and national nutrition planning. The overall mean score is 5.1 out of 12, indicating a poor score on this indicator.

Question 5 focuses on the participation of UP representatives in the community action planning (CAP) process and their participation in the implementation of CAP initiatives in the last year. The overall mean score is 4.1 out of 8, indicating low-moderate performance on this indicator.

Question 6 focuses on meaningful participation of the UP chairperson in all monthly UDCC meetings in the last quarter. The overall mean score is 7.4 out of 8, indicating good performance on this indicator.

Question 7 focuses on whether the UP has received any capacity building support from CARE/SHOUHARDO in the last year. The overall mean score is 0.5 out of 3. This is to be expected at the time of the baseline measurement as most of the UPs in SHOUHARDO II are new to the program.

Question 8 focuses on whether the UP undertook any capacity building initiatives for VDCs in the last year, based on training received from CARE/SHOUHARDO. The overall mean score is 0.2 out of 3. This is to be expected based on the low score under question 7.

Question 9 focuses on the organization of and participation by the UP in National days, namely observation of the following five days: Immunization Day, Women's Day, National Disaster Preparedness Day, Health Day and Sanitation Day. The overall mean score is 3.2 out of 5, indicating moderate performance on this indicator.

Questions 10 to 14 looked at the operations of the UP disaster management committee (UDMC). If the UP had not yet established this committee then Q10-14 were scored as 0, which is a contributing factor to the low scores for these questions. Question 10 focuses on whether the UDMC had available and utilized an up-to-date disaster Risk and Resource Map following the standard guidelines from CARE and the Government of Bangladesh. The overall mean score is 0.4 out of 12, indicating a poor performance on this indicator.

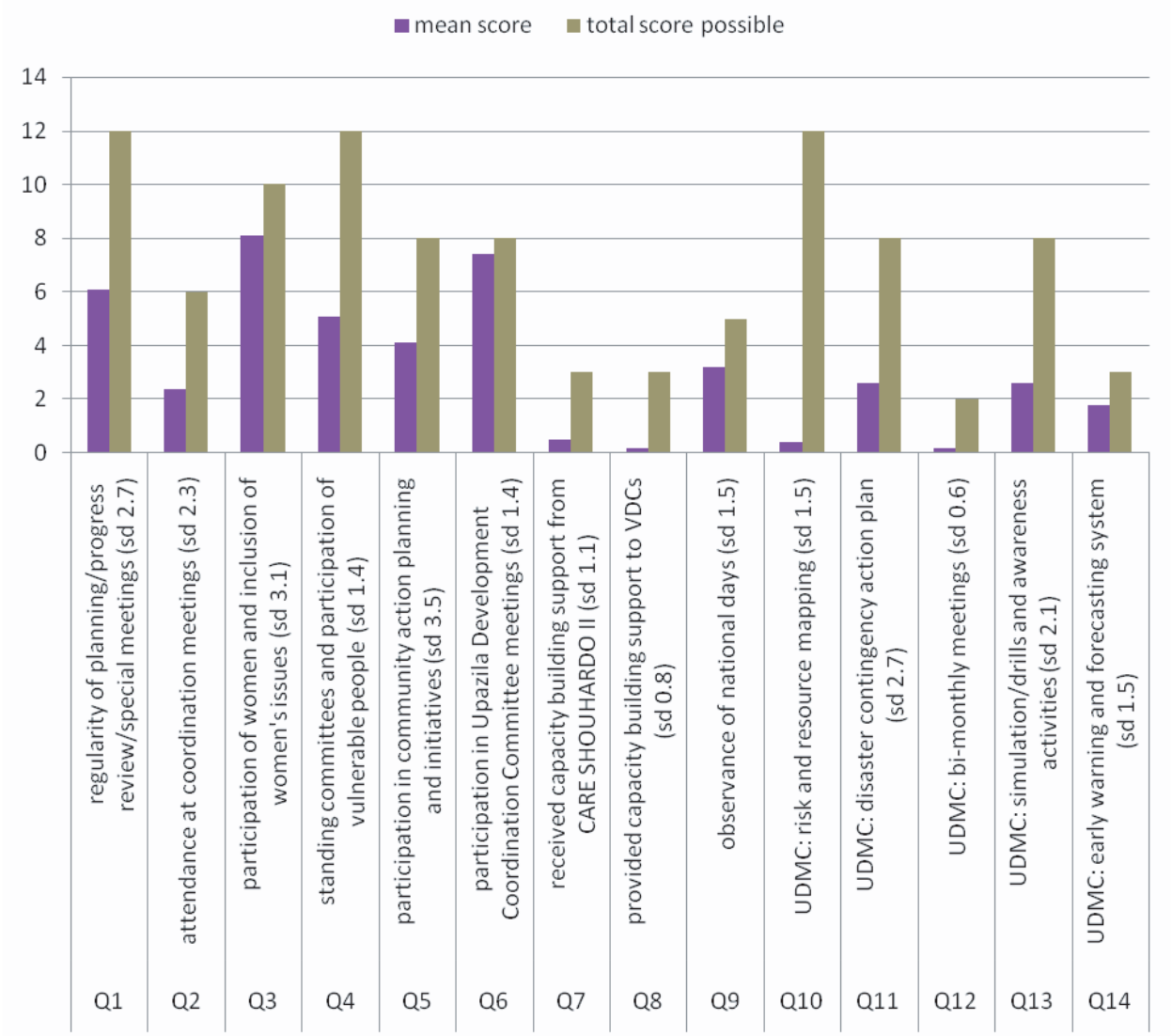
Question 11 focuses on whether the UDMC has available a contingency action plan that was updated in the last six months and meets CARE standards. The overall mean score is 2.6 out of 8, indicating poor performance on this indicator.

Question 12 focuses on whether the UDMC organized bi-monthly meetings in the last 6 months with participation by all committee members – in line with the standing order on disasters by the Government of Bangladesh. The overall mean score is 0.2 out of 2, indicating poor performance on this indicator.

Question 13 focuses on whether the UDMC organized regular community simulation/drills and/or awareness-raising activities, ranging from one a year to once every quarter in the last year. The overall mean score is 2.6 out of 8, indicating poor performance on this indicator.

Question 14 focuses on whether the UDMC had an operational early warning and forecasting system. The overall mean score is 1.8 out of 3, indicating moderate performance on this indicator.

Figure 27: mean weighted scores by MSS indicator



When asked UP members and executives were asked about the role/mandate of the UP in the KIIs, the most common response mentioned was the building and repair of roads, bridges and culverts, followed by ensuring proper law and order for community members, including addressing business/land disputes (including land recovery for the landless) and domestic issues. The third most common role of the UPs was mentioned as developing water and sanitation systems, followed by organizing health services and improving the livelihoods in their villages.

Ensuring the safety of villagers from natural disasters was not considered so much the main role or mandate of the UP. Instead, reference to natural disasters was included in the UP activities such as identifying areas at risk of flooding and clearing away water after floods. The apparent lack of awareness among UPs that disaster management is one of their main roles may be one reason that the scores for MSS questions 10-14 are so low, and indicate this is a priority area of focus for SHOUHARDO II.

Other key activities performed by the UPs included, in order of frequency: collecting tax, signing birth and death certificates, distribution of VGF/VGD cards, provide trade licenses to businesses, sole marriage

and divorce disputes (including discouragement of early marriage and domestic violence), cooperate with and monitor donor/NGO projects, organize 'meetings' and support education through building schools and distributing supplies. There was also infrequent mention of activities such as: organization of social activities (i.e. on National days), identification of and sometimes financial support to vulnerable people, distribution of pesticides and planting trees. The average working day lasts from 10am-4pm, and Sunday and Thursday are frequently mentioned as the busiest days for UP members/executives.

The majority of UP members and executives who participated in the KIIs had been in place 5-10 years, with some as long as almost 20 years. The main motivation for UP members and executives to take on this job was to contribute to the development of their communities. There was also infrequent mention of economic incentive as the main reason and one female UP member stated that her main reason for becoming a UP member was to ensure her husband 'understood reality better'.

UP decision making processes was an important topic in the KIIs to contextualize the MSS and KII findings broadly support the MSS scores. In almost half of the UPs where KIIs were organized, management decisions were made by the chairperson only, following discussion with members. In the other UPs, such decisions were made by the chairperson and members jointly; there were only two UPs where (standing) committees were consulted before making decisions. Lack of importance given to standing committees by UPs or lack of awareness of the role that standing and other committees can play, may be a contributing factor to the relative low-moderate score in question 4 of the MSS.

The most common meetings organized are the monthly coordination meetings, which were mentioned by almost all UPs interviewed. Less than half mention general planning meetings. There was limited mention of special meetings such as VGF/VGD, nutrition, water and sanitation, violence against women, and NGO and project meetings – wherein the majority of these include participation of standing and other committees. The distinction made by SHOUHARDO between quarterly planning, general and special meetings; and monthly coordination meetings did not come out clearly enough in the KIIs and some effort may be required to clarify these definitions within the project.

In roughly half of the Ups, meetings were organized on a regular basis, in the remaining UPs, meetings appeared to be organized more infrequently and on an ad hoc basis. The most reference was to monthly meetings, which primarily refers to the coordination meetings, which appear to be most common. Meeting announcements are mainly made through personal notice or mobile phone, and sometimes through letters, guards or the village police. More than half of the UPs indicated that they had processes to collect inputs into the meeting agenda prior to the meeting. In the majority of cases, all UP members/executives did not attend the meetings but on average it appears 8-9 UP members/executives were present at most meetings. Depending on the meeting, other participants included the local teacher and village leader, and sometimes villagers attended the meetings. There was only one mention of a government representative attending a UP meeting. In most cases, meeting decisions are made by the chairperson after consultation with other participants. There was only one mention of a majority voting system.

Almost all UPs had at least 2 female members, with the majority of UPs having 3 females as members. For almost one-third of UPs, it was mentioned that there is a difference in types of decisions and role in decision making between men and women – with limitations on the types of meetings and role in decision making for women. In a quarter of UPs there was some mention of women's exclusion from meetings and decisions and in several UPs both male and female interviewees stated that while women can 'speak' they have limited scope to 'do'. It is important to use this information to contextualize the relative high score on question 3 in the MSS; whereas women are UP members and women's issues may be included in the annual work plan, meaningful participation by women is often still very limited.

Regarding financial matters, the majority of UP members interviewed did not know how much money was currently held by the UP. In most cases, only the chairperson and secretary knew the amount held, which ranged from 1-50 lac Taka. These amounts were either kept by the secretary or by the chairperson. There was some mention of multiple accounts. The main sources of income were, in order of frequency

mentioned: trade licenses for businesses, signing of birth certificates, registration of rickshaws/vans, tax collection, government projects, land lease, and village-level judgments. There were limited responses regarding how money was spent. The most frequent mention was for UP member/executive (and guard) salaries and for meals, although there was some mention of projects and building maintenance/repairs as expenditure items. The individuals involved in expenditure were mostly the chairperson and the secretary with members involved in about half of the UPs interviewed.

The number of UP partners is increasing continuously. The main partners to the UPs are government departments. Approximately half of UP also mentioned NGOs as main partners and it is important to note that these UPs tended to have higher MSS scores than those with only government partners – among the UPs interviewed. In both cases, partnerships appear to be project-based. Government projects include Test Relief, the Kabi Kha food for work program and the Local Governance Support Program. It is interesting to note that for non-government project there are no written conditions, which would appear to imply that for these projects the UPs are a target group as opposed to a partner. For both types of project-based partnerships, there is limited awareness around how partnerships and projects were developed, which could indicate limited involvement by UPs in these processes although there is frequent mention of meetings/ discussions. For non-government projects, these were primarily initiated by NGOs who directly contacted the UP, after which UPs notified the Upazilla authorities.

The main benefits of partnerships were described as development of the target area and better well-being of the people living there. It is also important to note that almost half of the UPs, namely those with the higher MSS scores, recognize the fact the partnerships are an important mechanism to ensure better transparency and accountability in development programming, including more equitable distribution of benefits. There was also recognition that projects can be delivered better and faster through partnerships, and that there is less overlap and more synergy with other projects.

Projects result in some out-of-pocket expenses for the UPs, which can be problematic when there is no formal agreement and thus budget for NGO projects. In the majority of UPs there was no mention of problems in the partnership. However, a few UP members indicated that there were occurrences of UP corruption, in particular with regards to the identification of family members as ‘vulnerable’. In some cases this has lead to NGOs not accepting the beneficiary lists provided by the UPs. These problems were solved through meetings and identification of development of new beneficiary lists. It is interesting to note that issues of corruption were only raised in the UPs with the highest MSS scores, all of which scored as ‘moderate’. There was also some mention in differences of opinion in types of activities that NGOs and UPs wanted to do.

It is interesting to note that communities are not considered UP partners given the significant engagement that UPs have with villages in their areas. The main areas of engagement by UPs with communities are in line with the perceived UP role and activities described above, with infrastructure development being a primary focus. There was also some mention of education, and addressing polygamy, dowry practices, violence against women and early marriages. In UPs where these issues were mentioned, addressing socio-cultural issues such as violence against women and early marriages were considered the most time consuming pieces of UP work. Disaster management activities were only mentioned in one UP, which would again explain the low scores for questions 10-14 on DRM.

There appears to be a difference between the main areas of UP work and the main issues of concern identified by the interviewees. When asked what issues are of the most concern to the interviewee, the most common responses, in order of frequency, were: water and sanitation issues, addressing early marriage/polygamy/ violence against women and dowry practices, and helping the poor and extreme poor. In terms of prioritizing what to work on, most UP interviewees mentioned that they rely on their own judgment. Only in few UPs was there reference to community consultation on this, which could partly explain the relative low MSS score for question 5 on community action planning. In general, the UPs consider the poor and extreme poor to be the most vulnerable because they have no land, no work and no access to improved water and sanitation. However, the process for determining vulnerability remains unclear. Again, only in a few UPs was there mention of community consultations (i.e. with village leaders) to determine who the most vulnerable are.

There were no fixed schedules for meetings between UPs and community members (as opposed to meetings only with village leaders). In almost all UPs these meetings were ad hoc and as required on an ongoing basis. Only one UP stated that there were meetings organized twice a month, and one that there were almost weekly meetings; both UPs had a 'moderate' MSS score. Again, the limited degree of structure in engaging with communities could contribute to the overall low score on MSS question 5.

The meetings were sometimes formal; and sometimes informal. Meeting locations varied but were sometimes organized at the UP, the house of an influential village person, the house of an affected person or in shaded village areas. The meeting topics varied but one-third of the UP interviewees mentioned that the main topics were social issues. Decisons were made at many of these meetings but there were not minutes of meetings or records of decisions kept. There was also no formal feedback loop on these decisions to the broader community, although some UP members mentioned that people learned about this through discussions and other informal channels.

For half of the UP interviewees, the last time that they visited the villages was more than a month ago. The remainder had visited on average in the last week. The main purpose of the last meeting was to meet with village leaders and community members to discuss general problems, observe project progress, address specific issues (mainly social issues such as violence against women) or collect information. Only in a few cases was a decision made/problem solved during the visit. In most cases there was no follow up action determined and there was no date set for the next visit to the community.

One quarter of UP interviewees stated that there was no change as a result of their community engagement. For the other UPs, the interviewees described the following changes, in order of frequency: decrease in early marriage and social conflicts, improvements in education and number of children enrolled, improvements in infrastructure, improvements in law and order, and proper distribution of VGF/VGD cards, women's empowerment. There was some mention of negative experiences in terms of UP-community engagement such as the increased demand for and misuse of VGF/VGD cards, and frustration by female UP members that male UP executives prioritized men's needs over women's needs. One chairperson mentioned that the increased knowledge of people's issues through community engagement was a good strategy to get re-elected.

UP interviewees considered the main indicators of success of the UPs work with communities to be the attitudes of people towards UP members and the visibility of development. Just over three quarters of UP interviewees stated that villagers were happy with the UPs work, as verified through formal and informal interaction with them. Except for this community interaction, there are no other channels for community feedback or complaints on the UPs work.

When discussing the topic of organizational evolution of the UP in the last year, interviewees mentioned only a few organizational changes such as more committees, more documentation and some policy changes. Decision-making processes have not changed. Measurement of UP member/executive performance is primarily based on work but good behavior and responsibility are also mentioned. Some interviewees mention that there is really no scope to evaluate individual performance properly. All UPs have undergone a government financial audit in the last year. In a few cases there were recommendations which were then implemented. However, in most cases there appeared to be no proper feedback on audit results and no follow up after the audit.

In terms of institutional changes/future outlook for the next year, the most common responses, in order of frequency, were: hiring an accountant, building improvements/new building, hiring computer operators and getting internet. The hiring of an accountant is necessary because work load is constantly increasing and UP members/executives, especially the secretary, are overwhelmed by work. One UP also mentioned that income tax will be raised so that there will be more money for development of the union area. Other suggested improvements to the UP operating capacity include the establishment of a monitoring system, minimization of internal conflict, more transparency and accountability in decision-making and financial processes, more equal distribution of power, handing over of all khas land to the UP, better distribution of donor aid, increased salaries for UP members and executives, hiring of more honest staff, and punishment for corruption.

14.0 WOMEN'S EMPOWERMENT

Women's empowerment is an important factor in determining their own and their children's health and nutritional status. In this section, five aspects of empowerment are focused on:

1. Women's decision making within their homes;
2. Women's freedom of movement;
3. Whether women earn cash income;
4. The degree to which women themselves hold patriarchal values; and
5. Women's participation in community groups and local institutions.

The data collected in the baseline survey on these aspects are used to create indices which can be used for making comparisons across regions and well-being categories. Note that the enumerators were instructed to ask the questions regarding women's empowerment "of an adult women member of the household without men present".

14.1 Women's decision making power

Table 74 reports on the degree to which women are able to make various types of decisions. Women were asked to report whether they can decide alone, can decide with their husband or other adult male, whether their husband makes the decision after discussion with them, or they are not involved in the decision at all. The respondent could also note when a particular decision was not applicable. The decision for which most women reported "not applicable" (56%) was "spending money that you have earned yourself", which is plausible as few women actually earn income.

The data show that it is most common for decisions to be made by husbands after discussion with their wives. Very few women can make most kinds of decisions on their own. Only 35 percent can make decisions over "buying small food items, groceries and toiletries" on their own. Many women are not involved in some important household decisions at all. For example, 18 percent do not participate at all in decisions over the buying or selling of major household assets, and 7 percent do not participate in decisions over medical expenses for themselves and their children. A full 73 percent do not participate in decisions about the households' participation and involvement in *salish*, the traditional village justice system, which appears to be mainly a male domain.

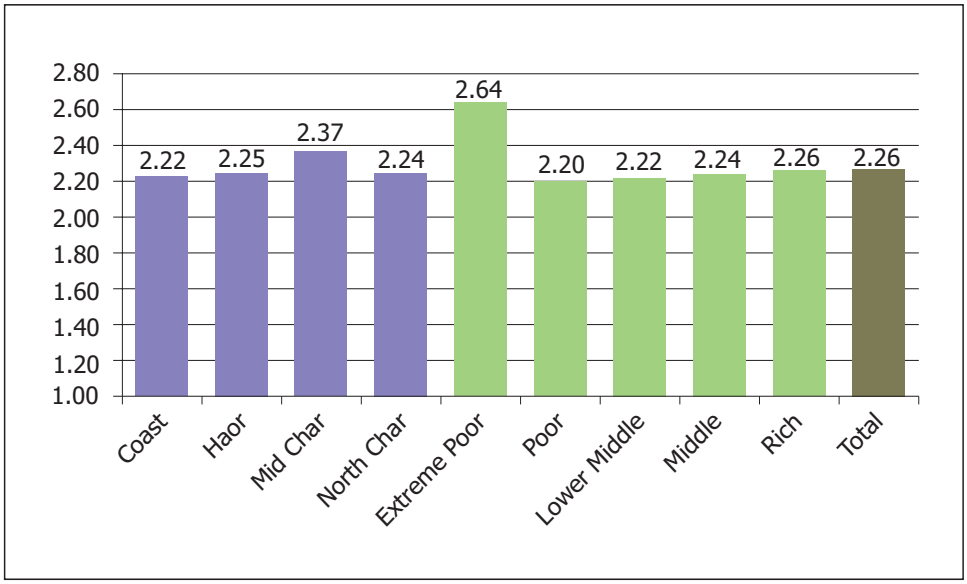
To amalgamate women's responses into a single index of decision-making power, the following categories of response, and corresponding score values from 1 for "least power" to 4 for "most power", were used: "Can decide alone" (score=4); "Can decide with husband or other adult male family member (3); "Husband makes decision after discussion with wife" (2); and "Not involved" (1). The overall decision-making score is the mean over the 12 decisions that the woman felt were applicable to her situation. Scores were calculated only for women reporting that at least 5 types of decisions are applicable. As figure 28 shows, women's decision making power within their households differs little across regions. It does show some variation by well-being category, being the highest among the extreme poor and the lowest among the poor but showing very little difference across households in the four top well-being categories. It is likely that the reason it is highest in the extreme poor households is that 42 percent of these households are headed by a female, so they often decide alone simply because there may not be an adult male counterpart to make decisions with. The index will be a useful tool for monitoring women's decisions making power over time as SHOUHARDO II promotes women's empowerment.

Table 74: Degree of women's participation in various types of decisions

Decision	Can decide alone	Can decide with husband or other adult male	Husband makes decision after discussion with wife	Not involved in decision	Percent for whom decision is "not applicable" a/
Buying small food items, groceries, toiletries	35.1	12.7	42.2	10.0	1.6
Buying clothing for yourself and your children	21.5	14.0	52.3	12.2	7.4
Spending money that you yourself have earned	25.6	13.7	42.7	18.0	55.9
Buying or selling major household assets (land, livestock, crops)	5.3	19.7	56.9	18.1	31.3
Buying or selling jewelry	5.9	17.9	59.0	17.2	40.6
Use of loans or savings	6.6	16.3	62.8	14.4	31.9
Expenses for your children's education	10.6	14.6	65.1	9.6	24.3
Expenses for your children's marriage	5.5	21.9	58.4	14.1	46.8
Medical expenses for yourself or your children	12.3	16.4	64.0	7.2	6.7
Expenses for family planning (contraceptives)	11.5	8.0	73.0	7.6	17.5
To move to shelter during time of disaster	7.7	23.7	49.3	19.3	15.4
Actively participate and involved in *salish* decision making	4.2	8.8	14.3	72.7	45.9

Note: The number of women for which calculations are undertaken depends on the number who felt the type of decision was not applicable, which is given in the far-right column. It is lowest for "Spending money that you yourself have earned " (N=3,629); it is highest for "Buying small food items, groceries, toiletries" (N=8,101).

Figure 28: Index of women's decision making power, by region and well-being category



14.2 Women's freedom of movement

Table 75 reports on the percent of women who can go to various locations in their local area. The top panel gives the percent of respondents who can go at all, and the bottom panel gives the percent who can go alone. Only 45 percent of women can go to the market, a very public place, while over 80 percent can go to a friend's home. Only 20 percent can go to a mosque or shrine. Note that nearly 30 percent of women cannot go to a medical facility. The percent who can go alone to these places is lower, most especially so for a medical facility. Although 72 percent of women can go to a medical facility, only 51 percent can go alone.

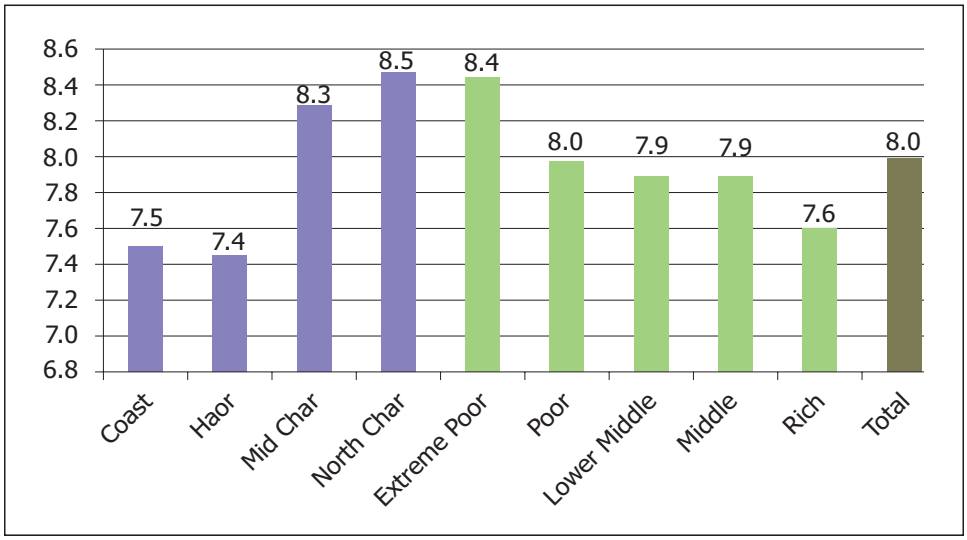
To create an index of freedom of movement, the following categories of response, with corresponding scores, were used: permitted to go alone (score=3); permitted to go accompanied by someone else (2); never permitted to go (1). The index value for each woman is the sum of the scores over the three types of places. The mean index values across regions and well-being categories are reported in figure 29. Women's freedom of movement is highest in Mid and North Char and lowest in Coast and Haor. It is highest among extreme poor households and falls steadily, being the lowest among "rich" households.

Table 75: Women's freedom of movement: percent of women who can go to various places in their local area, by region

Destinations	Region				Overall
	Coast	Haor	Mid Char	North Char	
Can go					
Market	37.4	37.5	38.0	55.3	4 4.5
Health center or doctor	67.6	66.1	75.7	77.6	72.3
Friend's home	81.0	74.1	84.1	90.1	82.3
Mosque/shrine	14.0	17.1	33.6	15.7	19.3
Can go alone					
Market	25.4	27.4	30.2	44.4	34.4
Health center or doctor	37.9	40.0	52.9	62.5	50.9
Friend's home	74.5	67.6	81.1	85.7	77.2
Mosque/shrine	11.6	14.8	32.2	14.9	17.7

Note: The total number of observations is 8,234.

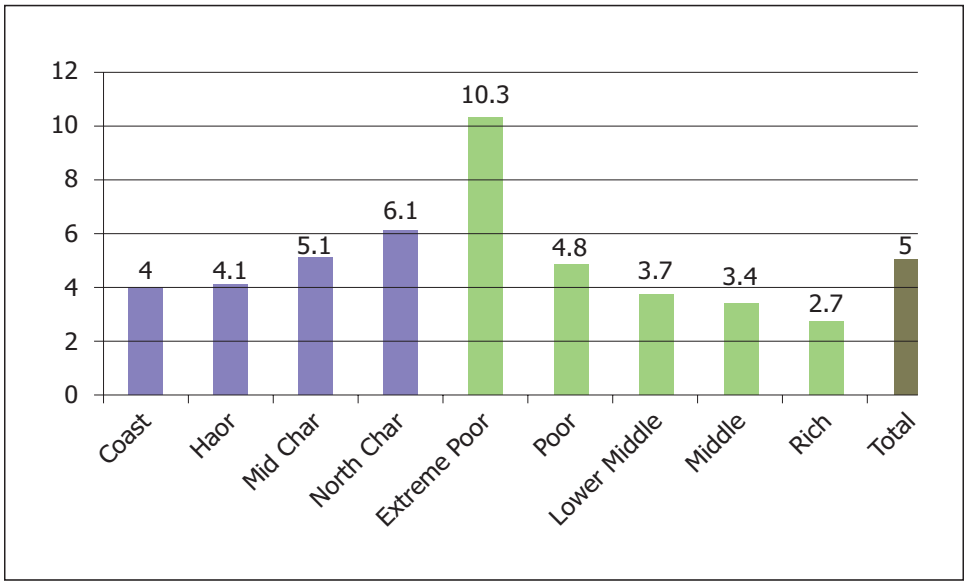
Figure 29: Freedom of movement index, by region and well-being category



14.3 Women's earning of cash income

The percent of women who earn cash income in the SHOUHARDO II's operational area is extremely low, at only 5 percent. This is far lower than the national prevalence of about 25 percent.[18] Across the project's four regions, the percent is highest in North Char (6%) and lowest in Coast (4%) (see figure 30). Over 10 percent of women in extreme poor households earn cash income, but again this may be influenced by the high percentage of extreme poor households headed by a female. The proportion declines precipitously across the well-being categories, falling to only 3 percent among "rich" households.

Figure 30: Percent of women who earn cash income, by region and well-being category (N=8,226)



14.4 Patriarchal attitudes among women

Patriarchy is the basic foundation on which discrimination against women rests. Table 76 reports on the proportion of women agreeing with various statements on patriarchal attitudes about family life. Agreement with the statements in the top panel implies less patriarchal attitudes while agreement with the statements in the bottom panel implies more patriarchal attitudes. The majority (near 70%) of women believe that a woman has the right to express her opinion even when she disagrees with her husband. Another indication that patriarchal values are losing their hold is that 67 percent of women believe that if the wife is working outside of the home, the husband should help with household chores. Further, only 9 percent of women believe that it is better to send a son to school than it is to send a daughter. Nevertheless, there are signs that patriarchal values are still widely held in the SHOUHARDO II project's operational area. For example, only 43 percent of women believe a married woman should be allowed to work outside of the home if she so desires. Nearly three-quarters of women believe that a wife should tolerate being beaten by her husband in order to keep the family together. A full 55 percent believe that important family decisions should be made by men in the family.

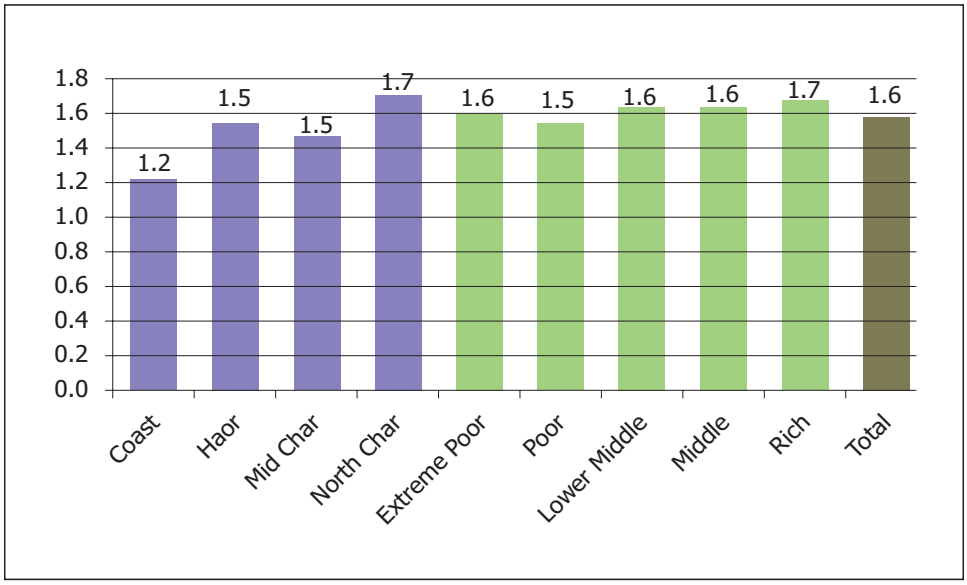
18 National Institute of Population Research and Training (NIPORT), Mitra and Associates, and Macro International (2009). *Bangladesh Demographic and Health Survey 2007*. National Institute of Population Research and Training, Mitra and Associates, and Macro International, Dhaka, Bangladesh and Calverton, Maryland, USA.

An index for "freedom from patriarchal beliefs" is computed as follows. A woman is assigned a score of 1 for each response of "agree" to statements 1-3 (implying less patriarchal attitudes); if her response was "disagree" she was assigned a score of 0. The opposite scoring system was applied for statements 4-6 (implying more patriarch attitudes). The overall score was calculated by summing the scores for statements 1-6. Figure 31 shows that freedom from patriarchal beliefs is highest in North Char and lowest in Coast. It varies little across the well-being categories, suggesting that improvements in socio-economic status do not lead to reductions in patriarchal values in the project's area.

Table 76: Percent of women who agree with various statements revealing patriarchal attitudes about family life, by region

Statements	Region				Overall
	Coast	Haor	Mid Char	North Char	
Statements implying less patriarchal attitude					
If the wife is working outside the home, the husband should help her with household chores.	63.8	62.3	71.9	68.8	66.7
A married woman should be allowed to work outside the home if she wants to.	38.8	38.4	41.2	48.0	42.8
The wife has a right to express her opinion even when she disagrees with what her husband is saying.	73.6	55.8	80.8	75.7	69.0
Statements implying more patriarchal attitude					
The important decisions in the family should be made only by the men of the family.	79.1	60.9	61.8	45.2	55.4
A wife should tolerate being beaten by her husband in order to keep the family together.	78.1	72.0	77.8	75.7	74.8
It is better to send a son to school than it is to send a daughter	20.9	9.7	10.8	6.1	8.9

Figure 31: Index for freedom from patriarchal beliefs, by region and well-being category



Note: The total number of observations is 7,967.

14.5 Women's participation in groups and local institutions

Female participation in groups is overall very low (see table 77). The highest participation rate is in savings and credit groups, in which one-fifth of all women participate. Participation in savings and credit groups is highest in Mid Char and North Char regions, and lowest in Coast and Haor regions. Being a committee member or officer in a group is also minimal in the project's operational area, with only 2 percent of women that do participate in any group being a committee member or officer. The percent of women who have ever attended a meeting of the traditional justice or court system ("*Salish*") is also low, at 2.3 percent. Among these women, however, a full 50 percent have actually spoken at a meeting. The index of women's group participation, which is simply the sum of the 10 types of groups listed in Table 77, has a mean value of 0.24 and, following the pattern for participation savings or credit groups, is highest for Mid and North Char and lowest for the other two regions (see figure 32). It increases across the well-being category groups.

Table 77: Percent of women participating in various community groups and local institutions, by region

	Region				Total
	Coast	Haor	Mid Char	North Char	
Participation in various community groups					
Savings or credit group	12.1	12.0	27.2	26.0	20.0
Community agriculture or garden group	0.2	0.4	0.3	0.4	0.3
Community health group	0.3	0.4	0.4	0.5	0.4
Parent-Teacher Association or School Management Committee	0.3	1.0	0.5	1.3	1.0
Mother's Group	0.2	0.4	0.4	0.5	0.4
Women's support group	0.3	0.3	0.4	0.5	0.4
UP General Committee	0.2	0.4	0.3	0.5	0.4
UP Standing Committee	0.1	0.3	0.2	0.4	0.3
Ward Shava	0.2	0.4	0.3	0.4	0.3
Other	0.3	0.4	0.4	0.4	0.4
Percent of women who are members of any community group	12.6	12.9	28.2	26.7	20.9
Percent of women who are members of any group who are also a committee member or officer in a group	1.2	2.9	2.2	1.7	2.1
Participation in Salish					
Percent who have ever attended a Salish meeting in their village	1.9	1.6	2.6	2.8	2.3
Percent who have attended who have spoken at a meeting	56	50.5	45.8	52.5	50.8

Figure 32: Index for women's participation in groups, by region and well-being category

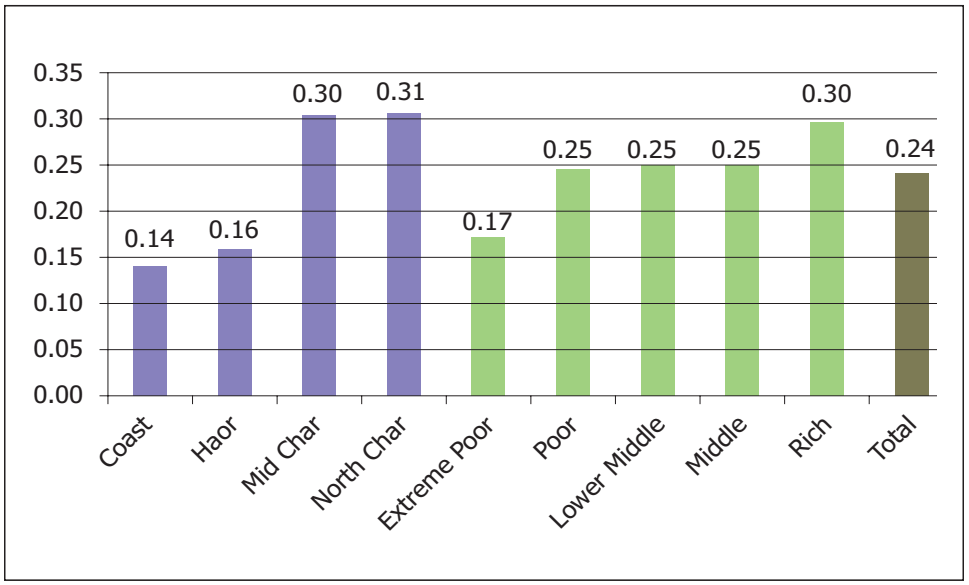
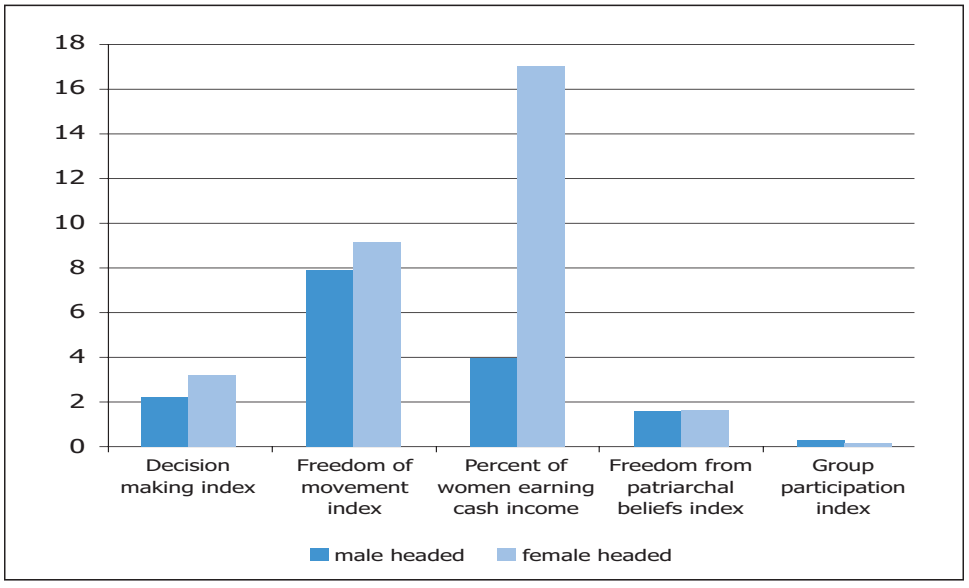


Figure 33 reports on the five aspects of women's empowerment by gender of household head. As would be expected, the indexes of women's decision making power within their homes, freedom of movement, and cash income earning are all higher for women living in female headed households. At least within their homes, these women are apparently not as subject to the limitations of living in a male dominated society. Note that the degree to which women hold patriarchal values is nevertheless the same for those living in male headed and female headed households. Finally, the index of group participation, while very low for both groups, is higher among women in male-headed households. It is perhaps the case that women in female-headed households do not have adequate time to participate.

Figure 33: Women's empowerment indicators, by gender of household head



Notes: For the total number of observations see previous tables and figures in this section. T-tests for differences in the indicators across male and female households indicate statistically significant differences (at the 1 percent level) for all except the freedom from patriarchal beliefs index.

15.0 DOMESTIC VIOLENCE AGAINST WOMEN

Domestic violence is a signal of abuse of power at the household level, and women's low empowerment makes them more vulnerable to it. The baseline survey included questions regarding the situations in which women felt a husband is justified in striking his wife and whether or not this has actually occurred in women's households. It should be kept in mind that domestic violence is a very sensitive, personal subject and, thus, under-reporting could be high.

The percent of women in the SHOUHARDO II operational area who report that they believe a husband is justified in "hitting or physically abusing" his wife in various situations is given in the top panel of Table 78 by region. Almost 60 percent of women believe that a husband is justified in doing so if she does not obey elders. Almost half of women believe he is justified in doing so if she goes out without telling him, neglects the children; or argues with him. Refusing to have sex or burning food appear to be less reprehensible offenses. Note that the percent of women who believe physical abuse is justified tends to be higher in the Coast and Haor regions.

As illustrated in figure 34, just over one-quarter of women responded "yes" to the question "Did any female member of your household experience being yelled at or struck during the previous year?". The prevalence is considerably higher in North Char (33%) and is lowest in the Coast region (20%). Note, however, that when asked the form that the "yelling or striking" took, in the Coast 70 percent of it was physical while in the rest of the regions it was physical in half of the reports (see Table 78). Domestic violence is actually lowest among the extreme poor, again possibly because of the high prevalence of female headed households, many of which may not have adult males living in them. It is highest among the "poor" (31%) and falls quickly to its lowest among the rich (18%). Thus, even though women appear to be least empowered among this rich group, it is also one with relatively little (reported) domestic violence. With regard to the frequency of yelling or striking, the large majority of women reported that it happened several times or often in the last year. This varied little across the regions.

Very few women reported that assistance was sought after an incident of yelling or striking, only 13 percent. Assistance was sought most often in Mid Char and least often in Haor region. By far the greatest source of assistance was a relative, friend or neighbor (89%), and few women made use of the police or formal law/ legal system (1.6%). Almost 10 percent received aid from a medical facility, most likely due to physical injury.

Table 78: Indicators of domestic violence, by region

Domestic Violence Indicators	Region				Overall
	Coast	Haor	Mid Char	North Char	
Percent of women who believe that a husband is justified in hitting or physically abusing his wife in various situations					
She goes out without telling him	47.3	53.6	36.9	48.2	48.1
She neglects the children	57.4	51.8	41.2	48.9	48.9
She argues with him	60.1	54.0	46.4	50.9	51.6
She refused to have sex with him	19.5	21.7	16.3	20.0	19.9
She burns the food	18.4	22.3	12.8	14.7	17.2
She does not obey elders	65.9	64.5	49.6	57.6	59.0

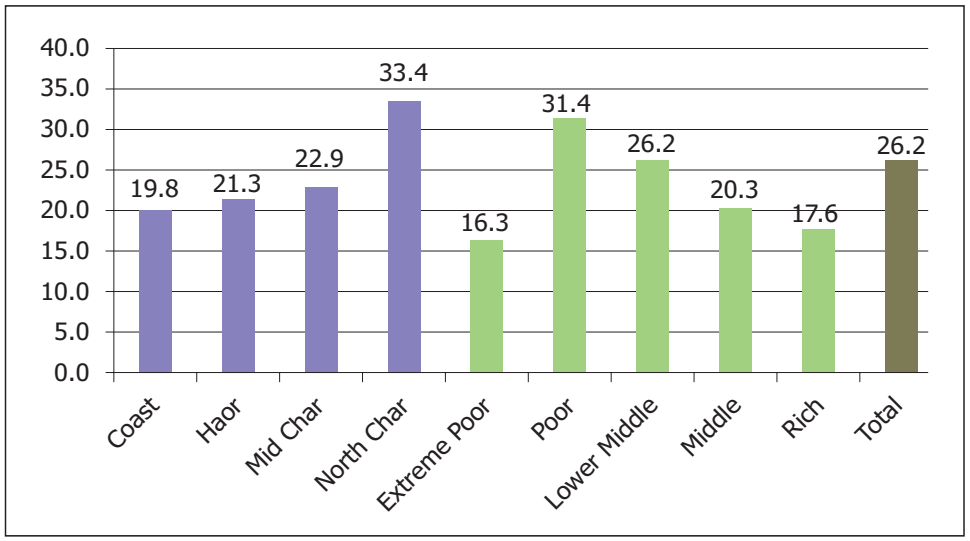
Table 78: Indicators of domestic violence, by region

Domestic Violence Indicators	Region				Overall
	Coast	Haor	Mid Char	North Char	
Percent of women responding "yes" to the question: "Did any female member of your household experience being yelled at or struck during the previous year?"					
	19.8	21.3	22.9	33.4	26.2
Nature of the yelling or striking a/					
Physical	2.9	4.6	9.8	3.3	4.7
Verbal	29.9	57.5	50.5	50.6	52.2
Both physical and verbal	67.1	37.8	39.7	46.0	43.1
Frequency of incidences of yelling or striking (in last year) a/					
One time only	10.5	7.6	8.4	6.4	7.2
Several times	69.0	74.2	74.6	77.1	75.5
Often	20.5	18.2	17.0	16.5	17.2
Percent of household for which assistance was sought after incidents of yelling or striking a/	14.9	9.8	23.8	11.0	12.7

a/ Respondents are those that answered "yes" to the question on any female member of the household being yelled at or struck.

Note: The number of observations for the first indicator if 7,618-8,137, depending on the situation. That for the second indicator is 7,612. That for the 3rd, 4th and 5th indicators is 1,890. That for the last indicator is 284.

Figure 34: Percent of households in which women report that a female member of the household was yelled at or struck during the previous year, by region and well-being category



16.0 MATERNAL AND CHILD HEALTH AND NUTRITION

16.1 Child malnutrition

Reducing malnutrition among young children is a key goal of the SHOUHARDO II project, and measuring changes in it will be a prime focus for evaluating the impact of the project. As part of the baseline survey, data were collected on the height, weight and age of all children under five years, allowing calculation of three measures of malnutrition. The first, stunting, is a result of inadequate growth of the fetus and child and results in a failure to achieve expected length compared to a healthy, well-nourished child of the same age. It is an indicator of past growth failure and associated with long-term factors including chronic insufficient protein and energy intake, frequent infection, and sustained inappropriate feeding practices. It is calculated by first combining height and age data to compute a child's height-for-age z-score. If the z-score is less than -2 standard deviations below the median of an adequately nourished reference population, the child is considered to be stunted. The second measure of malnutrition is wasting. Calculated in the same manner as stunting, it identifies children suffering from current or acute undernutrition resulting from failure to gain weight or actual weight loss. The third measure is underweight, which identifies children who are of inadequate weight compared to a healthy, well-nourished child of the same age. It is a composite measure of stunting and wasting, reflecting both past (chronic) and/or acute undernutrition.[19]

The reference population for calculating the malnutrition prevalences reported here is that used to develop the World Health Organization 2006 child growth standards. These standards are based on a multi-country study of children with optimal infant and child feeding practices and living in households with minimal health, environmental, and economic constraints on growth.[20] Note that stunting and wasting prevalences are only calculated for children 6 months or older following USAID indicator guidelines.

Table 79 presents stunting, wasting and underweight prevalences by region. The results are given both for children under five and children under two because while the SHOUHARDO II project's key outcome indicators are for children under five, an important target group for MCHN interventions is children under two. It is important to keep in mind that the sample size calculations for the baseline survey were based on the need to have a sufficient number of children under five years, not under two. Thus the sample sizes for under twos are small for the regional breakdowns, leading to imprecise estimates as indicated by wide confidence intervals.

19 See Cogill, Bruce (2003). *Anthropometric indicators measurement guide.* Food and Nutrition Technical Assistance Project, Academy for Educational Development, Washington, D.C.

20 de Onis, Mercedes, Cutberto Garza, Cesar G. Victora, Maharaj K. Bhan, and Kaare R. Norum, guest editors (2004). The WHO Multicentre Growth Reference Study (MGRS): Rationale, planning, and implementation. Food and Nutrition Bulletin 25(supplement 1):S3-S84.

Table 79: Percent of children stunted, wasted, and underweight, by region

Indicator (percentages)	Region				Total
	Coast	Haor	Mid Char	North Char	
Children under 2 years					
Stunting (6-23m)	42.3	56.7	44.3	52.8	52.9
	(35.7 - 48.9)	(48.4 - 64.9)	(33.5 - 55.1)	(43.4 - 62.2)	(47.7 - 58.0)
Wasting (6-23m)	19.3	17.8	14.9	14.3	16.2
	(13.0 - 25.6)	(10.5 - 25.0)	(7.6 - 22.2)	(9.7 - 18.9)	(12.4 - 19.9)
Underweight (0-23m)	32.7	40.1	22.9	34.5	35.3
	(27.4 - 38.0)	(31.4 - 48.9)	(16.2 - 29.6)	(26.8 - 42.2)	(30.3 - 40.3)
Children under 5 years					
Stunting among (6-59m)	56.8	63.5	50.2	57.4	58.6
	(53.4 - 60.1)	(58.1 - 69.0)	(45.1 - 55.4)	(52.4 - 62.4)	(55.6 - 61.6)
Wasting among (6-59m)	16.2	17.5	11.7	12.5	14.5
	(12.8 - 19.5)	(12.3 - 22.7)	(8.6 - 14.8)	(9.2 - 15.7)	(12.1 - 17.0)
Underweight among (0-59m)	41.1	44.4	34.0	39.8	40.8
	(37.7 - 44.8)	(37.9 - 50.8)	(30.0 - 38.0)	(34.3 - 45.2)	(37.4 - 44.3)

Notes: 95% confidence intervals are given in parentheses.

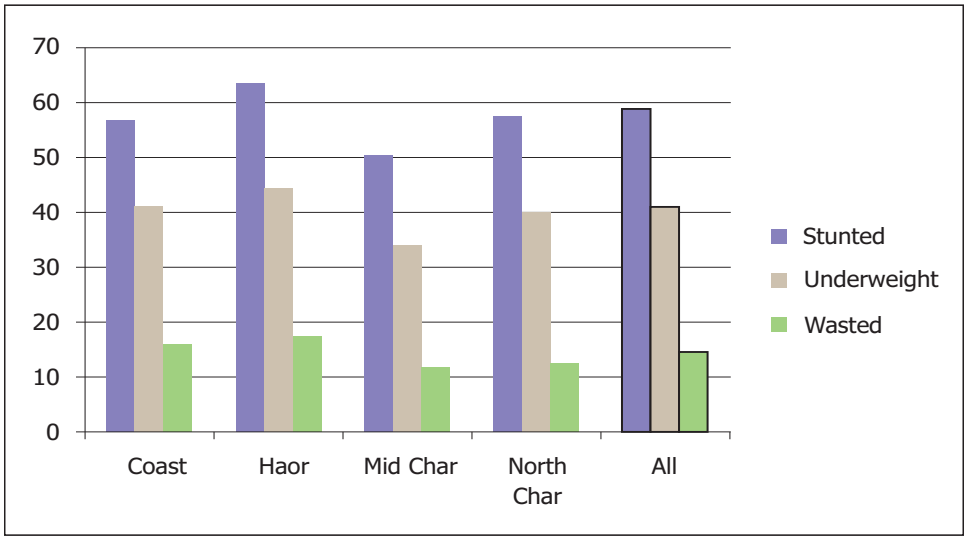
The number of observations for the "total" values for each age range are: 0-23 months: 1,265; 6-23m: 860; 0-59m: 3,417; 6-59m: 2,807. The ranges for the regional values are: 0-23m: 240-406; 6-23m: 164-267; 0-59m: 756-1,024; 6-59m: 652-817.

The prevalence of stunting among children under two in the SHOUHARDO II project's operational area is 52.9 percent. This is slightly lower than that found for the SHOUHARDO I project's baseline (56.6 percent)[21]. The prevalence of underweight is much lower, at 35.3 percent, and that of wasting is 16.2 percent. Haor tends to have higher malnutrition prevalences among these very young children than the other regions, although Coast has the highest wasting prevalence.

For children under five, the rates of stunting, underweight and wasting are 58.6, 40.8 and 14.5 percent, respectively. While the stunting prevalence is not completely comparable to that reported for Bangladesh as a whole, the latter which is for 0-59 month olds, it is notably higher: the national prevalence is 43.2. The underweight prevalence nationally is almost identical to that found in the project area: 41 percent. The national wasting prevalence (17.4 percent) is higher than that found for the project area. Note, however, that wasting prevalences are subject to seasonality, and the prevalences are thus not comparable. As illustrated in figure 35, for this broader age group, Haor has the highest prevalences of all three measures of malnutrition, and Mid Char has the lowest.

21 This percent differs from that reported in the baseline report itself because malnutrition prevalences for that report were calculated on the basis of the old NCHS growth standards and those presented here are based on the new 2006 WHO growth standards.

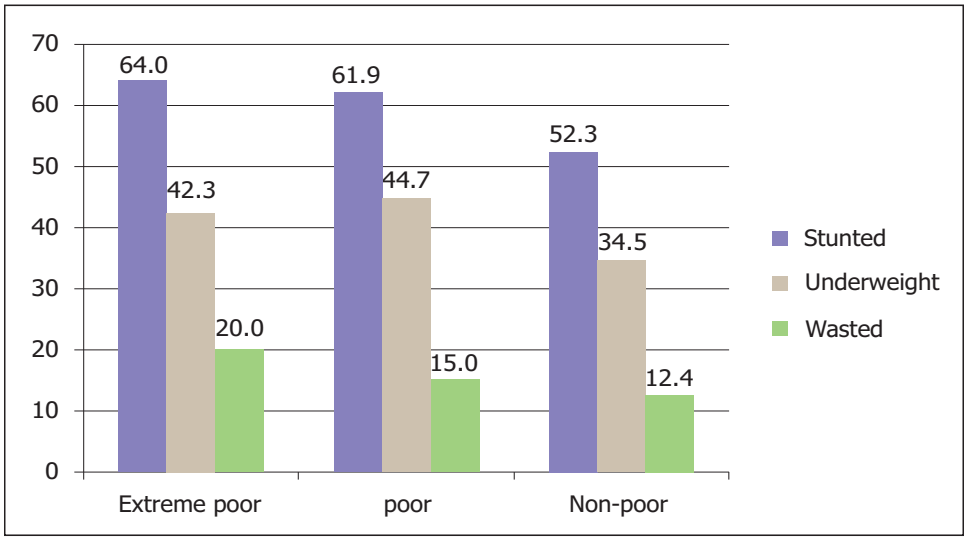
Figure 35: Percent of children under five stunted, wasted, and underweight, by region



Note: See previous table for number of observations.

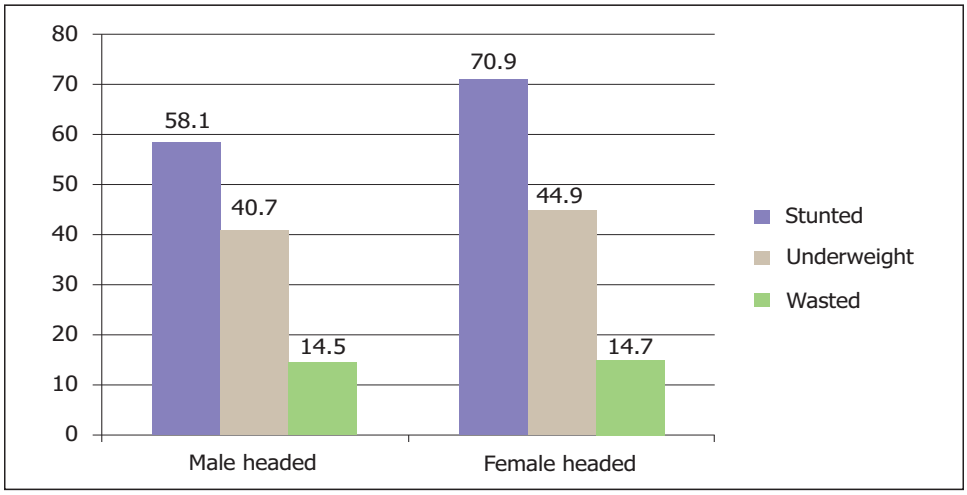
Figure 36 shows that child malnutrition is strongly related to households' economic status. For stunting and underweight the prevalences differ little between extreme poor and poor households but are far lower for non-poor households (that is, lower middle, middle and rich).[22] Wasting declines precipitously across the well-being categories, starting at 20 percent among the extreme poor, falling to 15 percent among the poor, and then to 12.4 percent among the non-poor. Prevalences of stunting and underweight are higher for children living in female headed households than male headed households (see figure 37). This can be partially explained by the fact that female headed households are concentrated in the poorer economic status groups.

Figure 36: Percent of children under five stunted, wasted, and underweight, by well-being category



22 For the analysis of the MCHN indicators the households in the three "non-poor" well-being categories area combined as the sample sizes within each of the three non-poor categories is too small for a finer breakdown.

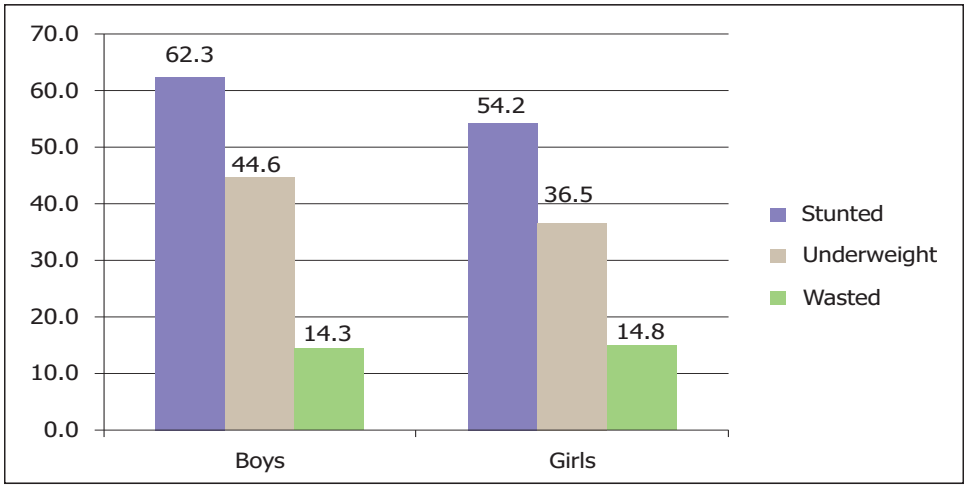
Figure 37: Percent of children under five stunted, wasted, and underweight, by gender of household head



Note: The number of observations for the stunted and underweight estimates (for 6-59 month olds) is 2,807. That for the underweight estimates (0-59 month olds) is 3,417.

The stunting and underweight prevalences of boys are substantially higher than those of girls (see figure 38). Previous surveys in Bangladesh confirm that boys do tend to have somewhat higher prevalences than girls in the country.[23] The large difference seen in the baseline sample is unusual, however. The stunting prevalence is 62.3 percent for boys compared to 54.2 percent for girls. This difference is partly due to the fact that stunting increases with age, and the average age of the boys in the sample is somewhat higher than the average age for girls, 30.5 months versus 28.2.[24] However, as illustrated in figure 39, the boy-girl difference is apparent at all months of age ranging from approximately 15 to 45 months. Thus is it not only this average age difference that is driving the differences in malnutrition rates. Boys appear to have particularly higher stunting rates than girls in the 20 to 30 month range.

Figure 38: Percent of children under five stunted, wasted, and underweight, by sex



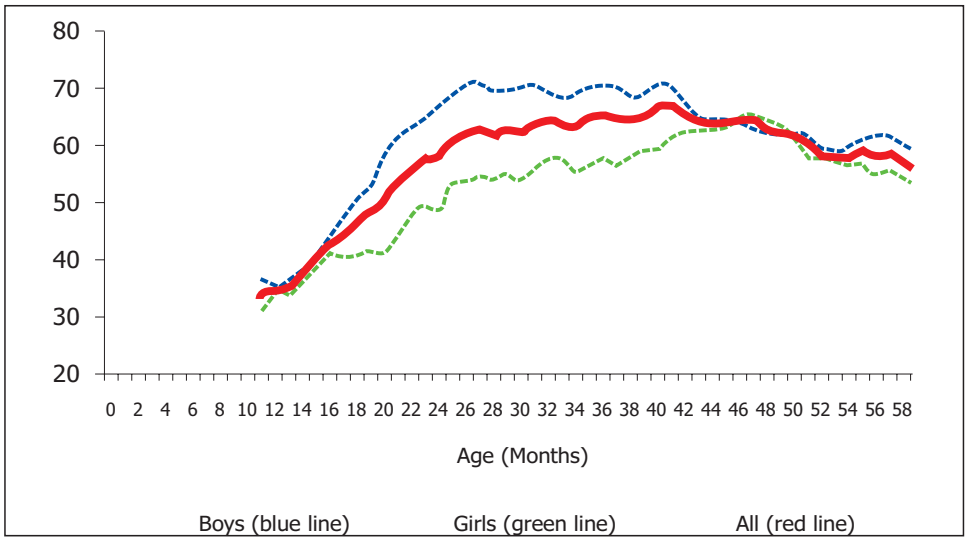
Note: The number of observations for the stunted and underweight estimates (for 6-59 month olds) is 2,807. That for the underweight estimates (0-59 month olds) is 3,417.

23 See for example the prevalences derived from the SHOUHARDO I project's baseline and endline surveys and country-wide Demographic and Health Surveys.

24 When this age difference is corrected for by applying age-based sampling weights such that the gender-specific distributions are uniform, there is very little change in the stunting prevalences for boys and girls.

Figure 39 also illustrates the typical steep increase in stunting that occurs after children reach 1 year of age. One of the main goals of the SHOUHARDO project is to prevent this increase from occurring.

Figure 39: Prevalence of stunting among 12-60 month olds, by month of age and sex



Note: Lines are smoothed using a 12-period moving average.

16.2 Child feeding practices

Infant and young child feeding practices have a direct impact on their nutritional status and, ultimately, their survival. As part of the baseline survey, data were collected on indicators of several feeding practices that are known to be beneficial for the health and nutrition of young children. The first, exclusive breastfeeding among children under 6 years old, is important because it ensures adequate growth in this age group, confers immunity, and reduces the risk of infection.[25] The next three indicators capture key aspects of the quality of complementary feeding of children in the 6-23 month age range. They are: whether the child has a minimum acceptable dietary diversity, an indicator of dietary quality, a minimum acceptable meal frequency for solid, semi-solid or soft foods, and a minimal acceptable diet. The latter takes into account both dietary quality and meal frequency.[26] The last two child feeding indicators looked at in this section are whether children receive iron and Vitamin A supplements.

The minimum dietary diversity indicator identifies whether a child has consumed at least four foods from the following seven food groups in the last 24 hours:

- Grains, roots and tubers
- Legumes and nuts
- Dairy products (milk, yogurt and cheese)
- Flesh foods (meat, fish, poultry and liver/organ meats)
- Eggs
- Vitamin-A rich fruits and vegetables
- Other fruits and vegetables.

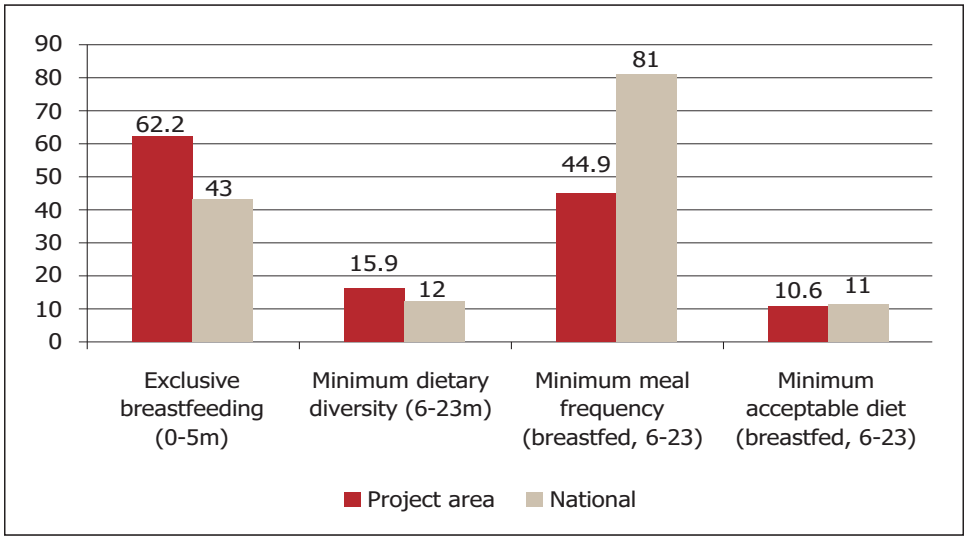
25 Smith, Lisa C., Usha Ramakrishnan, Aida Ndiaye, Lawrence Haddad, and Reynaldo Martorell (2003). *The importance of women's status for child nutrition in developing countries.* IFPRI Research Report #131. International Food Policy Research Institute, Washington, D.C.

26 The definitions and calculation methods for these first four indicators are given in WHO (2008). *Indicators for assessing infant and young child feeding practices. Part I: Definitions.* World Health Organization, Geneva. and WHO (2008). *Indicators for assessing infant and young child feeding practices. Part II: Measurement.* World Health Organization, Geneva,

The minimum meal frequency indicator focuses in on breastfed children (96% of children in the project's operational area), looking at meal frequency for two age groups: 6-8 month olds, and 9-23 month olds. A minimum acceptable meal frequency for 6-8 month olds is two times; that for 9-23 month olds is three times. A child is considered to have a "minimum acceptable diet" if it has both a minimum dietary diversity and a minimum meal frequency.

Figure 40 reports on the first four indicators, comparing them to their values for Bangladesh as a whole. Note that due to insufficient sample size the indicators could not be broken down by region. Sixty-two percent of children under six months in the project's operational area are exclusively breastfed, compared to 43 percent nationally.[27] The higher percent in the project's area may be a reflection of women's low status, which tends to be associated with higher rates of exclusive breastfeeding in South Asia.[28] It may also be due to the exceptional high poverty in the area. The percent of 6-23 month olds with minimum dietary diversity is 15.9, which is slightly higher than the national average. By contrast, the minimum meal frequency prevalence is far lower in the project's operational area (45%) than nation-wide (81%). Nevertheless, the percent of children with a minimum acceptable diet is the same as it is nationally: 11 percent.

Figure 40: Breastfeeding and complementary feeding indicators, project area compared to national (percent)



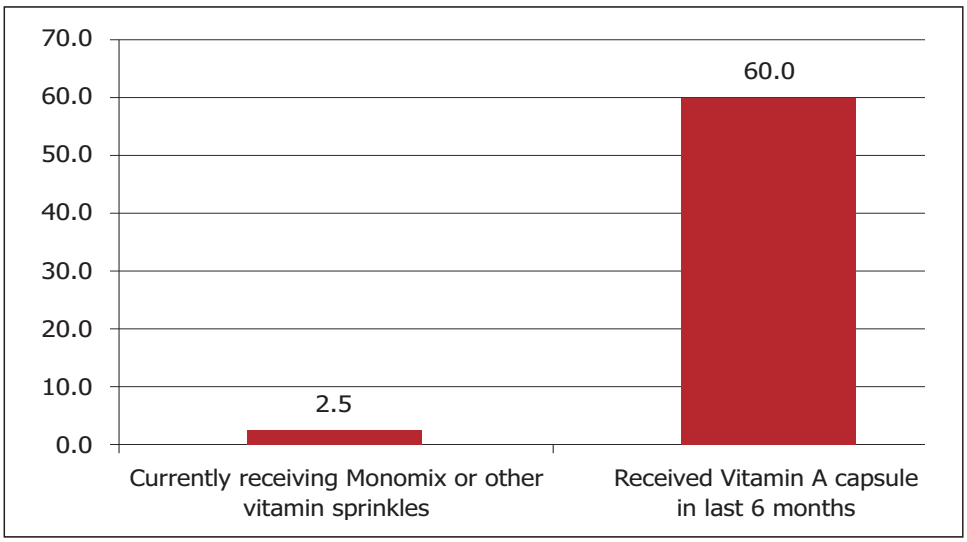
Note: The number of observations for the project area indicators are: exclusive breastfeeding: 325; minimum dietary diversity: 986; minimum meal frequency and minimum acceptable diet: 793.

With respect to supplementation, Figure 41 shows that consumption of "Monomix" (iron) or other vitamin sprinkles among children 6-23 months in the project's area is very rare, with only 2.5 percent of children doing so. By contrast, Vitamin A supplementation is fairly high, at 60 percent of children.

27 National statistics for the indicators are found in WHO (2008). *Indicators for assessing infant and young child feeding practices. Part III: Country profiles.* World Health Organization, Geneva.

28 Smith, Lisa C., Usha Ramakrishnan, Aida Ndiaye, Lawrence Haddad, and Reynaldo Martorell (2003). *The importance of women's status for child nutrition in developing countries.* IFPRI Research Report #131. International Food Policy Research Institute, Washington, D.C.

Figure 41: Supplementation among children 6-23 months old (percent)



Note: The number of observations are 987 and 986 for the first and second indicators, respectively.

On a final note, the prevalence of exclusive breastfeeding varies little for boys and girls (62.1 versus 62.3%). However, the quality of complementary feeding is slightly better for boys: the percent of boys with a minimum acceptable diet is 11.6 while that for girls is 9.5. These data suggest that it is not because boys are given lower quality care in the area of feeding that they have higher malnutrition prevalences than girls.

16.3 Child immunization

Immunization of children against the six major vaccine-preventable diseases—tuberculosis, diphtheria, pertussis, tetanus, poliomyelitis, and measles—is key to reducing child illness and mortality. Children are considered to have been fully vaccinated against these diseases if have received one dose of BCG vaccination, three doses of DPT and polio vaccines, and one dose of measles vaccine. The World Health Organization recommends that full vaccination occur by the time a child is one year old.[29]

The percent of children 12-23 months who had received the vaccinations at any time before the survey, as well as the percent who had received them by 12 months of age, are presented in table 80. National prevalences from the 2007 Demographic and Health Survey are also given for comparison (only available for the "at any time before the survey" indicator). A full 97 percent of children had received a BCG vaccination at some time before the survey, and the large majority had also received their first dose of DPT and polio vaccines. Coverage of these vaccines drops off for the second and third doses, falling to 85 percent for the third dose of DPT and only 75 percent for the third dose of polio. Seventy-eight percent of children had received the measles vaccine. Only 63 percent of children 12-23 months had received all doses of all vaccinations by their second year. This percent is substantially lower than that nation-wide in Bangladesh, which is 82. The vaccine with the lowest coverage compared to nationally is the third dose of polio.

29 NIPORT (National Institute of Population Research and Training), Mitra and Associates, and Macro International (2009). *Bangladesh Demographic and Health Survey 2007.* National Institute of Population Research and Training, Mitra and Associates, and Macro International, Dhaka, Bangladesh and Calverton, Maryland, USA.

Table 80: Percent of children 12-23 months who receive recommended vaccinations

	Vaccinated at any time before survey		Vaccinated by 12 months of age (only children with available vaccination cards) b/
	SHOUHARDO II area	All Bangladesh a/	SHOUHARDO II area
BCG	96.9	96.8	96.6
DPT 1	95.9	96.8	94.3
DPT 2	93.3	94.4	92.7
DPT 3	85.4	91.1	87.3
Polio 0	42.7	--	
Polio 1	93.7	97.7	95.0
Polio 2	90.5	94.3	92.7
Polio 3	75.4	90.8	87.8
Measles	77.9	83.1	66.9
All vaccinations	62.6	81.9	59.9

a/ From the Bangladesh Demographic Health Survey 2007.
b/ The percent of children with vaccination cards available at the time of interview is 71.3.

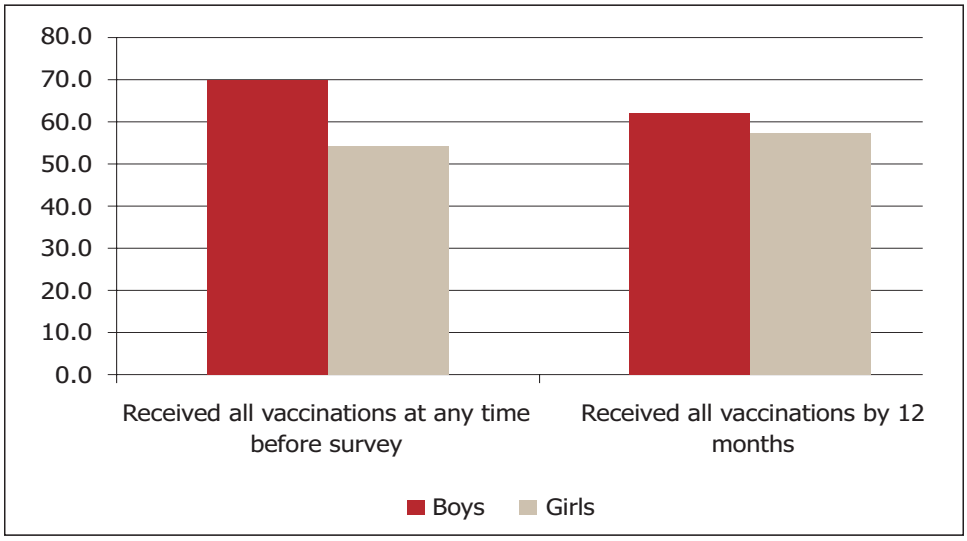
Notes: The total number of observations for the indicator "percent vaccinated at any time before survey" is: 689. That for vaccinations by 12 months is: 464.

Only the children with available vaccination cards on which the dates of all eight vaccinations had been recorded were used to evaluate the percent of children who had received vaccinations by the time of their first birthday.[30] Overall, 60 percent of these children had received all vaccinations before their first birthday, with the lowest coverage rate being for measles, followed by the third doses of polio and DPT.

In Section 16.1 above it was found the malnutrition prevalences are higher for boys than girls in the SHOUHARDO II project's area. As can be seen in Figure 42, vaccination prevalences are *higher* for boys than girls. Thus, it is most likely not a result of any greater neglect of boys than girls when it comes to preventative treatment, such as vaccinations, that more boys are malnourished than girls.

30 These children represent 71 percent of all sample children 12-23 months old.

Figure 42: Percent of children 12-23 months who have received all basic recommended vaccinations, by sex



Note: The total number of observations for the indicator "percent vaccinated at any time before survey" is: 689. That for vaccinations by 12 months is: 464 (the latter is only calculated for children with a vaccination card available at the time of the survey).

16.4 Mothers' hygiene practices

Proper hand washing practices and disposal of young children's feces are key behaviors for preventing diarrheal disease among children. For practical reasons, to gather information on hygiene practices the baseline survey relied on mother's recall or attitudes, and did not use direct observation of behaviors.

Table 81 provides information on hand washing attitudes and habits of households in the project's operational area, starting with the percent who feel that it is important to wash their hands at five critical times.[31] When asked (unprompted) to cite when it was important to wash their hands, 93 percent of mothers said 'before eating', and 77 percent said 'after defecation/urination'. These were the top two out of the five behaviors that were mentioned, and there was only modest variation among the four regions. Other important behaviors were mentioned much less frequently. Only 39 percent cited that it was important to wash hands after cleaning or changing a child's diapers. Only 36 percent cited 'before cooking or preparing food', and only 27 percent 'before breastfeeding or feeding a child'.

31 The methods for calculating the indicators of hygiene attitudes and practices used in the section are from Hernandez, Orlando and Scott Tobias (2010). *Access and behavioral outcome indicators for water, sanitation, and hygiene*. USAID Hygiene Improvement Project, Academy for Educational Development.

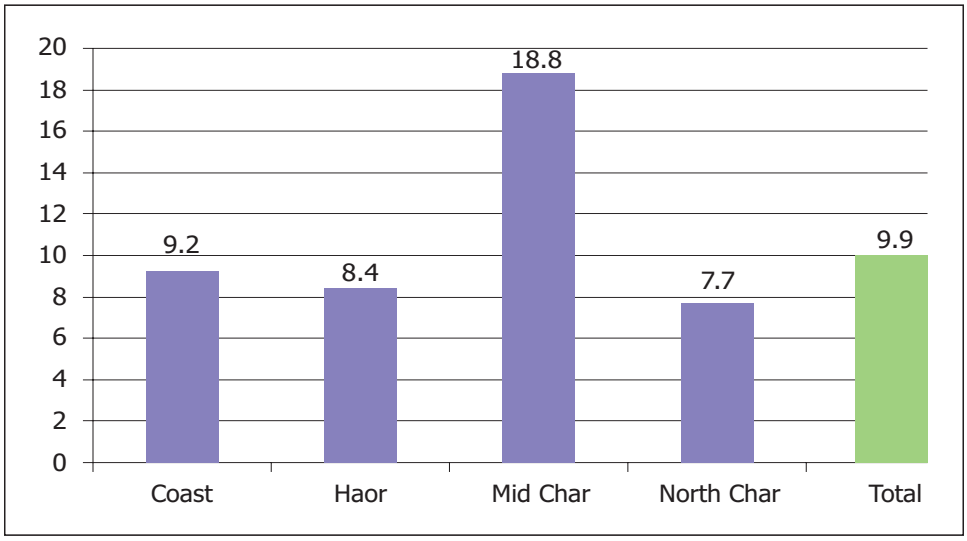
Table 81: Indicators of household members' hand washing habits, by region (percent)

Indicator	Region				Total
	Coast	Haor	Mid Char	North Char	
Percent of mothers who feel it is important to wash their hands at various critical times (N=3,695)					
Before eating	92.2	92.0	97.6	93.2	93.3
Before breastfeeding or feeding a child	30.2	25.9	41.4	20.2	26.7
Before cooking or preparing food	35.1	39.4	40.7	30.2	36.2
After defecation/urination	73.2	74.6	78.1	80.2	77.1
After cleaning a child that has defectated/ changing a child's diaper	38.6	39.5	46.6	35.0	39.0
Percent who feel it is important to wash hands at all 5 critical times (N=3,695)	9.2	8.4	18.8	7.7	9.9
Location at which most household members wash their hands (N=3,682)					
Inside/within 10 paces of the toilet facility	11.3	6.2	19.6	6.6	8.8
Inside/within 10 paces of the kitchen	15.4	15.4	19.8	11.6	14.8
Elsewhere in home or yard	13.6	17.2	17.8	35.5	23.6
Outside yard	7.1	13.2	11.9	13.9	12.9
No specific place	52.6	48.0	30.9	32.4	39.9
Percent of households for which the location has water and a cleansing agent a/ (N=2,081)					
Water	73.1	80.4	79.8	86.3	82.3
Cleansing agent (soap, detergent, ash or clay)	58.0	46.2	55.8	47.3	48.9
Percent of households using different types of cleansing agent					
Bar soap	43.2	21.9	22.5	31.6	26.7
Liquid soap	3.2	0.5	2.9	0.3	1.0
Detergent	0.6	0.7	0.6	0.0	0.4
Ash or clay	16.7	25.3	31.9	19.7	24.0

a/ Only calculated for households with a specified hand washing location.

Overall, only 10 percent of mothers of young children feel it is important to wash their hands at all five critical times. Women in the Mid Char region were almost twice as likely to name all five, however (see figure 43).

Figure 43: Percent of mothers of children under 5 who feel that it is important to wash hands at five critical times, by region



Note: The number of observations is 3,695.

Turning to the place where household members wash their hands, a full 40 percent of respondents indicated that in their house hand washing took place in 'in no specific place'. This percent rises to near half of all households in Coast and Haor. Among households that do have a specific place for hand washing, only 9 percent cited that is inside or close to the toilet facility, and only 15 percent that it is inside or near the kitchen. While 12 percent of households with a specific place for hand washing do so outside of their yard, the most common place is "elsewhere in home or yard".

Hygienic hand washing simply cannot take place without water, and among households with a hand washing location only 80 percent had water, falling to 73 percent in the Coast region. It is even less common for soap or other cleansing agents to be present at hand washing stations. Just under half of washing locations have any type of cleansing agent. Bar soap is the most common cleansing agent used followed by ash or clay. Liquid soap and detergent are rarely used.

Turning to disposal of children's feces, *where* young children are allowed to defecate is an important indicator of the quality of household hygiene practices. When children are allowed to defecate anywhere in or near their homes the chance of transmission of diseases to other children and adults increases.[32] Focusing in on children under three years old, Table 82 reports on the place of the child's last defecation. The most common place of defecation is indeed in the child's house or yard. This unhygienic practice was undertaken by over 50 percent of children. Another 18 percent defecated in her or his clothes and a further 19 percent went outside of the house/yard area. Only 11 percent of children defecated in either a potty or the household's latrine. Diapers, whether washable or disposable, are not commonly used in this population. Together the data suggest that unsanitary and unhygienic practices related to where children defecate are widespread. These practices are likely contributing to illnesses and poor nutritional outcomes.

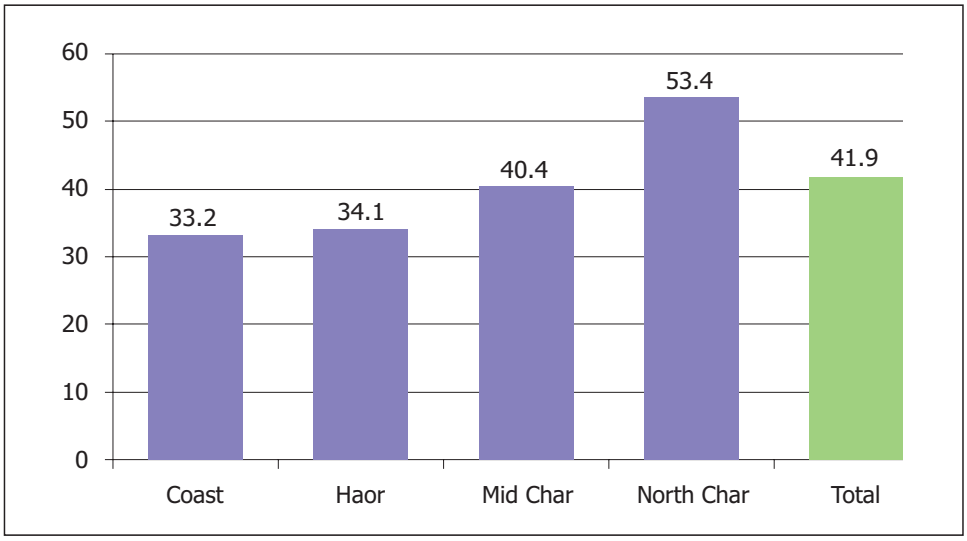
32 Hernandez, Orlando and Tobias, Scott (2010). *Access and behavioral outcomes indicators for water, sanitation, and hygiene*. USAID Hygiene Improvement Project, Academy for Educational Development.

Table 82: Indicators of disposal of feces of children under three, by region (percent)

Indicator	Region				Total
	Coast	Haor	Mid Char	North Char	
Place of child's last defecation (N=2,100)					
Used potty	2.3	2.8	4.6	2.1	2.8
Used latrine	6.6	10.4	11.8	6.3	9.0
Used washable diaper	0.3	0.1	1.5	1.2	0.7
Used disposable diaper	0.4	0.4	0.0	0.1	0.2
Went in his/her clothes	22.2	20.0	20.8	14.6	18.3
Went in house/yard	55.1	51.0	49.5	49.6	50.5
Went outside of house/yard	13.1	15.3	11.8	26.2	18.5
Place of disposal of child's feces (if latrine not used to defecate) (N=1,904)					
Dropped feces into toilet facility/latrine	15.3	10.8	23	26.2	18.4
Buried feces	7.2	9.8	7.5	5.9	7.9
Put feces into container for trash	0.0	0.0	0.0	0.0	0.0
Disposed of feces in yard	11.3	4.1	5	6.3	5.4
Disposed of feces in sink or tub	0.1	0.1	0.1	0	0.1
Feces thrown into waterway	5.2	8.9	9.8	3.4	6.9
Feces washed or rinsed away	22.3	17.5	21.8	15.6	17.7
Left at same place where child defecated	5.6	13.3	6.5	8.3	10.1
Threw it away to bush/outside of house	33	35.5	26.2	34.2	33.6
If "feces washed or rinsed away", where waste water disposed (N=311)					
Dropped into toilet facility/latrine	9.0	14.0	5.4	15.5	12.7
Put into container for trash	2.0	0.0	9.8	0.0	1.8
In yard	7.1	0.5	1.0	0.5	1.0
Outside of yard	47.1	33.6	32.6	37.3	35.5
Into sink or tub	0.0	0.0	0.0	6.3	1.9
Thrown into waterway	34.8	51.9	51.2	40.4	47.1
Percent of children whose feces are disposed of safely (N=1,860)	33.2	34.1	40.4	53.4	41.9

When it comes to disposal of children's feces, mothers commonly either wash or rinse it away (27%) or place it in a toilet facility/latrine (28%). Other less common practices include burying the feces (12%), throwing it into a waterway (10%), or disposing of it in the yard (8%). For those that wash or rinse it away, almost half do so into a waterway, while another 36 percent do so outside the yard. A summary measure of the degree to which disposal of children's feces is hygienic is the percent of children less than three years of age whose caretaker safely disposed of their stools after their last defecation. This is defined as defecating or disposing of feces in a latrine or toilet. As can be seen in figure 44, only 41.9 percent of caretakers dispose of their young children's feces safely. The percent ranges from a low of 33 in the Coast region to a high of 53 in North Char. Note that the safe disposal prevalence is slightly higher for boys (42.8 percent) than girls (41.0).

Figure 44: Percent of children under three whose feces are disposed of safely, by region



Note: The number of observations is 1,860.

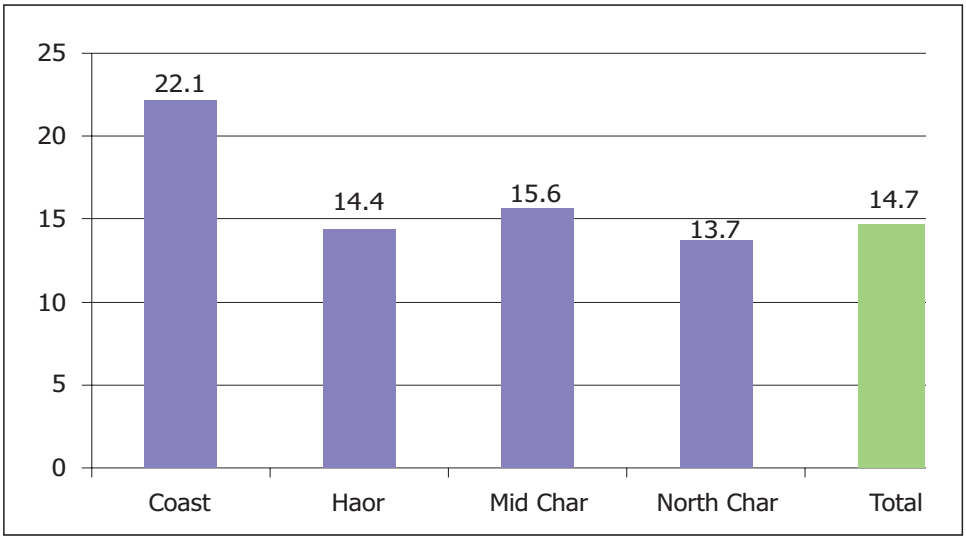
16.5 Diarrhea prevalence and care for children with diarrhea

Diarrhea is one of the leading causes of childhood morbidity and mortality in developing countries. Improved feeding and hygiene practices can greatly mitigate this risk provided mothers receive the knowledge and training to facilitate behavior change. In Bangladesh diarrhea is most widespread among 6-23 months old due to increased exposure to germs and bacteria that come with the introduction of solid and semi-solid foods, combined with weaning, greater mobility of the child, and a nascent immune system.[33]

Figure 45 shows the prevalence of diarrhea among children 6-23 months in the two weeks preceding the SHOUHARDO II baseline survey. It is important to note that diarrhea tends to be a seasonal affliction, and these data reflect the diarrhea situation specific to the period of data collection (November to December 2010). The overall prevalence is 14.7 percent, which is just a little higher than nationally (13.9 percent among 6-11 month olds and 14.2 percent among 12-23 month olds).[34] More than one in five children from the Coastal region suffered from diarrhea in the preceding two weeks, markedly higher than other regions. This higher prevalence is no doubt related to the lower percent of children under three whose feces are disposed of safely in the region (see previous section). It may also be related to the fact that less than a quarter of households in the region have access to an improved sanitation facility and that a good percent (26%) use hanging/open latrines.

33 Niport et al., Ibid.
34 Niport et al., Ibid.

Figure 45: Percent of children 6-23 months with diarrhea in the last two weeks, by region



Note: The number of observations is 1,004.

The diarrhea prevalence for boys is 10.1 percent higher than that for girls (15.4 versus 13.9 percent). Thus, illness in the form of infectious disease may be one factor driving the higher malnutrition prevalences for boys.

With respect to care for children during diarrhea, virtually no children received an increased amount of fluids while afflicted with diarrhea (table 83). Increased fluid intake is critical to counteract the deadly dehydration that can occur with serious episodes of diarrhea. Children's caregivers are also not uniformly ensuring that their children continue to eat normal amounts of food during diarrhea. However 93 percent of children who are breastfed continue to receive breast milk during diarrhea.

Beyond fluids and food, most children receive some kind of treatment when they have diarrhea, and many receive the recommended oral rehydration therapy. A full 60 percent received packet (commercial) saline; fewer received home-made solutions. Another common treatment is "pills/capsules/syrup". It is not clear whether these treatments are appropriate or not without further information. Note that the statistics reported on diarrhea treatment are not disaggregated by region due to insufficient sample size.

Table 83: Indicators of caring practices for children 6-23 months during diarrhea

Indicator	Percent of children
Change in amount to drink given to children with diarrhea (N=170)	
Much less	26.8
Some what less	26.5
About the same	46.7
More	0.0
Change in amount to eat given to children with diarrhea (N=169)	
Much less	19.5
Some what less	15.6

Table 83: Indicators of caring practices for children 6-23 months during diarrhea

Indicator	Percent of children
About the same	64.9
More	0.0
Percent of breastfeeding mothers who continued to breastfeed their child during diarrhea (N=164)	92.6
Percent of children receiving various types of treatments for diarrhea (N=172)	
Did not give anything	9.2
Packet saline	59.9
Home made (sugar/salt) saline	5.3
Home made (Labon-gur) saline	12.6
Rice poser	2.3
Pill/capsule/syrup	41.7
Injection	0.3
Intravenous	0.1
Home remedies/herbal medicine/plants	0.6
Plain drinking water	11.1
Others	1.0

Note: Statistics are not presented by region due to insufficient sample size.

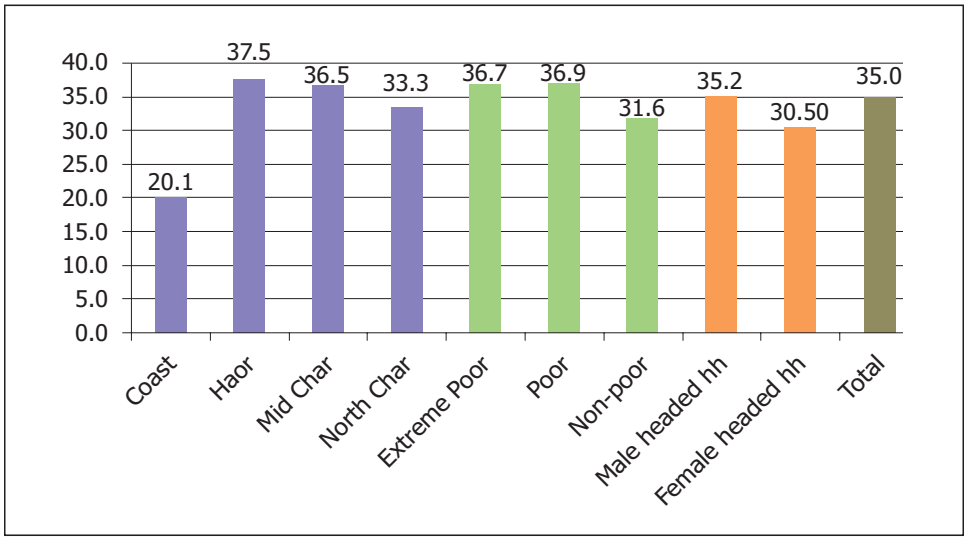
16.6 Malnutrition among mothers of children 0-59 months old

Not only is being malnourished inimical to women's own health, it can reduce the quality of care given to their children and increase the chances that their children will be born underweight.[35] As part of the baseline survey, data were collected on the weight and height of mothers of children under five. The data are used to calculate two indicators: the percent of women who are underweight, often referred to as "chronically undernourished", and the percent who are of short stature, a predictor of difficulties during pregnancy and low birth weight.[36] A woman is defined to be underweight if her body mass index (weight divided by height-squared) is less than 18.5. A woman is defined to have short stature if her height is less than 145 centimeters. Following Demographic and Health Survey protocol, only non-pregnant women and women who had not given birth in the last two months are included in the calculations.

Figure 46 reports on the percent of women who are underweight by region, well-being category, and gender of household head. Thirty-five percent of women in the SHOUHARDO II project's operational area are underweight, compared to 29.7 percent nation-wide.[37] There are strong differences across the regions in the underweight prevalence, with only 20 percent of women in the Coast region being underweight and nearly 40 percent being so in Haor. The prevalences in the other two regions are quite high as well. While there is little difference in the underweight prevalence between the "extreme poor" and "poor" groups of households, that for the "rich" group is lower (although not substantially so). The underweight prevalence is slightly lower in female than male headed households.

35 Smith et al., Ibid.
36 Niport et al., Ibid.
37 The national prevalence comes from the 2007 Demographic and Health Survey and refers to ever-married women between 15 and 49 years with children 0-5 years old, a demographic group almost identical to that of the SHOUHARDO II sample of women used for this analysis.

Figure 46: Percent of women underweight, by region and well-being category



Note: The number of observations is 3,591.

The percent of women who are of short stature is 14.9, quite close to the national prevalence (15.1). The regional pattern is similar to that of underweight, with the prevalence being lowest in Coast and highest in Haor. Unlike underweight, there is a strong correlation between short stature and well-being category. The percent of women living in extreme poor households who have short stature is 18.8. It falls to 15.5 for poor households and, further, to 13.1 for rich households. The prevalence among female headed households is higher than among male headed households.

16.7 Mothers' dietary diversity

To gain insight into the quality of mothers' diets, table 84 reports on the percent of mothers of children under five years who had consumed foods from various food groups in the 24 hours prior to the survey. Almost all women had consumed cereals, roots or tubers, that is, the starchy staples. A very high percentage had also consumed vegetables of some sort (91 percent). However, the percent consuming vitamin A –rich and nutritious dark green leafy vegetables is quite low, at 21 and 42, respectively. Further, only 66 percent of women consumed an animal protein food in the form of meats, fish and seafood, or eggs. Consumption of the other protein foods, pulses and legumes and dairy products, is also quite low. Finally, very few women consumed fruits, included vitamin A –rich fruits. Overall, the quality of women's diet is quite low in the project's operational area.

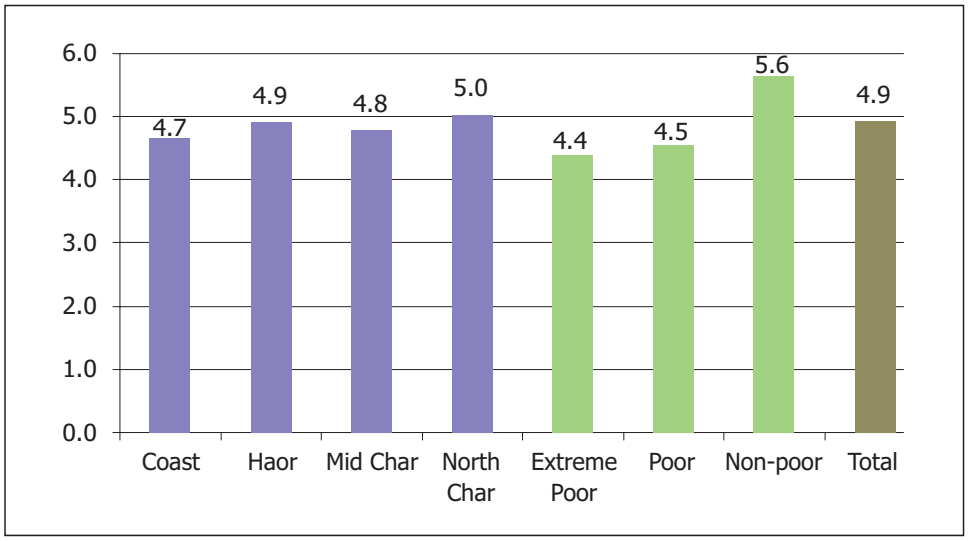
Table 84: Dietary diversity and food group consumption of mothers of 0-5 year-old children, by region (24 hour recall)

Indicator	Region				Total
	Coast	Haor	Mid Char	North Char	
Percent of women consuming foods from various food groups in the previous 24 hours					
Cereals, roots and tubers	99.0	99.4	98.3	98.6	98.9
Pulses and legumes	10.3	17.7	24.0	15.5	17.6
Dairy products	3.7	13.9	14.6	11.1	12.5
Meats, fish and seafood, and eggs	84.2	76.5	57.4	55.3	66.2
Oils and fats	71.6	73.0	66.6	72.3	71.6
Vegetables	88.7	91.0	85.7	94.3	91.2
Vitamin A -rich vegetables	13.2	13.3	28.9	27.3	20.8
Dark green leafy vegetables	33.5	38.4	37.1	50.4	42.2
Fruits	13.9	7.0	10.4	8.9	8.6
Vitamin A -rich fruits	3.3	3.5	8.0	6.2	5.2
Dietary diversity score (out of 14 food groups)	4.7	4.9	4.8	5.0	4.9

Notes: The number of observations is 3,672.

A dietary diversity score was calculated in the same manner as the household dietary diversity score presented earlier. Its mean value is 4.9. It is lowest in the Coast region and highest in North Char, though not much higher (figure 47).

Figure 47: Dietary diversity score, by region and well-being category



Notes: The number of observations is 3,672.

16.8 Caring practices for mothers during pregnancy

Receiving proper care during pregnancy, or "antenatal care", from a trained provider is important for diagnosing and treating problems that could be harmful to the health and survival of both a mother and her child. As can be seen in table 85 and illustrated in figure 48, currently just over half (51.3%) of mothers living in the SHOUHARDO II project's operational area receive any antenatal care, compared to 60.3% nationally.[38] In the North Char region this is up to 62 percent, but below 50 percent in the other three regions. For those mothers receiving any antenatal care, the average number of visits is 2.7, which is below the WHO-recommended minimum of four visits. Again, the number of visits is highest in North Char and about the same throughout the rest of the project area. Generally women are between 5 and 6 months pregnant when they first seek antenatal care, while the WHO recommends that the first visit be during the first trimester of pregnancy.

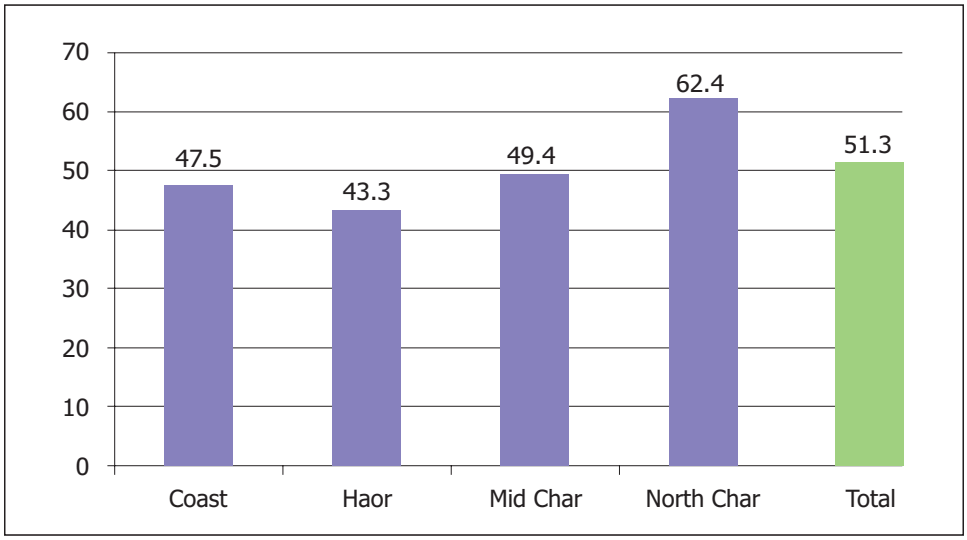
Table 85: Information on antenatal care for mothers, by region

Indicator	Region				Total
	Coast	Haor	Mid Char	North Char	
Percent of mothers receiving any antenatal care (N=3,685)	47.5	43.3	49.4	62.4	51.3
Number of antenatal care visits a/ (N=1,868)	2.4	2.4	2.3	3.2	2.7
Number of months pregnant at first visit a/ (N=1,855)	5.6	5.3	5.6	5.1	5.3
Type of provider (percent among receivers) a/ (N=1,864)					
Doctor	72.5	64.5	63.8	49.3	58.2
Nurse/midwife	18.1	5.2	4.4	14.5	9.7
Traditional birth attendent	0.4	0.0	2.2	0.3	0.5
Community health worker	8.4	29.8	29.5	34.8	30.9
Other	0.6	0.5	0.1	1.1	0.7
Place care was received a/ (N=1,868)					
Mother's home	5.0	23.1	18.2	12.9	17.1
Other home	3.5	4.1	7.7	4.8	5.0
Government hospital	54.0	35.7	35.3	39.7	38.2
Other government health facility	6.8	9.0	10.5	10.1	9.6
Private hospital or clinic	23.6	17.5	22.8	14.5	17.4
Other private health facility	4.6	5.3	3.8	15.0	9.2
Other	2.5	5.2	1.7	3.0	3.6

a/ Among those receiving any antenatal care.

38 Niport et al., Ibid.

Figure 48: Percent of mothers of children under five years receiving any antenatal care, by region



Note: The number of observations is 3,685.

The most common care provider reported is a doctor, cited by 58 percent of mothers who had sought antenatal care. Because only 35.5 percent of pregnant women in Bangladesh receive antenatal care from a *qualified* doctor,[39] it is likely that many survey respondents are referring to non-medically trained "doctors". The percent of women receiving care from a doctor is highest by far in the Coast region and lowest by far in North Char. The second most common type of provider is community health workers, from which 31 percent of women receive care. While nurses and midwives provide care to only 10 percent of the women receiving antenatal care, almost 20 percent of women in Coast region receive care from them.

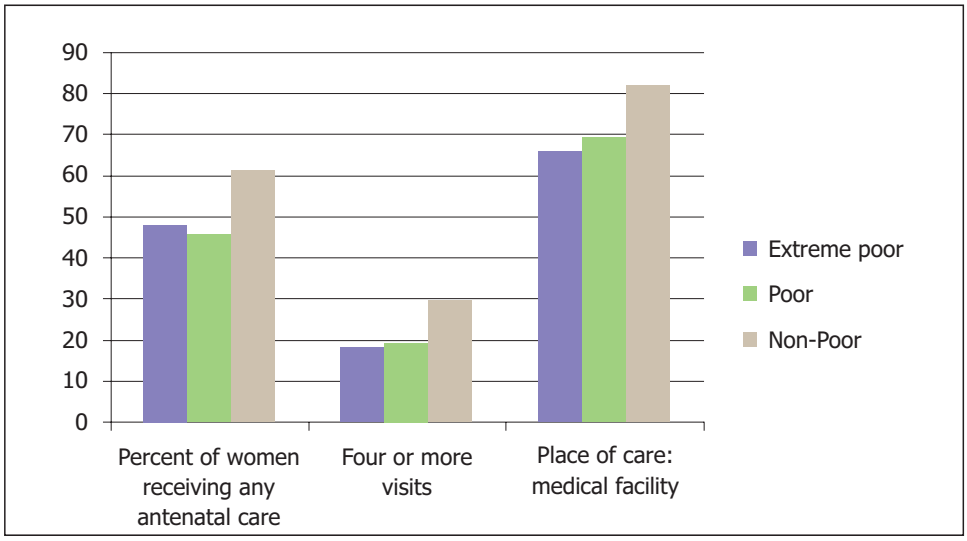
The place where antenatal care is received affects the frequency and quality of care received. The most common place of antenatal care is public facilities, whether a government hospital or other government health facility. Nearly half of all women that receive antenatal care do so from a public facility. Over a quarter of women make use of private hospitals, clinics or other types of facilities. Twenty-two percent of women receive care in their homes or other homes, compared to 12 percent nationally.[40] Receiving care in a home is highest in Haor and Mid Char, where use of public facilities is lowest.

Figure 49 looks at indicators of antenatal care by household well-being category. The percent of women receiving antenatal care is roughly the same among the extreme poor and poor, but rises for the rich, as does the percent of women having at least four antenatal care visits. Whether a woman receives care in a medical facility also increases with the economic status of her household. Overall these results suggest that economic resources are indeed a constraint to women receiving proper antenatal care. Figure 50 indicates that women living in female headed households have slightly higher rates of antenatal care (including the number of visits), than women living in male headed households. They are less likely to receive care at a medical facility, however.

39 The questionnaire for the Bangladesh Demographic and Health Surveys distinguishes between "qualified doctors" and "unqualified doctors" when asking women where they receive antenatal care (see Niport et al., Ibid).

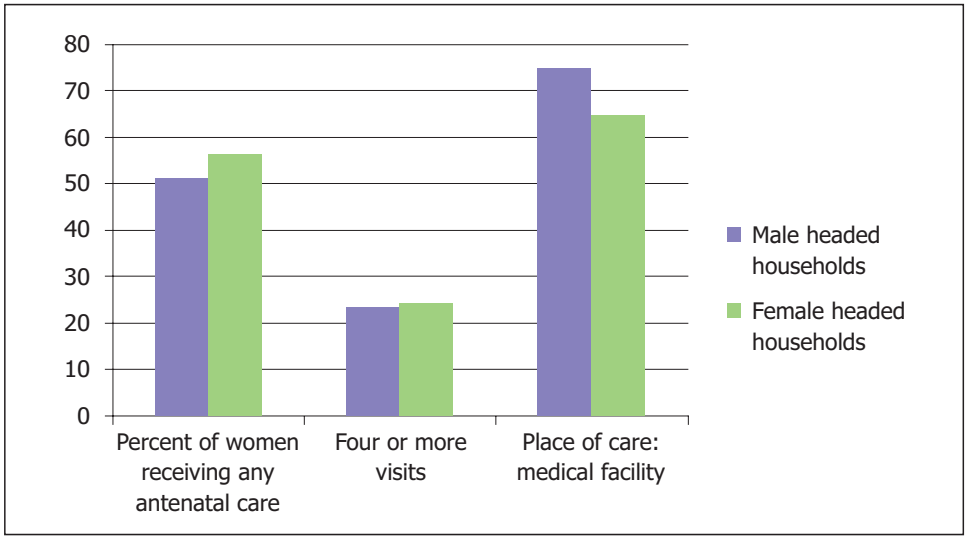
40 Niport et al., Ibid.

Figure 49: Indicators of antenatal care, by well-being category



Note: The number of observations are 3,685, 1,866 and 1,868, respectively, for the three indicators

Figure 50: Indicators of antenatal care, by gender of household head



Note: The number of observations are 3,685, 1,866 and 1,868, respectively, for the three indicators.

Mothers need more food and daytime rest than usual during pregnancy. As can be seen in Table 86, however, only a minority do so. About half of women receive the same amount of food and rest as they do when they are not pregnant. A disturbing finding is that 37 percent of women receive *less* food during pregnancy than when they are not pregnant. This number rises to a full 72 percent of women in the Coast region. In the case of day time rest, 21 percent of women report getting less rest during pregnancy than usual. It is again in the Coast region where this percent is highest, at near 40 percent of women. Clearly, the SHOUHARDO II project needs to prioritize improving practices regarding the food consumption and daytime rest of pregnant women in the Coast region.

Table 86: Information on caring practices for mothers during pregnancy, by region (percent)

Indicator	Region				Total
	Coast	Haor	Mid Char	North Char	
Food and rest during pregnancy					
Amount of food taken during pregnancy (N=3,688)					
More food	7.6	12.6	15.0	17.5	14.5
Less food	72.2	31.8	45.1	34.3	36.8
Same amount as usual	20.2	55.2	39.6	47.4	48.2
Amount of daytime rest taken during pregnancy (N=3,689)					
More rest	26.3	19.8	29.3	28.4	24.7
Less rest	38.6	16.2	24.5	21.4	20.5
Same amount as usual	35.0	63.7	45.9	49.4	54.3
Supplementation during pregnancy					
Took vitamin A within 1.5 m of delivery? (N=3,674)	24.3	34.3	25.1	47.7	37.0
Took iron/folic acid during pregancy? (N=3,677)	39.0	36.6	41.7	59.6	45.7
Number of months took iron/folic acid a/ (N=1,603)					
1-2 months	43.2	50.2	55.9	46.7	49.1
3-4 months	34.8	35.2	23.5	30.1	31.1
5-6 months	12.5	9.1	10.6	16.9	13.0
More than 6 months	9.4	5.5	10.0	6.4	6.7
Percent of pregnant and lactating women taking iron/folic acid in last 7 days (N=1,470)	14.8	10.8	16.3	23.4	16.1

a/ Among those who took any iron/folic acid during pregnancy.

One important component of antenatal care is Vitamin A and iron/folic acid supplementation. At the time of the baseline survey, only 37 percent of women were taking Vitamin A supplements during pregnancy, with supplementation being particularly low in the Coast and Mid Char regions. Forty-six percent of women receive iron/folic acid supplements during pregnancy. Note that the percent rises to 60 in North Char, which is higher than the prevalence nationally in Bangladesh (55).[41] Most women who do receive iron/folic acid supplements only take them for 1-4 months during their pregnancy. To track a key IPTT indicator, the baseline survey data were used to estimate the percent of currently pregnant or lactating women who are taking an iron/folic acid supplement, which is only 16 percent. The percent is highest in North Char (23.4) and lowest by far in Haor (10.8).

41 Niport et al., Ibid.

17.0 CONCLUSIONS

Table 87 below provides an overview of the baseline findings for the SHOUHARDO II logframe indicators.

Table 87: SHOUHARDO II indicator performance tracking table, baseline values

Indicator	Region				Total	95 percent confidence interval	Total for extreme poor and poor
	Coast	Haor	Mid Char	North Char			
SO1. Availability of and access to nutritious foods enhanced and protected for 370,000 PEP households							
Average household dietary diversity score	4.9	5.2	4.9	5.2	5.1	4.9 - 5.2	4.7
Number of months of adequate household food provisioning	5.0	5.6	6.3	5.9	5.8	5.6 - 6.0	5.1
Household monthly income per capita (taka)	667	745	756	741	742	726 - 758	630
SO2. Improved health, hygiene and nutrition status of 281,000 children under 2 years of age							
Percent of children 6-59m stunted	56.8	63.5	50.2	57.4	58.6	55.6 - 61.6	61.7
Percent of children 0-59m underweight	41.1	44.4	34.0	39.8	40.8	37.4 - 44.3	44.4
Percent of children 6-23m stunted	42.3	56.7	44.3	52.8	52.9	47.7 -58.0	55.4
Percent of children 0-23m underweight	32.7	40.1	22.9	34.5	35.3	30.3 - 40.3	37.8
Percent of children 6-23m with diarrhea	22.1	14.4	15.6	13.7	14.7	10.9 - 18.5	13.9
Percent of children 0-5m who are fed exclusively with breast milk	--	--	--	--	62.2	53.0 - 71.4	65.2
Percent of children 6-23m who receive a minimum acceptable diet	--	--	--	--	10.6	7.9 - 13.3	7.5
Percent of children immunized against 6 diseases by 12months	--	--	--	--	59.9	52.3 - 67.5	58.6
Percent of pregnant and lactating women taking iron supplements in the last 7 days	14.8	10.8	16.3	23.4	16.1	12.5 - 19.8	14.7
Percent of caregivers demonstrating proper personal hygiene behaviors							
Percent who feel it is important to wash hands at five critical times	9.2	8.4	18.8	7.7	9.9	7.6 - 12.1	9.8
Percent who dispose of children's feces safely	33.2	34.1	40.4	53.4	41.9	38.1 - 45.8	41.3
Percent of households using improved hygiene and sanitation facilities							
Percent of households with access to an improved water source	66.9	60.1	63.0	60.7	61.1	58.2 - 64.0	59.2
Percent of households with access to an improved sanitation facility	23.1	22.6	28.8	29.3	26.3	23.3 - 29.3	19.3

Table 87: SHOUHARDO II indicator performance tracking table, baseline values							
Indicator	Region				Total	95 percent confidence interval	Total for extreme poor and poor
	Coast	Haor	Mid Char	North Char			
SO3. PEP women and adolescent girls empowered in their families, communities and Union Parishad							
Percent of PEP women involved in community level decisions (e.g., salish, community initiatives)							
Percent of woman who have ever attended a Salish meeting in their village	1.9	1.6	2.6	2.8	2.3	1.57 - 2.96	2.1
Percent among those who have attended a Salish meeting who have spoken at a meeting	56	50.5	45.8	52.5	50.8	38.7 - 62.8	35.8
Percent of women who are members of any community group	12.6	12.9	28.2	26.7	20.9	18.5 - 23.2	21.0
Decision making score for women in household	2.22	2.25	2.37	2.24	2.26	2.21 - 2.32	2.28
SO4. Local elected bodies and government service providers resonsiveness and accountability to the PEP increased							
PEP households accessing safety net programs	7.8	10.3	17	19.3	14.8	13.1 - 16.5	14.5
SO5. Targeted community members and government institutions are better prepard for, mitigate, and respond to disasters and adapt to climate change							
Percent of PEP households distress selling	7.3	11	12.4	14.6	12.5	11.1 - 13.9	9.6
Taka value of distress sales	49,372	37,319	19,432	17,707	25,274	21,483 - 29,066	17,119

Annex I: Abbreviated SHOUHARDO II results framework

Goal: Transform the lives of women and men in 370,000 PEP households in 11 of the poorest and mostmarginalized districts by reducing their vulnerability to food insecurity

SO 1: "Availability of" and "access to" nutritious foods enhanced and protected for 370,000 PEP households

IR 2.1: Increased access of communities to and utilization of health and nutrition services, with special emphasis on prevention, in line with Ministry of Health protocols

OP 2.1a: PEP in target communities are aware of and utilize essential preventive and curative health and nutrition services

OP 2.1b: Referral linkages established for curative and preventive health and nutrition needs IR 2.2: Improved adoption of health, hygiene and nutrition behavior and caring practices by PEP in target communities

OP 2.2a: PEP households in target communities are aware of caring and feeding practices for pregnant and lactating women and children 0-23 months

OP 2.2b: Access to and adoption of improved hygiene and sanitation practice

OP 2.2c: Access to and use of safe drinking water

OP 2.2d: PEP in target communities benefiting from more nutritious diet

OP 2.2e: Supplemental food distributed to pregnant/lactating women, children under 2 & their families

SO 3: PEP women, are empowered to be actively engaged in initiatives to reduce food insecurity in their communities and families

IR 3.I: Increased ability of poor women and adolescent girls to influence decisions affecting their community and family's food security and well-being

OP 3.1a: EKATA and ECCD established

OP 3.1b: PEP women in target communities are active participants in WS/UP

IR3.2: Men and women are working together to reduce VAW

OP 3.2a: Support groups formed in communities focused on reducing violence against women

OP 3.2b: Strengthened linkages with medical and legal services for poor women in target communities who have been abused

SO 4: Local elected bodies and government service providers responsible for reducing food insecurity are accountable to and work proactively with communities

IR 4.1: Nation Building Departments (NBD) and local government in target communities increase their capacity to address food insecurity among the PEP, especially women

OP 4.1a: Program Advisory Coordination Committees established at National, Divisional, District, Upazila levels

IR 4.2: PEP in target communities have increased access to entitlements and services, including safety nets and natural resources

OP 4.2a: PEP in target communities are aware of the roles and responsibilities of NBDs and local government, as well as their own entitlements

OP 4.2b: PEP from target communities are active members of the local government structure

SO 5: Targeted community members, government institutions and PNGOs are better able to prepare for, mitigate, and respond to disasters and adapt to climate change

IR 5.1 Disaster mitigation and preparation strategy around disaster and climate change are developed and operational in target communities and local government

OP 5.1a: Communities and institutions have strengthened their capacity to reduce losses and food insecurity due to natural disasters and the impact of climate change

OP 5.1b: Early warning systems operating in communities

IR 5.2: National and international policy informed of the needs of the PEP, who are most vulnerable to food insecurity due to the impact of disasters and climate change

OP 5.2a: Participatory research conducted to inform the national and international policy on impact of disaster and climate change on food security

OP 5.2b: Voices of PEP are amplified at local, national and international decision-making levels regarding strategies to mitigate the impact of disaster and climate change on their lives

Annex II: Detailed asset ownership tables

Table 88: Average number of domestic assets owned, by region

Domestic assets	Region				Overall
	Coast	Haor	Mid Char	North Char	
N	2,117	2,005	2,086	2,150	8,408
Chairs	2.2	1.3	1.7	1.6	1.5
Khat	0.9	1.7	1.7	1.8	1.7
Cupboards	0.5	0.2	0.2	0.2	0.2
Tables	0.6	0.6	0.7	0.9	0.7
Showcases	0.2	0.3	0.3	0.3	0.3
Dressing tables	0.1	0.1	0.1	0.1	0.1
Watches	0.6	0.2	0.2	0.1	0.2
Clocks	0.3	0.2	0.2	0.3	0.2
Lanterns	0.3	0.4	0.5	0.4	0.4
Radios	0.1	0.1	0.1	0.1	0.1
TVs	0.1	0.1	0.1	0.1	0.1
Cassette players	0.0	0.0	0.0	0.0	0.0
Electric fans	0.3	0.2	0.2	0.2	0.2
Mobile phones	0.7	0.5	0.5	0.4	0.5

Table 89: Average number of transport/agricultural assets owned, by region

Productive assets	Region				Overall
	Coast	Haor	Mid Char	North Char	
N	2,117	2,005	2,086	2,150	8,408
Boat	.03	.04	.08	.01	.03
Motorcycle	.03	.02	.02	.03	.02
Rickshaw/van	.03	.04	.05	.07	.05
Bicycle	.04	.16	.14	.35	.22
Shallow/hand-tube well	.12	.13	.30	.43	.27
Power tiller	.01	.02	.03	.02	.02
Paddle thresher	.00	.02	.03	.02	.02
Spray machine	.02	.04	.03	.06	.05
Plough	.11	.20	.08	.16	.16
Fishing nets	.24	.20	.13	.18	.18
Pumps	.02	.05	.06	.05	.05
Hoe	.53	1.10	1.02	1.05	1.05
Axe	.31	.45	.29	.38	.39
Shovel	.55	.73	.67	.65	.68

Table 90: Average number of animal assets owned, by region

Productive assets	Region				Overall
	Coast	Haor	Mid Char	North Char	
N	2,117	2,005	2,086	2,150	8,408
Cows	.44	.95	.86	1.03	.94
Buffalo	.06	.01	.00	.00	.01
Goats	.33	.30	.36	.32	.32
Sheep	.01	.04	.07	.10	.07
Chickens	5.72	3.59	2.13	2.92	3.16
Duck	.28	1.03	.61	1.04	.93
Pigs	.01	.01	.04	.01	.02

Annex III: Detailed seasonal calendar tables

Table 91: Seasonal calendar, Coast region

Months	Apr-may	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr
Bangla month	Baishak	Jaisti	Ashar	Sravon	Bhadra	Ashin	Kartic	Agra-hayan	Payush	Magh	Falgun	Chaitra
Rainfall												
M/poor		♦♦	♦♦♦♦♦	♦♦♦♦	♦♦♦	♦						
F/poor			♦♦	♦♦♦♦♦		♦♦	♦	♦♦♦♦♦				
F/ext-poor		♦	♦♦♦♦♦	♦♦♦	♦♦♦♦	♦♦	♦♦					
M/ext-poor			♦♦♦♦♦	♦♦♦♦♦	♦♦♦♦	♦♦♦	♦♦	♦				
Flood												
M/poor		♦♦♦						♦♦♦				
F/poor	♦♦♦♦♦	♦♦♦♦	♦♦♦♦♦									
F/ext-poor		♦♦♦	♦♦♦♦♦	♦♦♦♦	♦♦							
M/ext-poor	♦♦	♦	♦♦♦♦♦	♦♦♦♦♦	♦	♦						
Drought												
M/poor	♦♦♦♦♦	♦										♦
F/poor	♦♦♦♦♦											
F/ext-poor	♦♦♦♦♦	♦♦♦									♦♦	♦♦♦♦♦
M/ext-poor	♦♦♦♦♦	♦♦♦										♦♦♦♦♦
Storm												
M/poor												
F/poor	♦	♦♦♦♦♦	♦♦♦♦♦	♦♦♦♦♦	♦♦♦	♦♦♦	♦♦					
F/ext-poor			♦♦♦									
M/ext-poor	♦♦♦♦♦	♦♦♦♦♦										
Planting irri/boro rice												
M/poor			♦♦♦♦♦									
F/poor								♦♦♦♦♦				
F/ext-poor			♦♦♦♦♦									
M/ext-poor				♦♦♦♦♦	♦♦♦♦♦							
Harvesting Irri/boro rice												
M/poor							♦♦♦♦♦	♦♦♦♦♦				
F/poor	♦♦♦♦♦											♦♦♦
F/ext-poor						♦♦♦	♦♦♦♦♦	♦♦♦♦				
M/ext-poor	♦♦♦♦♦							♦♦♦♦♦				

Table 91: Seasonal calendar, Coast region

Months	Apr-may	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr
Bangla month	Baishak	Jaisti	Ashar	Sravon	Bhadra	Ashin	Kartic	Agra-hayan	Payush	Magh	Falgun	Chaitra
Intensity of work												
M/poor		♦	♦♦♦♦♦	♦♦♦♦♦			♦♦♦♦♦	♦♦♦♦♦	♦♦♦♦	♦		
F/poor	♦♦♦♦♦							♦♦♦♦♦	♦♦♦♦	♦♦♦♦		♦♦♦
F/ext-poor			♦♦♦				♦♦♦♦♦	♦♦♦♦♦	♦♦♦♦	♦♦♦	♦♦♦♦♦	♦♦♦♦♦
M/ext-poor	♦♦♦♦♦			♦♦♦♦♦	♦♦♦♦♦			♦♦♦♦♦				
Migration for work												
M/poor	♦♦♦♦♦	♦			♦♦♦	♦♦			♦♦	♦	♦♦	♦♦♦♦♦
F/poor								♦♦♦♦♦	♦♦♦♦♦			
F/ext-poor				♦♦♦♦♦	♦♦♦							
M/ext-poor		♦♦♦♦♦	♦♦♦♦			♦♦♦♦	♦♦♦		♦♦♦			
Food scarcity												
M/poor				♦♦♦	♦♦♦♦♦	♦♦♦♦	♦					♦♦
F/poor		♦♦♦	♦♦♦		♦♦♦♦♦	♦♦♦♦♦	♦♦♦♦♦					
F/ext-poor				♦♦♦♦♦	♦♦♦♦							
M/ext-poor									♦♦♦♦♦	♦♦♦♦	♦♦♦♦♦	
Income												
M/poor	♦♦♦♦♦		♦♦♦♦♦	♦♦♦♦♦			♦♦♦♦♦	♦♦♦♦♦	♦♦♦♦		♦♦♦	♦♦♦
F/poor	♦♦♦♦							♦♦♦♦♦				
F/ext-poor			♦♦♦				♦♦♦♦♦	♦♦♦♦♦	♦♦♦♦	♦♦♦	♦♦♦♦♦	♦♦♦♦♦
M/ext-poor	♦♦♦♦♦			♦♦♦♦	♦♦♦♦♦			♦♦♦♦♦				
Disease												
M/poor	♦♦♦♦	♦♦♦♦♦										
F/poor	♦♦♦♦							♦♦♦♦♦	♦♦♦♦	♦♦♦		
F/ext-poor		♦♦♦	♦♦									♦♦♦♦♦
M/ext-poor	♦♦♦♦♦										♦♦♦♦	♦♦♦♦

Table 92: Seasonal calendar, Haor region

Months	Apr-may	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr
Bangla month	Baishak	Jaisti	Ashar	Sravon	Bhadra	Ashin	Kartic	Agra-hayan	Payush	Magh	Falgun	Chaitra
Rainfall												
M/poor			♦♦♦	♦♦♦♦	♦♦♦♦♦	♦♦♦						
M/poor	♦	♦	♦♦♦♦♦	♦♦♦♦♦	♦♦♦♦	♦♦♦	♦♦	♦				
F/ext-poor				♦♦♦♦	♦♦♦♦♦	♦♦♦	♦♦♦	♦♦	♦			
F/ext-poor	♦♦♦♦	♦♦♦♦♦	♦♦♦♦♦	♦♦♦	♦♦♦	♦♦	♦	♦				
Flood												
M/poor			♦♦♦♦	♦♦♦♦♦	♦♦♦♦♦	♦♦♦♦♦						
M/poor	♦♦	♦♦♦	♦♦♦♦♦	♦♦♦♦♦	♦♦♦♦♦	♦♦♦♦♦	♦♦♦♦					
F/ext-poor		♦♦	♦♦♦♦♦	♦♦♦♦♦								
F/ext-poor					♦♦♦♦♦	♦♦♦♦						
Drought												
M/poor										♦♦♦♦	♦♦♦♦♦	♦♦♦♦♦
M/poor	♦♦♦♦♦	♦♦♦										♦♦♦♦♦
F/ext-poor	♦♦♦	♦♦♦♦									♦♦♦♦♦	♦♦♦♦♦
F/ext-poor		♦♦♦♦			♦♦♦		♦♦				♦♦♦♦♦	♦♦♦♦♦
Storm												
M/poor	♦♦♦♦♦	♦♦♦♦♦										
M/poor	♦♦♦♦♦	♦♦♦♦♦	♦♦	♦♦								
F/ext-poor	♦♦♦♦	♦♦	♦									
F/ext-poor	♦♦♦♦♦	♦♦♦♦	♦♦♦									
Planting irri/boro rice												
M/poor		♦♦♦♦		♦♦♦♦♦	♦♦♦♦♦				♦♦♦♦♦	♦♦♦♦♦		
M/poor						♦♦♦♦♦	♦♦♦♦♦					
F/ext-poor										♦♦♦♦♦		
F/ext-poor									♦♦♦♦	♦♦♦♦♦	♦	
Harvesting Irri/boro rice												
M/poor		♦♦♦♦♦						♦♦♦♦♦			♦♦♦♦♦	
M/poor		♦♦♦♦♦							♦♦♦♦♦	♦♦♦♦♦		
F/ext-poor		♦♦♦♦♦	♦♦♦♦									
F/ext-poor	♦♦♦♦	♦♦♦♦♦										
Intensity of work												
M/poor	♦♦♦♦♦	♦♦♦♦	♦♦♦	♦♦♦♦	♦♦				♦♦♦♦	♦♦♦♦	♦♦	
M/poor		♦♦♦♦♦					♦♦♦♦♦	♦♦♦				
F/ext-poor		♦♦♦♦	♦♦					♦♦♦	♦♦♦♦♦	♦♦♦		
F/ext-poor	♦♦♦♦	♦♦♦♦♦							♦♦♦♦	♦♦♦♦♦		

Migration for work												
M/poor					♦♦♦♦		♦♦♦♦♦	♦♦♦				
M/poor							♦♦♦♦	♦♦♦♦	♦♦♦♦♦	♦♦♦♦♦		♦♦♦♦
F/ext-poor		♦♦♦♦♦	♦♦♦					♦♦♦	♦♦♦			
F/ext-poor	♦♦♦♦	♦♦♦♦						♦♦♦♦♦	♦♦♦♦♦			
Food scarcity												
M/poor	♦♦♦♦♦					♦♦♦♦♦	♦♦♦♦					♦♦♦♦♦
M/poor							♦♦♦♦♦	♦♦♦♦♦	♦♦♦♦	♦♦♦♦	♦♦♦♦	♦♦♦♦
F/ext-poor				♦♦♦♦♦	♦♦♦	♦♦						
F/ext-poor						♦♦♦♦						♦♦♦♦♦
Income												
M/poor		♦♦♦♦♦	♦♦♦♦♦	♦♦♦	♦♦♦♦			♦♦	♦♦♦	♦♦♦♦	♦♦♦	
M/poor		♦♦♦♦♦					♦♦♦♦	♦♦♦♦	♦♦			
F/ext-poor		♦♦♦♦♦	♦♦♦					♦♦	♦♦♦	♦♦♦		
F/ext-poor		♦♦♦♦♦	♦♦♦♦♦				♦♦♦♦	♦♦♦♦				
Disease												
M/poor					♦♦♦♦♦		♦♦♦♦					♦♦♦
M/poor						♦♦♦	♦♦♦♦♦	♦♦♦♦♦	♦♦♦	♦♦♦♦	♦♦♦♦	♦♦♦
F/ext-poor						♦♦♦♦♦	♦♦♦♦					♦♦
F/ext-poor					♦♦♦	♦♦♦♦♦	♦♦♦♦♦					

Table 93: Seasonal calendar, North Char region

Months	Apr-may	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr
Bangla month	Baishak	Jaisti	Ashar	Sravon	Bhadra	Ashin	Kartic	Agra-hayan	Payush	Magh	Falgun	Chaitra
Rainfall												
F/poor	♦	♦♦	♦♦♦♦♦	♦♦♦♦	♦♦♦	♦♦	♦					
F/poor	♦♦	♦	♦♦♦♦♦	♦♦♦♦	♦♦♦	♦♦	♦					
M/ext-poor	♦	♦♦	♦♦♦♦♦	♦♦♦♦	♦♦♦	♦♦	♦					
M/ext-poor	♦	♦	♦♦	♦♦♦♦♦	♦♦♦♦	♦♦	♦♦♦					
Flood												
F/poor					♦♦♦♦	♦♦♦♦♦	♦♦♦					
F/poor					♦♦♦♦♦	♦♦♦♦	♦♦					
M/ext-poor				♦♦♦♦♦	♦♦♦♦							
M/ext-poor			♦♦♦♦♦			♦♦♦♦						
Drought												
F/poor	♦♦♦	♦♦♦									♦♦♦♦	♦♦♦♦♦
F/poor	♦♦♦♦	♦♦♦										♦♦♦♦♦
M/ext-poor	♦♦♦										♦♦♦♦	♦♦♦♦♦

M/ext-poor	♦♦♦	♦♦									♦♦♦♦	♦♦♦♦♦
Storm												
F/poor	♦♦♦♦♦	♦♦♦♦				♦♦	♦♦♦					
F/poor			♦♦♦♦				♦♦♦					
M/ext-poor	♦♦♦	♦♦♦♦♦				♦♦♦♦						
M/ext-poor	♦♦♦♦♦	♦♦♦♦	♦♦♦			♦	♦♦					
Planting irri/boro rice												
F/poor			♦♦♦	♦♦♦♦♦						♦♦♦♦		
F/poor			♦♦♦♦	♦♦♦	♦♦					♦♦♦♦♦		
M/ext-poor				♦♦♦♦♦	♦♦♦♦	♦♦♦				♦♦♦♦♦	♦♦♦♦	
M/ext-poor		♦♦♦		♦♦♦♦♦						♦♦♦♦		
Harvesting Irri/boro rice												
F/poor	♦♦	♦♦♦♦♦					♦♦♦	♦♦♦♦				
F/poor		♦♦♦♦♦							♦♦♦♦	♦♦♦		
M/ext-poor	♦♦♦♦	♦♦♦♦♦					♦♦♦	♦♦♦♦				
M/ext-poor							♦♦♦	♦♦♦♦	♦♦			
Intensity of work												
F/poor		♦♦♦♦		♦♦♦				♦♦♦♦		♦♦♦		♦♦
F/poor		♦♦♦♦	♦♦	♦				♦♦♦♦♦	♦	♦♦♦		
M/ext-poor	♦	♦♦♦♦♦			♦♦♦	♦		♦♦♦		♦♦♦♦♦	♦♦♦	
M/ext-poor				♦♦♦♦			♦	♦♦♦♦	♦♦	♦♦♦♦	♦	
Migration for work												
F/poor		♦♦				♦♦♦	♦♦♦♦♦					♦♦♦♦
F/poor		♦♦							♦♦♦♦♦	♦♦♦	♦♦	♦
M/ext-poor		♦♦♦					♦♦♦♦	♦♦♦♦♦				
M/ext-poor	♦♦				♦♦♦	♦♦♦♦	♦♦♦♦♦					♦
Food scarcity												
F/poor	♦♦					♦♦♦♦	♦♦♦♦♦					♦♦♦
F/poor							♦♦♦♦					♦♦♦♦♦
M/ext-poor	♦♦♦					♦♦	♦♦♦♦♦					♦♦♦♦
M/ext-poor						♦♦♦	♦♦				♦♦♦♦	♦♦♦♦♦
Income												
F/poor		♦♦♦♦♦						♦♦♦♦				
F/poor										♦♦♦♦♦		
M/ext-poor			♦♦♦♦♦					♦♦♦♦	♦♦♦	♦♦		
M/ext-poor		♦♦♦♦♦					♦♦♦	♦♦♦♦				
Disease												
F/poor		♦♦♦				♦♦♦♦		♦♦	♦			♦♦♦♦♦
F/poor							♦♦♦♦♦	♦♦♦	♦♦♦♦			
M/ext-poor			♦♦♦	♦♦		♦♦♦♦	♦♦♦♦♦					
M/ext-poor						♦♦♦♦♦	♦♦♦♦	♦♦♦				

Table 94: Seasonal calendar, Mid Char region

Months	Apr-may	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr
Bangla month	Baishak	Jaisti	Ashar	Sravon	Bhadra	Ashin	Kartic	Agra-hayan	Payush	Magh	Falgun	Chaitra
Rainfall												
M/poor	♦♦♦♦	♦♦♦♦	♦♦♦♦♦			♦♦♦						♦
M/poor	♦♦	♦♦	♦♦♦♦♦	♦♦♦♦	♦♦♦	♦♦		♦				
F/ext-poor	♦	♦	♦♦♦♦♦	♦♦♦	♦♦	♦♦♦♦						
F/ext-poor	♦♦	♦	♦♦♦♦♦	♦♦♦♦	♦♦♦	♦						
Flood												
M/poor			♦♦	♦♦♦♦	♦♦♦♦♦	♦♦♦						
M/poor				♦♦♦	♦♦♦♦♦	♦♦♦♦						
F/ext-poor				♦♦♦♦♦	♦♦♦♦	♦♦♦						
F/ext-poor				♦♦♦♦	♦♦♦♦♦							
Drought												
M/poor	♦♦♦				♦♦						♦♦♦♦	♦♦♦♦♦
M/poor											♦♦♦♦	♦♦♦♦♦
F/ext-poor	♦♦♦	♦♦									♦♦♦♦♦	♦♦♦♦
F/ext-poor												♦♦♦♦♦
Storm												
M/poor	♦♦♦♦♦	♦♦♦♦				♦♦♦						♦♦
M/poor	♦♦♦♦♦	♦♦♦♦				♦						
F/ext-poor	♦♦♦♦♦	♦				♦♦♦	♦♦					♦♦♦♦
F/ext-poor	♦♦♦♦♦					♦♦♦♦						
Planting irri/boro rice												
M/poor	♦♦♦							♦♦	♦♦♦♦♦	♦♦♦♦		
M/poor				♦♦♦♦						♦♦♦♦♦		
F/ext-poor	♦♦♦								♦♦♦♦♦	♦♦♦♦		
F/ext-poor				♦♦♦♦						♦♦♦♦♦		
Harvesting Irri/boro rice												
M/poor	♦♦♦♦	♦♦♦♦♦	♦♦	♦♦♦								
M/poor		♦♦♦♦♦						♦♦♦♦				
F/ext-poor	♦♦♦♦	♦♦♦♦♦		♦♦♦								
F/ext-poor			♦♦♦♦					♦♦♦♦♦				

Intensity of work												
M/poor	♦♦♦	♦♦♦♦		♦♦	♦	♦				♦♦♦♦♦		
M/poor		♦♦♦♦		♦♦				♦♦♦		♦♦♦♦♦		
F/ext-poor	♦♦♦♦♦			♦♦♦♦	♦♦				♦♦♦		♦	
F/ext-poor		♦♦♦♦		♦♦♦				♦♦♦	♦♦	♦♦♦♦♦		♦
Migration for work												
M/poor				♦♦♦♦	♦♦♦♦♦	♦♦♦	♦♦♦♦					
M/poor								♦	♦♦♦♦♦		♦♦♦	♦♦♦♦
F/ext-poor		♦♦♦			♦♦♦♦♦		♦♦♦♦	♦♦	♦♦♦♦			
F/ext-poor							♦♦♦♦♦				♦♦♦♦	♦♦♦
Food scarcity												
M/poor	♦♦♦♦					♦♦♦♦					♦♦♦	♦♦♦♦♦
M/poor							♦♦♦	♦♦♦♦				♦♦♦♦♦
F/ext-poor			♦♦			♦♦♦♦	♦♦♦♦♦	♦♦♦				
F/ext-poor					♦♦♦♦		♦♦♦♦♦					
Income												
M/poor	♦♦♦♦	♦♦♦♦♦		♦♦♦♦					♦♦♦	♦♦		
M/poor		♦♦♦							♦♦♦♦♦	♦♦♦♦		
F/ext-poor		♦♦♦♦♦			♦♦♦				♦♦♦♦	♦♦		
F/ext-poor	♦♦♦♦♦		♦♦♦					♦♦♦♦		♦♦		
Disease												
M/poor				♦♦♦♦♦	♦♦♦♦							♦♦
M/poor								♦♦♦♦♦		♦♦♦♦		
F/ext-poor	♦♦♦	♦♦	♦♦♦♦			♦♦♦♦♦						
F/ext-poor							♦♦♦♦♦					

Annex IV: Baseline household questionnaire

CARE Bangladesh
SHOUHARDO II Program

BASELINE HOUSEHOLD SURVEY
December 2010

	RECORD TIME THE INTERVIEW STARTED.	HOUR ..... MINUTES.....

Ques. SL				
Cluster Number				
HH WBA ID				
Survey Team's ID				

MODULE A. INFORMATION ON INTERVIEW AND AREA IDENTIFICATION

Interview information

A1	Date of interview	__|__|		__|__|	20__|__|		
			dd	***mm***	***yy***	**ID**	**Signature**
A2	Name of Interviewer	1					
A3	Name of Interviewer	2					
A4	Reviewed by (Supervisor/ Name & Code)						
A5	Reviewed by (Team Leader/Name & Code)						
A6	Reviewed by others (Name & Code)						
A7	Data Entry by (Name/Code)						
A8	Entry Date						
A9	Data entry checked by (Name/Code)						
A10	Data entry checked Date						

Area Identification

	Area	Code
A11	Region	Coast .....1 Haor.....2 Mid Char .....3 North Char 4
A12	District **(Use Geocode)**	|__|__|__|__|__|
A13	Upazila **(Use Geocode)**	|__|__|__|__|__|
A14	Union **(Use Geocode)**	|__|__|__|__|__|
A15	Village **(Use Code provided)**	|__|__|__|__|__|

Result code:

Completed=1, Incompleted=2

PART I. HOUSEHOLD INFORMATION

(Respondents are knowledgeable adult household members)

MODULE B. RESPONDENT IDENTIFICATION FOR PART I

B1	Name of household head: _____	
B2	Respondent's name: 1. _____ **(Household head if possible)**	
B3	Relationship to household head (see codes below)	Code
B4	Respondent's name: 2. _____	
B5	Relationship to household head (see codes below)	Code
B6	Cell or house phone number of household head or other adult household member **If no phone number leave blank**	|__||__||__| - |__||__||__||__| - |__||__||__||__|
B7	Marital status of household head **List responses and circle code number of response**	Married.....1 Single .....2 Divorced/separated .....3 Widowed 4
B8	Disability status of household head **List responses and circle code number of response**	Not disabled .....1 Physically disabled (temporary) .....2 Physically disabled (permanent).....3 Mentally disabled.....4
B9	Household well-being category **Extract from WBA record sheet**	Extreme Poor .....1 Poor .....2 Lower Middle.....3 Middle .....4 Rich 5

Codes for B3 and B5: Relationship to household head

1 = Household head
2 = Wife of household head
3 = Husband of household head
4 = Son,
5 = Daughter
6 = Father
7 = Mother
8 = Daughter in law/son in law
9 = Brother
10 = Sister
11 = Father/mother in law
12 = Nephew/niece
13 = Grandfather/Grandmother,
14 = Grandson/Granddaughter
15 = Sister-in-law/Brother-in-law
16 = Brother's wife,
17 = Others (e.g. servant)

MODULE C. BASIC INFORMATION ON HOUSEHOLD MEMBERS

Circle line number of member.

Start with household head.

Line number	Name of member	Sex 1 = Male 2 = Female	Age in years (write "0" for less than 1 year)	Education (for ages 6 and up)	Literacy 1 = Can read 2 = Can write 3 = Can read and write 4 = Neither	Primary occupation (see codes below)	Secondary occupation (see codes below)	Eligible for		
								Part II: women's empowerment Woman 18 years or older?	Part III: Information on children 0-59 months old	
		C1	C2	C3	C4	C5	C6		Child under 6?	Enter line # of caregiver
					Only for adults (18 or older)					
								C7	C8	C9
1								1	1	__|__
2								2	2	__|__
3								3	3	__|__
4								4	4	__|__
5								5	5	__|__
6								6	6	__|__
7								7	7	__|__
8								8	8	__|__
9								9	9	__|__
10								10	10	__|__
…								11	11	__|__
15								15	15	__|__

Codes for C3: 0 = No class, 1 = Class 1, 2 = Class 2, 3 = Class 3, 4 = Class 4, 5 = Class 5, 6 = Class 6, 7 = Class 7, 8= Class 8, 9 = Class 9, 10 = SSC pass, 11 = HSC pass, 12 = Graduate, 13 = Masters.

Codes for C5 and C6: 1 = Farming, 2 = Agricultural day labor/contract labor, 3 = Fishing, 4 = Poultry and livestock rearing, 5 = Non-agricultural day labor/contract labor, 6 = Casual labor, 7 = Regular salaried employment, 8 = Self employed in business/petty business, 9 = Paid "volunteers", 10 = House work (child care, home care), 11 = Servant/ Maid, 12 = Student, 13 = Beggar, 14 = Old/ Disabled, 15 = Unemployed, 16 = Other.

MODULE D. HOUSEHOLD ECONOMIC SECURITY

Indicators of economic distress

	For Section D use Head of Household as Respondent	Codes
D1	Did any resident household member migrate out of the village for part of the last 12 months to find employment?	Yes..... 1 No..... 2 **If "No", skip to D2**
D1.1	If yes, how many members migrated?	|__||__|
D1.2	What was the longest time any one person was gone (in days)	|__||__|
D2	Did any resident household member sell labor in advance for part of the last 12 months?	Yes..... 1 No..... 2
D3	Did any resident household member take out an interest bearing loan from non-formal sources in the last 12 months?	Yes..... 1 No..... 2

Housing Characteristics		Codes	
D4	What is the main construction material of the walls of your main house? **Circle code number of response. (Observation)**	Brick..... 1 C.I. Sheet / wood..... 2 Mud wall ..... 3 Bamboo 4	Straw/jute stick/leaves .. 5 Thatched bamboo/poly-thene..... 6 Other 7
D5	What is the main construction material of the roof of your main house? **Circle code number of response. (Observation)**	Concrete ..... 1 C.I. Sheet / wood..... 2 Tiles..... 3 Bamboo 4	Straw/jute stick/leave ..... 5 Thatched bamboo/poly-thene..... 6 Other 7
D6	How many rooms do you have for your family to live in your house?	|___||___|	

Ownership and sales of assets

	Asset	Number currently owned	Sales in last year
Domestic assets		D7	D8
	Now I'm going to ask you about some of the items you own in your house. How many (_____) do you own? **If do not own, write "0".**		
1A	Chairs		Did you sell any of these kinds of items in the last year? Yes.....1 No.....2 DNK.....3 **Circle code number of response.**
1B	Khat		
1C	Cupboard		
1D	Tables		
1E	Show case		
1F	Dressing table		
1G	Watch		
1H	Clock		
1I	Lantern		
1J	Radio		
1K	TV		
1L	Cassette player		
1M	Electric fan		
1N	Mobile Phone		
1O	Gold ornaments/jewelry (ana)		
1P	Silver ornaments/jewelry (ana)		

	Asset	Number currently owned	Sales in last year
Transport/Agricultural Assets		D7	D8
	Now I'm going to ask you about your ownership of transportation and agricultural assets. How many … do you own?		
2A	Boat		Did you sell any of these kinds of items in the last year? Yes..... 1 No..... 2 DNK..... 3
2B	Motorcycle		
2C	Rickshaw/van		
2D	Bicycle		
2E	Shallow / hand tube well		
2F	Power tiller		
2G	Paddle thresher		
2H	Spray machine		
2I	Plough		
2J	Fishing net		
2K	Pump		
2L	Hoe		
2M	Axe		
2N	Shovel/spader		
Animal Assets			
	Now I'm going to ask you about farm animals. How many …. do you own?		Did you sell any of animals in the last year? Yes..... 1 No..... 2 DNK..... 3
3A	Cow		
3B	Buffalo		
3C	Goat		
3D	Sheep		
3E	Chicken		
3F	Duck		
3G	Pigs		
Trees and Plants			
	Now I'm going to ask you about some trees and plants. How many …. do you own?		Did you sell any of these trees or plants in the last year? Yes..... 1 No..... 2 DNK..... 3
4A	Timber tree		
4B	Fruit tree		
4C	Bamboo tree		
4D	Medicinal plants		

Land ownership

How much of these types of land do you own (in decimals)? **List each type one-by-one and record response.**

	Type	Amount owned (Decimals)
D9_A	Own homestead land	|__|__|__|__|__•|__|
D9_B	Own agricultural land	|__|__|__|__|__•|__|
D9_C	Land lease-IN	|__|__|__|__|__•|__|
D9_D	Land lease-OUT	|__|__|__|__|__•|__|
D9_E	Mortgage-IN	|__|__|__|__|__•|__|
D9_F	Mortgage-OUT	|__|__|__|__|__•|__|
D9_G	Haor (extended marsh)	|__|__|__|__|__•|__|
D9_H	Pond/ditch	|__|__|__|__|__•|__|
D9_I	Other type of land	|__|__|__|__|__•|__|

Distress sales of assets

D10	Did anyone in your household sell any assets in the last year in order to be able to purchase food, pay for medicine, pay school fees, or meet any other urgent household need?	Yes.....1 No.....2 DNK.....3 **If "No", skip to D12**
D11	How much money did you get from selling assets for these things? (Taka)	|___|___|___|___|___| **98 = DNK**

Household income

D12	Did any resident household member bring cash income into the household in the last year?	1 = Yes 2 = No Circle code number of response. If "No", skip to D18

	What activities did you make money from in last year? **For each activity, record number of months and monthly income. Prompt for more activities till respondent indicates no more.**	Number of months in different activities and (net) income for last 12 months									
		Person 1 Name _____ Line number from Module C |___||___|		Person 2 Name _____ Line number from Module C |___||___|		Person 3 Name _____ Line number from Module C |___||___|		Person 4 Name _____ Line number from Module C |___||___|		Person 5 Name _____ Line number from Module C |___||___|	
		# of months	Monthly Income (Taka)	# of months	Monthly Income (Taka)	# of months	Monthly Income (Taka)	# of months	Monthly Income (Taka)	# of months	Monthly Income (Taka)
		D13_1	D13_2	D14_1	D14_2	D15_1	D15_2	D16_1	D16_2	D17_1	D17_2
A	Agricultural day labor										
B	Agricultural contract labor										
C	Non-agricultural day labour										
D	Non-agricultural contract labor										
E	Casual labor										
F	Regular salaried employment										
G	Self employment in business/service provision										
H	Petty business										
I	Business, using hired labor										
J	Paid "volunteer"										
K	Rickshaw/rickshaw van pulling										
L	Boatman										
M	Working as servant/ maid										
N	Begging										
O	Cash-for-work										
P	Student stipend (including cash value of food received)										

Other source		Income (Taka)
D18_A	How much income did your household receive from **remittances** in the last year?	|___|___|___|___|___|___|___|___|
D18_B	… from **gifts** in the last year?	|___|___|___|___|___|___|___|___|
D18_C	… from **pensions/retirement fund**?	|___|___|___|___|___|___|___|___|
D18_D	….from **leases**?	|___|___|___|___|___|___|___|___|
D18_E	…. **sales of agricultural products**?	|___|___|___|___|___|___|___|___| **If "0", skip to D18_G**
D18_F	How much did you spend on agricultural inputs (e.g., seeds, fertilizer, etc) in the last year?	|___|___|___|___|___|___|___|___|
D18_G	How much income did your HH receive from sales of animals or animal products (including cattle, poultry and fish) in the last year	|___|___|___|___|___|___|___|___| **If "0", skip to D19_A**
D18_H	How much did you spend on inputs needed to raise the animals (e.g., feed, veterinary services) in the last year?	|___|___|___|___|___|___|___|___|

Remoteness and access to markets

Circle code number of responses.

		Code
D19_A	How long would it take to walk to the nearest town?	Less than 30 minutes..... 1 30 minutes to 1 hour ..... 2 1 to 2 hours..... 3 More than 2 hours 4
D19_B	How long would it take to walk to _____ (Upazilla/thana headquarter)?	Less than 30 minutes..... 1 30 minutes to 1 hour ..... 2 1 to 2 hours..... 3 More than 2 hours 4
D19_C	Did anyone in your household buy any food in the last year?	Yes ..... 1 No 2 **If "No", skip to D19_E**
D19_D	How long does it take to walk to a place to buy food?	Less than 30 minutes..... 1 30 minutes to 1 hour ..... 2 1 to 2 hours..... 3 More than 2 hours 4
D19_E	Some people have their own businesses making things to sell like baskets, rugs or furniture. Does anyone in your household do this?	Yes..... 1 No..... 2 **If "No", skip to D19_G**
D19_F	How long does it take to walk to the place to sell these things?	Less than 30 minutes..... 1 30 minutes to 1 hour ..... 2 1 to 2 hours..... 3 More than 2 hours 4
D19_G	Do you ever sell food that you grow?	Yes..... 1 No ..... 2 N/A..... 3 **If "No", skip to D19_I**

D19_H	How long does it take to walk to the place to sell the food, for example to a market or to a buyer pick-up location?	Less than 30 minutes..... 1 30 minutes to 1 hour ..... 2 1 to 2 hours..... 3 More than 2 hours 4
D19_I	Do you ever buy inputs for crop production like seeds and fertilizer?	Yes..... 1 No..... 2 **If "No", skip to D20**
D19_J	How long does it take to walk to the nearest place to buy inputs such as seeds and fertilizer?	Less than 30 minutes..... 1 30 minutes to 1 hour ..... 2 1 to 2 hours..... 3 More than 2 hours 4

Household loans

D20	How many loans does your household currently have?	|____|____| **If 0, go to D23**

	Details by loan					
Loan #	Sex of the household member who took out the loan 1 = Male 2 = Female	What was the source of the loan?	What was the **main** reason for taking out the loan?	Total amount borrowed (Taka)	Amount of loan still outstanding (Taka)	Rate of interest paid/agreed upon (%)
	D21	D22	D23	D24	D25	D26
1				|___|___|___|___|___|	|___|___|___|___|___|	|___|___|___|
2				|___|___|___|___|___|	|___|___|___|___|___|	|___|___|___|
3				|___|___|___|___|___|	|___|___|___|___|___|	|___|___|___|
4				|___|___|___|___|___|	|___|___|___|___|___|	|___|___|___|
5				|___|___|___|___|___|	|___|___|___|___|___|	|___|___|___|

Codes for D22

Money lender/pawnshop..... 1
Bank/formal lending institution... 2
Informal savings group 3
Neighbor/friend/relative..... 4
NGO/CBO..... 5
Trader/grocer..... 6
Other 7

Codes for D23

Purchase agricultural tools..... 1
Purchase agricultural inputs..... 2
Land purchase 3
Livestock purchase..... 4
Purchase of other productive assets 5
Purchase of non-productive assets 6
Consumption (food, clothes, etc.) 7
Pay for treatment/medicine 8
Education expenses..... 9
Housing/repairing (including housing tax) 10
Wedding 11
Bride price/Dowry 12
Funeral 13
Religious event..... 14
Loan repayment 15
Legal dispute/expenses 16
Migration..... 17
Rental of house / shop..... 18
Starting small business..... 19
Other 20

Household Savings

D27	Does any member of your household have any cash savings (money put aside for some future use)?	Yes ..... 1 No ..... 2 **If No, go to E1**
Savings #1 (If household has only one form of savings skip additional savings)		
D28_1	Sex of person saving	Male ..... 1 Female ..... 2 All household 3
D29_1	Main method of saving used	Bank ..... 1 Savings Scheme/ Coops ..... 2 Post Offices ..... 3 Home ..... 4 Insurance company ..... 5 NGO ..... 6 Other 7
D30_1	Total amount of Taka in savings	|___|___|___|___|___|___| Taka
D31_1	Reasons for saving **Circle code numbers of mentioned responses**	To buy household goods ..... 1 To start/help busines ..... 2 To buy land/house ..... 3 For education/training ..... 4 For marriage ..... 5 To build/repair house ..... 6 To earn interest from lending ..... 7 Difficult times ..... 8 To meet medical expenses ..... 9 To replace lost assets ..... 10 To purchase large asset ..... 11 To meet children's needs ..... 12 To meet all members needs ..... 13 Other 14
Savings #2 (If household has only one form of savings skip to E1)		
D28_2	Sex of person saving	Male ..... 1 Female ..... 2 All household 3
D29_2	Main method of saving used	Bank ..... 1 Savings Scheme/ Coops ..... 2 Post Offices ..... 3 Home ..... 4 Insurance company ..... 5 NGO ..... 6 Other 7
D30_2	Total amount of Taka in savings	|___|___|___|___|___|___| Taka
D31_2	Reasons for saving **Circle code numbers of mentioned responses**	To buy household goods ..... 1 To start/help busines ..... 2 To buy land/house ..... 3 For education/training ..... 4 For marriage ..... 5 To build/repair house ..... 6 To earn interest from lending ..... 7 Difficult times 8 To meet medical expenses 9 To replace lost assets 10 To purchase large asset 11 To meet children's needs 12 To meet all members needs 13 Other 14
Savings #3 (If household has only one form of savings skip top E1)		
D28_3	Sex of person saving	Male ..... 1 Female ..... 2 All household 3
D29_3	Main method of saving used	Bank ..... 1 Savings Scheme/ Coops ..... 2 Post Offices ..... 3 Home ..... 4 Insurance company ..... 5 NGO ..... 6 Other 7
D30_3	Total amount of Taka in savings	|___|___|___|___|___|___| Taka
D31_3	Reasons for saving? **Circle code numbers of mentioned responses**	To buy household goods ..... 1 To start/help busines ..... 2 To buy land/house ..... 3 For education/training ..... 4 For marriage ..... 5 To build/repair house ..... 6 To earn interest from lending ..... 7 Difficult times ..... 8 To meet medical expenses ..... 9 To replace lost assets ..... 10 To purchase large asset ..... 11 To meet children's needs ..... 12 To meet all members needs ..... 13 Other 14

MODULE E. ACCESS TO SOCIAL SERVICES AND COMMON PROPERTY RESOURCES

Access to and use of social services

Which of the following services are available in your village/union?

List each service one-by-one and record answers. If answer is "Yes" for either A or B, ask question on utilization (C).

	Type of Service	Available in village 1 = Yes 2 = No 3 = DNK	Available in union 1 = Yes 2 = No 3 = DNK	Utilization 1 = Frequently 2 = Sometimes 3 = Never
		A	B	C
E1	Primary health care services			
E2	Family planning services			
E3	Primary school			
E4	Pre-school			
E5	Union Parishad			
E6	Grammo Shalish			
Services from the government provided by the …				
E7	Department of Social Services			
E8	Department of Women's Affairs			
E9	Department of Agriculture Extension (DAE)			
E10	Department of Fisheries (DOF)			
E11	Department of Livestock (DOL)			
E12	Government Land Office			
E13	BADC seed department			
E14	Department of Youth Development			
E15	Department of Cooperatives			
E16	Government Family Planning			
E17	Government immunization services			

Participation in social safety nets

		Codes	
E18	Which of the following programs has your household participated in or received assistance from in the last year? **Read each response code and circle code number if safety net was used**	Government VGD ..... 1 Government VGF ..... 2 Govt. cash-for-work .... 3 "100 days work ..... 4 Aged allowance ..... 5 Widow allowance 6	Disability allowance ..... 7 Non-Govt cash-for- work ..... 8 Non-Govt food-for-work ..... 9 Community based savings group ..... 10 Other _____ 11

Access to and use of common property resources

Which of the following common properties are available and used by members of your household?
Read each item one-by-one and fill in response codes in column A. Next, for all items with response "yes", fill in response code for column B. For all items with response "yes", fill in activity codes in column C.

		Available 1 = Yes 2 = No 3 = DNK	Utilized 1 = Yes 2 = No	Activities (see codes)
		A	B	C
E19.1	Roadside sloping			
E19.2	Embankments			
E19.3	Railway grounds			
E19.4	Beel/Haor			
E19.5	River/Canal			
E19.6	CBO water body			
E19.7	Grazing land			
E19.8	Forest land			
E19.9	Hills			
E19.10	Khas pond			
E19.11	Khas land			
E19.12	Other_____			
E19.13	Other _____			

Activity Codes

Fishing....1	Collecting soil....8
Collecting aquatic animals....2	Collecting water....9
Collecting aquatic foods....3	Crop cultivation....10
Irrigation....4	Fish culture....11
Grazing....5	Tree plantation....12
Collecting fruit....6	Other....13
Collecting firewood....7	

MODULE F. DISASTER RISK MANAGEMENT AND CLIMATE CHANGE

Disaster risk management

		Codes	
F1	In the last 12 months, what type(s) of natural disasters were experienced by your household? **Multiple Response**	Heavy rains ..... 1 Wildfire ..... 2 Hurricane..... 3 Wind storms ..... 4 Erosion (river, wind) ..... 5 Earthquake 6	Cyclone ..... 7 Floods..... 8 Cold wave ..... 9 Other _____ ..... 10 None..... 11 DNK 12
F2	What was the most recent natural disaster your household experienced? **Single Answer**	Heavy rains ..... 1 Wildfire ..... 2 Hurricane..... 3 Wind storms ..... 4 Erosion (river, wind) ..... 5 Earthquake 6	Cyclone ..... 7 Floods..... 8 Cold wave ..... 9 Other _____ ..... 10 None..... 11 DNK ..... 12 **If 11 or 12, go to F7**
F3	In what year did you experience this disaster?	|___|___|___|___|	
F4	How did the most recent disaster affect your household? **Multiple Response**	Loss of family member ..... 1 Loss of livelihood ..... 2 Loss of home..... 3 Physical disability/injury ..... 4 Loss of assets ..... 5 Loss of water supply 6	Having to care for others..... 7 Additional household members ..... 8 Stress/anxiety/fear..... 9 Other _____ ..... 10 No effect..... 11 DNK 12
F5	How did your household cope with the most recent disaster? **Multiple Response**	Loan from neighbours/relatives . 1 Loan from money lender..... 2 Loan from NGO..... 3 Loan form bank..... 4 Reduced # or quantity of meals . 5 Mortgaged farmland out ..... 6 Leased farmland out..... 7 Sold HH productive assets (tools, livestock, vehicles, etc.) ..... 8 Sold other household assets (furniture, radios, jewelry, etc.).. 9 Sold agricultural products in advance or low price ..... 10 Sold advance male labor 11	Sold advance female labor ..... 12 Sold farmland..... 13 Sold homestead land ..... 14 Ate famine foods..... 15 Accepted aid..... 16 Accepted help from others ..... 17 Migrated..... 18 Used savings ..... 19 Purchased goods on credit ..... 20 Postpone medical treatment ..... 21 Sent child to work ..... 22 Other _____ ..... 23 DNK..... 24
F6	What could have been done differently to reduce the impact of future disasters in your community? **Multiple Response**	Structural improvement to home 1 Improvement to infrastructure (shelters, roads, bridges) .....2 Community disaster response plan 3 Food stocks .....4 Water stocks .....5 Medical supplies stocks .....6 First aid training.....7 Increased collaboration/ coordination w/ neighbors.....8 Increased collaboration/ coordination with communities...9	Better forecasting..... 10 Earlier/better warning ..... 11 Increased collaboration /coordination w/ local govt..... 12 Income alternatives/more diversified income..... 13 Evacuation routes/plans ..... 14 Improved alternative modes of communication (i.e. shortwave radio, etc.)..... 15 Other ..... 16 Nothing ..... 17 DNK..... 18

Climate change

F7	Do you think the climate is changing in your area?	Yes.....1 No.....2 No opinion/DNK.....3 **If answer is "No" or "No opinion/DNK", skip to G1**
F8	If yes, in what ways do you think it is changing? **Multiple Response**	1 = It is becoming warmer 2 = It is becoming colder 3 = It is becoming dryer 4 = It is becoming wetter 5 = Rains are more unpredictable 6 = Rains are coming earlier 7 = Rains are beginning later 8 = Rains are stopping earlier 9 = Rains are stopping later 10 = Temperatures are more unpredictable 11 = Strong winds are more common 12 = Other (Specify: _____)

MODULE G. HOUSEHOLD FOOD SECURITY

Food consumption

The respondent should be an adult female if possible.

Now I would like to ask you about the types of foods that you or anyone else in your household ate yesterday during the day or at night. Please include all foods, including the foods eaten here at your house or somewhere else (e.g., other homes, street stalls, given by employer) .

Read the list of foods one-by-one and record coded response.

		Code 1 = Yes 2 = No			Code 1 = Yes 2 = No
G1	**Any cereals**, e.g. rice, bread, wheat, wheat bread, rice flakes, puffed rice, barley, wheat grain, popcorn?		G9	**Any eggs?**	
G2	**Any pumpkin, carrots, squash, or sweet potatoes** or vegetables that are yellow or orange inside?		G10	**Any fresh or dried fish or shellfish?**	
G3	**Any white potatoes, white yams** or other foods made from roots and tubers?		G11	**Any legumes/pulses**, e.g. Bengal gram, black gram dal, lentil, Khesarl?	
G4	**Any dark green, leafy vegetables**, e.g., ipomoea, amaranth, spinach, parwar sag, and drumstick leaves?		G12	**Any Milk or Milk products**, e.g. cow milk, buffalo milk, goat milk, yogurt, curd, cheese?	
G5	**Any other vegetables**, e.g. cucumber, radish, pepper, string beans, cabbage, cauliflower, radish, onion?		G13	**Any foods prepared using fat,**, e.g., oil, butter, dalda or ghee?	
G6	**Any ripe papaya, mangoes** or other fruits that are yellow or orange inside?		G14	**Any sugar or honey?**	
G7	**Any other fruits**, e.g. banana, papaya, sithphal, grapefruit, apple, orange, jackfruit, jambu fruit, plums, melon, tomato, date, lemon, etc. ?		G15	**Any other foods such as condiments, coffee, tea?**	
G8	**Any meat**, such as, liver, beef, poultry, lamb, pork, etc.?				

Months of Insufficient Food

The respondent should be an adult female if possible.

		Code
G15.1	Now I would like to ask you about your household's food supply during different months of the year. When answering these questions, please think back over the last 12 months, from now to the same time last year. Were there months, in the past 12 months, in which you did not have enough food to meet your family's needs? **Circle number code of response.**	Yes.....1 No.....2 **If "No", skip to G18_1**
	If yes, which were the months in the past 12 months in which you did not have enough food to meet your family's needs? This includes any kind of food, such as food you produced yourself, food purchased, food given to you by others, food aid, or food you borrowed. **Do not read the list of months aloud. Place a "1" in the box if the respondent mentions the month. If the respondent does not mention the month, place a "2" in the box.**	Yes.....1 No.....2

G16_1	January		G16_7	July	
G16_2	February		G16_8	August	
G16_3	March		G16_9	September	
G16_4	April		G16_10	October	
G16_5	May		G16_11	November	
G16_6	June		G16_12	December (this month)	

Household Hunger

Circle the number code of the responses. After asking "How often did this happen?", code the response according to the number of times the respondent said the event happened.

		Code
G17_1	In the last 4 weeks was there a time when there was no food to eat of any kind in the house, because of lack of resources to get food?	Yes.....1 No.....2 **If "No", skip to G17_3**
G17_2	How often did this happen?	**Rarely or sometimes** (1 – 10 times) ..... 1 **Often** (more than 10 times) 2
G17_3	In the last 4 weeks, was there a time when you or any household member went to sleep at night hungry without eating anything at all because there was not enough food?	Yes.....1 No.....2 **If "No", skip to G17_5**
G17_4	How often did this happen?	**Rarely or sometimes** (1 – 10 times) ..... 1 **Often** (more than 10 times) 2
G17_5	In the last 4 weeks was there a time when you or any household member went a whole day and night without eating anything at all because there was not enough food?	Yes.....1 No.....2 **If "No", skip to G18_1**
G17_6	How often did this happen?	**Rarely or sometimes** (1 – 10 times) ..... 1 **Often** (more than 10 times) 2

Household Food Access: Food insecurity coping strategies

Read each question and then ask how often the event happened in the last year Circle the number code of the response.

		Code
G18_1	In the last year, how often did you or any of your family have to eat potato, wheat, or another grain although you wanted to eat rice (not including when you were sick)?	**Never** .....1 **Rarely** (1-6 times in last year).....2 **Sometimes** (7-12 times in last year).....3 **Often** (a few times each month) .....4 **Regularly** (almost or every day) 5
G18_2	In the last 12 months how often did you yourself skip entire meals due to scarcity of food? **Respondent only**	**Never** .....1 **Rarely** (1-6 times in last year).....2 **Sometimes** (7-12 times in last year).....3 **Often** (a few times each month) .....4 **Regularly** (almost or every day) 5
G18_3	In the last 12 months how often did you personally eat less food in a meal due to scarcity of food? **Respondent only**	**Never** .....1 **Rarely** (1-6 times in last year).....2 **Sometimes** (7-12 times in last year).....3 **Often** (a few times each month) .....4 **Regularly** (almost or every day) 5
G18_4	In the past 12 months how often did your family purchase food (rice, lentils etc.) on credit (or loan) from a local shop?	**Never** .....1 **Rarely** (1-6 times in last year).....2 **Sometimes** (7-12 times in last year).....3 **Often** (a few times each month) .....4 **Regularly** (almost or every day) 5
G18_5	In the past 12 months how often did your family have to borrow /take food from relatives or neighbors to make a meal?	**Never** .....1 **Rarely** (1-6 times in last year).....2 **Sometimes** (7-12 times in last year).....3 **Often** (a few times each month) .....4 **Regularly** (almost or every day) 5

MODULE H. AGRICULTURAL PRODUCTION, FISHERIES AND LIVESTOCK REARING

		Codes
Field crop production		
H1	Did you cultivate any field crops like cereals, ground nuts, jute, or fruits and vegetables for selling to others?	Yes.....1 No.....2 DNK.....3 **If "No" or "DNK", go to H8**
H2	In the last year did anyone in your household cultivate any of these crops? **Read list and circle code number of items respondent says were grown.** **(Yes/no in Bangla questionnaire)**	Rice (HYV).....1 Rice (LIV).....2 Rice (Local).....3 Vegetables (commercial).....4 Fruits (commercial).....5 Wheat.....6 Groundnut.....7 Maize.....8 Pulses.....9 Oilseeds.....10 Spices.....11 Jute.....12 Tobacco.....13 Other (Specify: _____).....14 Other (Specify: _____).....15
H3	Which of the following improved cropping practices did you use in the last year? **Read list and circle code number of practices respondent says were used.**	Use high quality seed.....1 Use 2-3 seedling per hill for rice.....2 Maintain proper spacing.....3 Intercrop.....4 Use IPM.....5 Use organic fertilizers.....6 Use recommended seed storage methods.....7 Balanced fertilizer use.....8 Green manure.....9 Other (Specify: _____).....10
H4	Which agricultural inputs did you purchase before or during the last cropping season? **Read list and circle code number of inputs respondent says were purchased.**	Improved seed.....1 Seedlings.....2 Saplings.....3 Irrigation water.....4 Fertilizer.....5 Ploughing.....6 Use of pesticides.....7 Use of weedicides.....8 Other (Specify: _____).....9 Other (Specify: _____).....10
H5	Which of the following agricultural financial services did you or your household use in the previous cropping season? **Read list and circle code number of services respondent says were used.**	Agricultural loan.....1 A company provided advance inputs.....2 Government subsidy.....3 Other (Specify: _____).....4

H6	Have you or any member of your household participated in any training programs on improved food production technologies? **Circle code number of response.**	Yes.....1 No.....2 DNK .....3 If "No" or "DNK", skip to H8.
H7	What kind of agricultural techniques were you trained in? **Multiple Response**	Use of improved seeds.....1 Use of new food crops .....2 Proper use of fertilizer .....3 Weed control (herbicides, weeding).....4 Conservation agriculture (zero /minimal tillage, composting).....5 Pest management practices (pesticides).....6 Improved post-harvest techniques .....7 Improved water management.....8 Other (_____).....9

Vegetable Production/Gardening **Ask to person who normally does gardening if possible.**

H8	In the previous year did any member of your household grow any vegetables in a garden?	Yes..... 1 No..... 2 DNK..... 3 **If "No" or "DNK", go to H11**

H9	Which of the following vegetables did you grow? **Read list and circle code number of items respondent says were grown.**	Green Gourd..... 1 Radish ..... 2 Birinjal ..... 3 Lal shak..... 4 Pumpkin (yellow)..... 5 Corriandor leaf / Kalijira/Ginger ..... 6 Potato/Keshur..... 7 Data Shak ..... 8 Potol/Shajina/ ..... 9 Chichinga/Jhinga..... 10 Bean 11	Pui Shak .....12 Kacha Kola.....13 Ladies Finger .....14 Green Chili.....15 Onion.....16 Garlic.....17 Sweet potato.....18 Tomato .....19 Korolla .....20 Papaya .....21 Other green leafy veges ...22 Other (Specify: _____) 23

H10	Which of the following improved practices did you apply to any of your vegetable crops in the last year? **Read list and circle code number of practices respondent says were used.**	Improved bed system ..... 1 Improved pit/heap systems2 Quality seed .....3 Organic fertilizer.....4 Compost preparation.....5 Multi storied cropping.....6 Relay cropping.....7 Multiple cropping.....8 Thinning.....9	Pruning..... 10 Mulching..... 11 Bagging..... 12 Stalking/sticking/trellis ..... 13 Non-chemical pesticides ..... 14 Artificial pollination..... 15 Weed management ..... 16 Water management..... 17 Other (Specify: _____) 18

Fish Production/Rearing

H11	In the last year did you or your household raise/rear any fish? **Circle code number of response.**	Yes..... 1 No..... 2 DNK..... 3 **If "No" or "DNK", go to H13**

H12	Which of the following improved fish production practices did your household use in the last year? **Read list and circle code number of practices respondent says were used.**	Testing water color to determine if food adequate..... 1 Maintaining stocking density..... 2 Species selection..... 3 Pond cleaning..... 4 Liming..... 5 Providing supplementary feed..... 6 Employing fish disease management..... 7 Using polyculture..... 8 Providing fish seed..... 9 Other (Specify: _____) 10
Livestock Production/Rearing		
H13	During the last 12 months, did you raise any livestock or poultry? **Circle code number of response.**	Yes raised livestock..... 1 Yes raised poultry..... 2 No..... 3 DNK ..... 4 **If "No" or "DNK", skip to H15**
H14	What improved practices do you apply in the last year to raising poultry and rearing livestock? **Read list and circle code number of practices respondent says were used.**	Improved breeding..... 1 Vaccination..... 2 Supplementary poultry feed..... 3 Fattening ..... 4 Artificial insemination..... 5 Supplementary poultry feed..... 6 Other (Specify: _____) 7
Technical support		
H15	Do you know where to go to get technical guidance for agriculture, livestock rearing, gardening, or pond/fish management? **Circle code number of response.**	Yes..... 1 No..... 2 DNK..... 3 **If "No" or "DNK", skip to I1**
H16	In the past year did you or any member of your household receive any type of assistance (technical, materials, financial) from any of the following sources? **Read list and circle code number of assistance type respondent says were used. Changed to yes/no in Bangla questionnaire.**	Neighbors/relatives/other farmers..... 1 Dept. of Agriculture ..... 2 Dept. of Fisheries..... 3 Department of livestock..... 4 NGO..... 5 Seed/pesticide companies ..... 6 Fish/poultry/livestock feed and pharmaceutical companies 7 Other (Specify: _____) 8

MODULE I. WATER AND SANITATION

		Codes
I1	What is the main source of drinking water for members of your household? **Circle code number of response. Prompt if necessary.**	Hand tube well 1 Tara pump 2 Deep tube well 3 Shallow tube well 4 Ring well/ indara 5 Pond 6 River/canal 7 Piped water 8 Pond sand filter 9 Rainwater harvesting system 10 Other (specify) _____ 11
I2	Is water normally available from this source? **Circle code number of response.**	Yes 1 No 2
I3	In the last two weeks was water unavailable from this source for a day or longer? **Circle code number of response.**	Yes 1 No 2
I4	How much time does it usually take to go to the drinking water source, get water, and come back? **Circle code number of response. Enter "0" if source is at house.**	0 (in or at house) 1 30 minutes or less 2 30 minutes to 1 hour 3 1 hour to 2 hours 4 2 to 3 hours 5 More than 3 hours 6
I5	If source is a tube well (hand, deep, shallow or Tara pump, has the well been tested for arsenic?	Yes 1 No 2 DNK 3 N/A 4 **If 2, 3, or 4, skip to I8**
I6	If tested, does the tubewell/Tara pump have arsenic?	Yes 1 No 2 DNK 3 **If "No" or "DNK", skip to I8**
I7	If yes, is it marked red or green?	Red 1 Green 2 Neither 3
I8	Does the household have access to a toilet facility?	Yes 1 No 2 **If "No", skip to J1**
I9	What kind of toilet facility do members of your households usually use? **Circle code number of response. Prompt if necessary.**	Ring-slab/offset latrine (water seal) 1 Ring-slab/offset latrine (water seal broken) 2 Pit latrine (covered) 3 Pit latrine (uncovered) 4 Septic latrine 5 Hanging/open latrine 6 Local adopted hygienic latrine 7
I10	Which members of your household use this toilet? **Circle code number of response.**	Male adults 1 Female adults 2 Male children 3 Female children 4 All 5

May I see your latrine?

Observe the latrine directly and record condition.

	Condition	Codes
I11	Is the latrine functioning?	Yes..... 1 No..... 2
I12	Does the latrine show signs of use?	Yes..... 1 No..... 2
I13	Is the latrine itself clean? For example, is the pan and slab (or place to sit while defecating) clean?	Yes..... 1 No..... 2
I14	Is the surrounding area of the latrine clean?	Yes..... 1 No..... 2
I15	Does the latrine have an unbroken water seal?	Good water seal..... 1 Broken water seal..... 2 No water seal..... 3
I16	Is there a hand washing station inside the latrine or within 10 paces of the latrine?	Yes..... 1 No..... 2 **If "No", skip to J1**
I17	Is there a cleansing agent at this hand washing station? (soap, detergent, ash or clay)	Yes..... 1 No..... 2

PART II. INFORMATION ON WOMEN'S EMPOWERMENT

(Respondent is an adult woman household member)

The questions in Part II should be asked of an adult woman member of the household without men present.

To help find a woman, see circled line numbers from column C7 of household roster. The preferred respondent is the female head of household or spouse of the male head of household.

MODULE J. RESPONDENT IDENTIFICATION FOR PART II

J1	Name of respondent: _____	
J2	Line number of respondent _____ **Record line number from Module C**	|___||___|
J3	Relationship to household head (see codes below)	Code

Codes for J3:

1= Household head, 2= Wife of household head, 3= Daughter, 4=Granddaughter, 5=Niece, 6=Mother, 7= Daughter in law, 8=Sister, 9=Sister-in-law, 10=Brother's wife.

Result code:

Completed=1, Incompleted=2,

MODULE K. INFORMATION ON WOMEN'S EMPOWERMENT

Decision making in household

The basic question: In the last year, to what extent have you been able to make the following kinds of decisions?

First read the possible responses.

1 = Can decide alone
2 = Can decide with husband or other adult male family member
3 = Husband makes decision after discussion with wife
4 = Not involved in decision
5 = Not applicable

Then list each item (K1 – K12) one-by-one and record code number of response.

	Type of decision	Code
K1	Buying small food items, groceries, toiletries	
K2	Buying clothing for yourself and your children	
K3	Spending money that you yourself have earned	
K4	Buying or selling major household assets (land, livestock, crops)	
K5	Buying or selling jewelry	
K6	Use of loans or savings	
K7	Expenses for your children's education	
K8	Expenses for your children's marriage	
K9	Medical expenses for yourself or your children	
K10	Expenses for family planning (contraceptives)	
K11	To move to shelter during time of disaster	
K12	Actively participate and involved in ***salish*** decision making	

Freedom of movement

Circle code number of response.

		Code
K13	Are you allowed to travel to the local market to buy things	Yes..... 1 No..... 2 **If "No" skip to K15**
K14	Can you go alone?	Yes..... 1 No..... 2
K15	Are you allowed to travel to a local health center or doctor	Yes..... 1 No..... 2 **If "No" skip to K17**

K16	Can you go alone?	Yes..... 1 No..... 2
K17	Are you allowed to travel to homes of friends in the neighborhood	Yes..... 1 No..... 2 **If "No" skip to K19**
K18	Can you go alone?	Yes..... 1 No..... 2
K19	Are you allowed to travel to a nearby mosque/shrine	Yes..... 1 No..... 2 **If "No" skip to K21**
K20	Can you go alone?	Yes..... 1 No..... 2

Earning of Cash Income

Circle code number of response.

		Code
K21	As you know, some women take up jobs for which they are paid in cash. Others sell things, have a small business or work on the farm or in the family business. In the last 12 months, have you done any of these things?	Yes..... 1 No..... 2 **If "No" skip to K23**
K22	If yes, did you earn any money from your work in the last 12 months?	Yes..... 1 No..... 2

Attitudes about family life

Now I would like to get your opinion on some aspects of family life. Please tell me if you agree or disagree with each statement.

Circle code number of response.

		Code
K23	The important decisions in the family should be made only by the men of the family.	Agree.....1 Disagree .....2 DNK/depends.....3
K24	If the wife is working outside the home, then the husband should help her with household chores.	Agree.....1 Disagree .....2 DNK/depends.....3
K25	A married woman should be allowed to work outside the home if she wants to.	Agree.....1 Disagree .....2 DNK/depends.....3
K26	The wife has a right to express her opinion even when she disagrees with what her husband is saying.	Agree.....1 Disagree .....2 DNK/depends.....3
K27	A wife should tolerate being beaten by her husband in order to keep the family together.	Agree.....1 Disagree .....2 DNK/depends.....3
K28	It is better to send a son to school than it is to send a daughter.	Agree.....1 Disagree .....2 DNK/depends.....3

Domestic Violence

		Code
K29	Sometimes a husband is annoyed or angered by things his wife does. In your opinion, is a husband justified in hitting or physically abusing his wife in the following situations? **List the situations one-by-one and circle the code number of the situation if the respondent says "yes".**	She goes out without telling him .....1 She neglects the children .....2 She argues with him.....3 She refuses to have sex with him.....4 She burns the food .....5 She does not obey elders.....6
K30	Did any female member of your household experience being yelled at or struck during the previous year? **Circle code number of response.**	Yes..... 1 No..... 2 DNK..... 3 Refuse to answer..... 4 **If "No", "DNK" or "Refuse to answer", skip to K35**
K31	What was the nature of this yelling or striking? **Circle code number of response.**	Physical.....1 Verbal .....2 Both physical and verbal.....3
K32	How often did incidences like this occur? **Circle code number of response.**	One time only.....1 Several times.....2 Often 3
K33	Was any assistance sought after these incidents? **Circle code number of response.**	Yes.....1 No.....2 **If "No", skip to K35**
K34	Did you get assistance from ….? **List all of the types one-by-one and circle the code numbers for which the respondent indicates "yes".**	A medical facility.....1 The police.....2 A lawyer or legal firm .....3 A relative, friend or neighbor.....4 A women's support group .....5 Other 6

Participation in Community Groups and Local Institutions

Which of the following groups are you a member of in your village?

Read list one-by-one and code number "1" if respondent is a member. If response is "yes" to any of the groups, ask the woman if she is a committee member or officer in the group.

K35	Savings or credit group	Member ..... 1 Committee Member/Officer ..... 2 Not a member ..... 3 1 = yes 2 = No
K36	Community agriculture or garden group	Member ..... 1 Committee Member/Officer ..... 2 Not a member ..... 3 1 = yes 2 = No
K37	Community health group	Member ..... 1 Committee Member/Officer ..... 2 Not a member ..... 3 1 = yes 2 = No
K38	Parent-Teacher Association or School Management Committee	Member ..... 1 Committee Member/Officer ..... 2 Not a member ..... 3 1 = yes 2 = No
K39	Mother's Group	Member ..... 1 Committee Member/Officer ..... 2 Not a member ..... 3 1 = yes 2 = No
K40	Women's support group	Member ..... 1 Committee Member/Officer ..... 2 Not a member ..... 3 1 = yes 2 = No
K41	UP General Committee	Member ..... 1 Committee Member/Officer ..... 2 Not a member ..... 3 1 = yes 2 = No
K42	UP Standing Committee	Member ..... 1 Committee Member/Officer ..... 2 Not a member ..... 3 1 = yes 2 = No
K43	Ward Shava	Member ..... 1 Committee Member/Officer ..... 2 Not a member ..... 3 1 = yes 2 = No
K44	Other_____	Member ..... 1 Committee Member/Officer ..... 2 Not a member ..... 3 1 = yes 2 = No
K45	Have you ever attended a Salish meeting in your village?	Yes ..... 1 No ..... 2 **If "No", skip to Module L**
K46	Did you speak at the meeting?	Yes ..... 1 No 2

PART III. INFORMATION ON CHILDREN 0-59 MONTHS OLD AND THEIR MOTHERS

(Respondent is the selected index child's mother)

MODULE L. RESPONDENT AND CHILD IDENTIFICATION FOR PART III

Selection of index child for height and weight measurement

Interviewer: List all of the children living in the household who are under 5 years of age, that is, those with circled line numbers in column C8 of Module C.

	Child's name
	Child 1 _____
	Child 2 _____
	Child 3 _____
	Child 4 _____

Then read the children's names to present household members and ask:
Are these all of the children 5 years old or younger living here?
If there are more children, add their names.

If there is only one child listed, this is the index child. If there is more than one child, use the "numbered papers in a container" method to randomly choose the index child and record the information about the child below.

	Name of index child: _____
L1	Line number of index child (from Module C) _____

Age verification of index child aged 0-59 months and identification of mother

I would like to ask you some questions about (NAME). I will need (NAME'S) vaccination or birth card.

L2	What is (NAME's) birth date? **Verify birth date on vaccination or birth card and fill in the day, month and year. If day is not known, enter '99'.** **If a vaccination or birth card is not available, ask the mother if she knows the birth date and if she does, enter it.** **If there is no birth date and the mother does not know it, use *the local calendar of events* provided in the training to approximate the month and year of birth (leave day of birth blank).**	A. Day …..…….. ☐☐ B. Month……..….. ☐☐ C. Year …..... ☐☐☐☐
L3	**Check birth date. Was child born December 2005 or later? Circle code number of response.**	Yes..... 1 No..... 2

If answer to L4 was "no" then choose another child randomly using the "paper in the container" method and determine the child's birth date until a child is found who was born December 2005 or later.

If there are no more children in the household, thank the household members present and end the interview.

If the child was born December 2005 or later, he or she is 0-59 months old, his/her mother is the respondent for the remainder of the questionnaire. Go to question L5.

Information on respondent for Part III

L4	Name of respondent: _____	
L5	Line number of respondent **Record line number from Module C**	
L6	Relationship to household head (see codes below)	Code
L7	How old are you? (years)	
L8	Are you currently pregnant? **Circle code number of response.**	Yes..... 1 No..... 2 DNK..... 3
L9	What is your level of education? (see codes below)	Code
L10	If the respondent is the caretaker of the child, write 99 in the box.	

Codes for L6:
1 = Household head, 2 = Wife of household head, 3 = Daughter, 4 = Granddaughter, 5 = Niece, 6 = Mother, 7 = Daughter in law, 8 = Sister, 9 = Sister-in-law, 10 = Brother's wife.

Codes for L9: 0 = No class, 1 = Class 1, 2 = Class 2, 3 = Class 3, 4 = Class 4, 5 = Class 5, 6 = Class,6 7 = Class 7, 8 = Class 8, 9 = Class 9, 10 = SSC pass, 11 = HSC pass, 12 = Graduate, 13 = Masters.

MODULE M. ANTENATAL CARE

Now I would like to ask you some questions about **your index child or your current pregnancy**.

Circle code number of response and follow arrowed skip codes.

		Codes	
M1	Did you see anyone for antenatal care during your **current or index child** pregnancy?	Yes ..... 1 No 2	M8
M2	Whom did you see?	Doctor ..... 1 Nurse/midwife ..... 2 Traditional birth attendant ..... 3 Community/village health worker ..... 4 Other 5	
M3	Where did you receive antenatal care for your current or index child pregnancy?	Your home ..... 1 Other home ..... 2 Government hospital ..... 3 Other Government health facility ..... 4 Private hospital/clinic ..... 5 Other Private health facility ..... 6 Other 7	
M4	How many months pregnant were you when you first received antenatal care for your last pregnancy?	Number of months ..... ☐☐ DNK 98	
M5	How many check-ups did you have during your pregnancy?	Number of visits ..... ☐☐ DNK 98	
M6	Do you have an antenatal card or a prescription sheet for your pregnancy? If yes: May I see it please?	Yes, Seen ..... 1 Yes, Not Seen ..... 2 No Card 3	M8
M7	**Verify number of antenatal visits** **Is the number of documented visits on the card different than the stated number of visits in M5?**	Same as stated ..... 1 Different than stated ..... 2 Note number of documented visits ☐☐	
M8	During your **(current/index)** pregnancy, do/did you take the same amount of food as you usually take or do/did you take more or less food than you usually take?	More food ..... 1 Less food ..... 2 Same as usual 3	
M9	During your **(current/index)** pregnancy, do/did you take as much daytime rest as you usually take?	More rest ..... 1 Less rest ..... 2 Same as usual 3	
M10	Did you receive Vitamin A within one and a half months of delivery of the child? **Interviewer: show her the red Vitamin A capsule**	Yes ..... 1 No 2	
M11	In your last pregnancy, did you take any iron and folic acid tablets like this? **Interviewer: show her the iron tablet**	Yes ..... 1 No 2	M13
M12	For how many months during your last pregnancy did you take iron and folic acid tablets?	1-2 ..... 1 3-4 ..... 2 5-6… ..... 3 > 6 4	
M13	Have you taken an iron and folic acid tablet in the last 7 days?	Yes ..... 1 No 2	

MODULE N. FOOD CONSUMPTION OF MOTHER

Now I would like to ask you **(mother)** about the types of foods that you **(mother)** ate yesterday during the day or at night. Please include all foods, including the foods eaten here at your house or somewhere else.

Read the list of foods one-by-one and record coded response.

		Code 1 = Yes 2 = No			Code 1 = Yes 2 = No
N1	**Any cereals**, e.g. rice, bread, wheat, wheat bread, rice flakes, puffed rice, barley, wheat grain, popcorn?		N8	**Any meat**, such as, liver, beef, poultry, lamb, pork, etc.?	
N2	**Any pumpkin, carrots, squash, or sweet potatoes** or vegetables that are yellow or orange inside?		N9	**Any eggs?**	
N3	**Any white potatoes, white yams** or other foods made from roots and tubers?		N10	**Any fresh or dried fish or shellfish?**	
N4	**Any dark green, leafy vegetables**, e.g., ipomoea, amaranth, spinach, parwar sag, and drumstick leaves?		N11	**Any legumes/pulses**, e.g. Bengal gram, black gram dal, lentil, Khesarl?	
N5	**Any other vegetables**, e.g. cucumber, radish, pepper, string beans, cabbage, cauliflower, radish, onion?		N12	**Any Milk or Milk products**, e.g. cow milk, buffalo milk, goat milk, yogurt, curd, cheese?	
N6	**Any ripe papaya, mangoes** or other fruits that are yellow or orange inside?		N13	**Any foods prepared using fat,,** e.g., oil, butter, dalda or ghee?	
N7	**Any other fruits**, e.g. banana, papaya, sithphal, grapefruit, apple, orange, jackfruit, jambu fruit, plums, melon, tomato, date, lemon, etc. ?		N14	**Any sugar or honey?**	

MODULE O. MOTHER'S HAND WASHING HABITS AND DISPOSAL OF CHILD'S FECES

Mother's hand washing habits

		Codes
O1	Please mention all of the times when it is important to wash your hands. **Circle the code number of the hand washing occasion only if the mother mentions it. After she is finished, prompt two times: Any other times?**	Before eating ..... 1 After eating ..... 2 Before praying ..... 3 Before breastfeeding or feeding a child ..... 4 Before cooking or preparing food ..... 5 After defecation/urination ..... 6 After cleaning a child that has defecated/changing a child's diaper ..7 When my hands are dirty ..... 8 After cleaning the toilet or potty ..... 9 Other (specify) _____ ..... 10 DNK 11
O2	Can you please show me where members of your household most often wash their hands? **Observe and circle response code.**	Inside/within 10 paces of the toilet facility ..... 1 Inside/within 10 paces of the kitchen/cooking place ..... 2 Elsewhere in home or yard ..... 3 Outside yard ..... 4 No specific place ..... 5 No permission to see ..... 6 **If 5 or 6, skip to O5**

O3	Is water present at the place? **Observe. If there is a tap or pump see if water comes out. If there is a container, see if water is in it. Circle response code.**	Yes ..... 1 No 2
O4	Is soap, detergent, ash or clay present at the place? **Observe. Circle all response codes that apply.**	None ..... 1 Bar soap ..... 2 Detergent (powder/liquid/paste) ..... 3 Liquid soap (including shampoo) ..... 4 Ash or clay 5

Disposal of child's feces

		Codes
O5	The last time (NAME) passed stool, where did he/she defecate? **Circle code number of response.**	Used potty ..... 1 Used washable diaper ..... 2 Used disposable diaper ..... 3 Went in his/her clothes ..... 4 Went in house/yard ..... 5 Went outside of house/yard ..... 6 Used latrine ..... 7 **If 7 skip to P1**
O6	The last time (NAME) passed stool, where were his/her feces disposed? **Circle code number of response.**	Dropped into toilet facility/latrine ..... 1 Buried ..... 2 Put into container for trash ..... 3 In yard ..... 4 In sink or tub ..... 5 Thrown into waterway ..... 6 Washed or rinsed away ..... 7 Left at the same place where the child defecated ..... 8 Threw it away to bush/outside of the house ..... 9 **If 1-6, 8, 9 skip to P1**
O7	If "washed or rinsed away", probe where the waste water was disposed. **Circle code number of response.**	Dropped into toilet facility ..... 1 Put into container for trash ..... 2 In yard ..... 3 Outside of yard ..... 4 Into sink or tub ..... 5 Thrown into waterway 6

MODULE P. FEEDING OF CHILDREN 0-23 MONTHS

Check the index child's birth date (question L2). Was the child born in December 2008 or later? If so, he/she is 0-23 months. If not, skip to Module S.

To mother: Now I would like to ask you about what your child eats and drinks.
Circle the code number of the response and follow the arrowed skip codes.

		Codes	
P1	Has (NAME) ever been breastfed?	Yes.....1 No.....2 DNK.....3	 P3 P3
P2	Was (NAME) breastfed yesterday during the day or at night?	Yes.....1 No.....2 DNK.....3	
P3	Now I would like to ask you about some medicines and vitamins that are sometimes given to infants. Was (NAME) given any vitamin drops or other medicines as drops yesterday during the day or at night?	Yes.....1 No.....2 DNK.....3	
P4	Was (NAME) given any oral rehydration solution yesterday during the day or night? (salt/sugar saline, Labon-gur, packet saline, rice poser)?	Yes.....1 No.....2 DNK.....3	

Child's consumption of liquids

Read the questions below. Read the list of liquids one by one and mark "Yes" or "No" or "DNK". After you have completed the list, next ask question P6 in the far right hand column for items B, C and F if the respondent replied "Yes" for them.

		Codes			
					P6
P5	Next I would like to ask you about some liquids that (NAME) may have had yesterday during the day or night. Did (NAME) have any … **Read the list of liquids starting with "plain water"**	Yes	No	DNK	How many times yesterday during the day or at night did (NAME) consume any…. **Only if the child consumed the item. Record "99" for "DNK"**
A	Plain water ?	1	2	3	
B	Infant formula/baby formula bought with money?	1	2	3	|__|__| Times
C	Milk, such as tinned, powdered or fresh animal milk?	1	2	3	|__|__| Times
D	Juice or juice drinks?	1	2	3	
E	Clear broth?	1	2	3	
F	Yogurt?	1	2	3	|__|__| Times
G	Thin porridge?	1	2	3	
H	Any other liquids?	1	2	3	

Child's consumption of solids

As the respondent recalls foods, in the table below circle the response in the column next to the food group. If the food is not listed, write it down in the "OTHER FOODS" box.

Ask the mother: Please describe everything that (NAME) ate yesterday during the day or night, whether at home or outside the home.

Use these probes.

(a) Think about when (NAME) first woke up yesterday. Did (NAME) eat anything then?
IF YES: Please tell me everything (NAME) ate then … anything else**?**
Keep asking until respondent indicates nothing else. Then continue to question (b).

(b) What did (NAME) do after that? Did (NAME) eat anything then?
IF YES: Please tell me everything (NAME) ate then… anything else?
Keep asking until respondent indicates nothing else.

Keep repeating question (b) until the respondent says the child went to sleep until the next day.

If respondent mentions anything like a porridge, sauce or stew, probe:
(c) What ingredients were in that (MIXED DISH)? … Anything else?
until respondent indicates nothing else.

P7	OTHER FOODS **Write in other foods mentioned by mother, not listed below, here.**	**Interviewer: Indicate here whether there were any foods filled in in the box?** Yes..... 1 No..... 2

		Codes			
P8			YES	NO	DNK
A	Any cereals: porridge, bread, rice, noodles, or other foods made from cereals	A ……..			
B	Pumpkin, carrots, squash or sweet potatoes that are yellow or orange inside	B ……..			
C	White potatoes, white yams, manioc, cassava, or any other foods made from roots	C ……..			
D	Any dark green leafy vegetables, such as ipomoea, amaranth, spinach, parwar sag, and drumstick leaves	D ……..			
E	Ripe mangoes, ripe papayas or other fruits that are yellow or orange inside	E ……..			
F	Any other fruits or vegetables	F ……..			
G	Liver, kidney, heart or other organ meats	G ……..			
H	Any meat, such as beef, pork, lamb, goat, chicken, or duck	H ……..			
I	Eggs	I ……..			

		Codes			
J	Fresh or dried fish, shellfish, or seafood	J ……..			
K	Any foods made from beans, peas, lentils, nuts or seeds, such as Bengal gram, black gram, dal, Khesari	K ……..			
L	Cheese, yogurt, curd or other milk products	L ……..			
M	Any oil, butter, dalda or ghee or foods made with any of these	M ……..			
N	Any sweet foods such as honey, chocolates, sweets, candies, pastries, cakes or biscuits	N ……..			
O	Condiments for flavor, such as chilies, spices, herbs, or fish powder	O ……..			
P	Grubs, snails, or insects	P ……..			
Q	Foods made with red palm oil, red palm nuts, or red palm nut pulp sauce	Q ……..			
	Check categories A-Q. **If all are "No" go to P9** **If at least one is "Yes" or all are "DNK" go to P10**				

		Codes	
P9	Did (NAME) eat any solid, semi-sold, or soft foods yesterday during the day or at night?	Yes.....1 No.....2 DNK.....3 **If yes, probe: What kinds of foods did (NAME) eat? Go back to P8 and record foods eaten. Then continue with P10.**	P11 P11
P10	How many times did (NAME) eat solid, semi-solid, or soft foods other than liquids yesterday during the day or night?	Number of times …….. |__|__| DNK.....98	
P11	Did (NAME) drink anything from a bottle with a nipple yesterday during the day or night?	Yes.....1 No.....2 DNK.....3	

MODULE Q. IMMUNIZATION OF CHILDREN 0-23 MONTHS

Circle the code number of the response and follow the arrowed skip codes.

		Codes	Skip
Q1	Does the mother have a vaccination card for (NAME)? Have you seen it?	Yes, Seen ..... 1 Yes, Not Seen ..... 2 No Card 3	Q4
Q2	**(1) Copy vaccination date for each vaccine from the card.** **(2) Write "44" in "Day" column if card shows that a vaccination was given but no date is recorded.**	Day Month Year BCG..... ☐☐ ☐☐ 20 ☐☐ P0..... ☐☐ ☐☐ 20 ☐☐ P1..... ☐☐ ☐☐ 20 ☐☐ P2..... ☐☐ ☐☐ 20 ☐☐ P3..... ☐☐ ☐☐ 20 ☐☐ D1..... ☐☐ ☐☐ 20 ☐☐ D2..... ☐☐ ☐☐ 20 ☐☐ D3..... ☐☐ ☐☐ 20 ☐☐ MEA..... ☐☐ ☐☐ 20 ☐☐	**Skip to Q10 If all vaccines given and recorded in card**
Q3	Has (NAME) received any vaccinations that were not recorded on this card? **Record "Yes" only if respondent mentions BCG, POLIO 1-3, DPT 1-3, and/or measles vaccine(s)** **After this question skip to Q10**	Yes..... 1 **Probe for vaccinations and write "66" in the corresponding day column in Question Q2** No..... 2 DNK..... 3	**Q10** **Q10** **Q10**
Q4	Please tell me if (NAME) received any of the following vaccinations: A BCG vaccination against tuberculosis, that is, an injection in the left shoulder that caused a scar?	Yes..... 1 No..... 2 DNK..... 3	
Q5	Polio vaccine that is, drops in the mouth?	Yes..... 1 No..... 2 DNK..... 3	Q7
Q6	How many times did (NAME) receive polio vaccine:	Times	
Q7	DPT vaccination, that is, an injection given in the thigh or buttocks, sometimes at the same time as polio drops?	Yes..... 1 No..... 2 DNK..... 3	Q9
Q8	How many times?	Number of times	
Q9	An injection given to prevent measles after 9 months of age?	Yes..... 1 No..... 2 DNK..... 3	

Q10	Has (NAME) received a vitamin A capsule like this in the last 6 months? **Check vaccination card if available. Show blue and red Vitamin A capsules as either may have been given depending on child's age.**	Yes..... 1 No..... 2 DNK..... 3	
Q11	Are you or someone else adding any Moni-mix or other sprinkles packets into (NAME's) food?	Yes..... 1 No..... 2 DNK..... 3	

MODULE R. DIARRHEA AMONG CHILDREN 6-23 MONTHS

Check the index child's birth date (question L2). Was the child was born between December 2008 and June 2010? If so, he/she is 6-23 months. Proceed to ask the questions below. If not, skip to Module S.

Circle the code number of the response and follow the arrowed skip codes.

		Codes	Skip
R1	Has (NAME) had diarrhea (having 3 or more loose stools in 24 hours) in the last 2 weeks?	Yes..... 1 No..... 2	S1
R2	Now I would like to know how much (NAME) was given to drink during the diarrhea (including breastmilk). Was he/she given less than usual to drink, about the same amount, or more than usual to drink? **If "less", probe**: Was he/she given much less than usual to drink or somewhat less?	Much less ..... 1 Somewhat less..... 2 About the same ..... 3 More..... 4 Nothing to drink..... 5 DNK..... 6	
R3	When (NAME) had diarrhea, was he/she given less than usual to eat, about the same amount, more than usual, or nothing to eat? **If "less", probe**: Was he/she given much less than usual to drink or somewhat less?	Much less ..... 1 Somewhat less..... 2 About the same ..... 3 More..... 4 Nothing to drink..... 5 DNK..... 6	
R4	**Re-verify breastfeeding status of (NAME).** Are you breastfeeding (NAME)**?**	Yes..... 1 No..... 2	R6
R5	Did you continue to breastfeed (NAME) during diarrhea?	Continued..... 1 Did not continue..... 2	
R6	Was anything given to (NAME) to treat the diarrhea? **Circle the number of the responses mentioned.**	Home made (sugar/salt) saline …1 Home made (Labon-gur) saline……..... 2 Packet saline..... 3 Rice poser..... 4 Pill/capsule/syrup ..... 5 Injection ..... 6 Intravenous..... 7 Home remedies/herbal medicine/ plants..... 8 Plain drinking water..... 9 Did not give anything..... 10 Others (Specify)..... 11	

MODULE S. HEIGHT AND WEIGHT OF CHILD 0-60 MONTHS AND MOTHER

ALL children 0-60 months should be weighed and measured as part of this module.

Request permission of the respondent to measure her height and weight and that of the index child.

		Codes
S1	**Write in the birth date of the child from Question L2**	Day ..... ☐☐ Month ..... ☐☐ Year ..... 20 ☐☐
	If the child was born in December 2008 or later, he/she is 0-23 months. **Measure length of child lying down.** **If the child was born November 2008 or earlier, he/she is 24 months or older. Measure standing height.**	
S2	Sex of child	Male ..... 1 Female 2
S3	Height or length of child in centimeters	☐☐☐ centimeters
S4	Height of mother **(or respondent)** in centimeters	☐☐☐☐ centimeters
S5	Weight of child and mother **(or respondent)** weighed ***together*** (in kilograms)	☐☐☐ kilograms
S6	Weight of the mother **(or respondent)** ***only*** (in kilograms)	☐☐☐ kilograms
S7	Date measured/weighed	Day ..... ☐☐ Month ..... ☐☐ Year ..... 20☐☐
S8	Result for child **Circle code number**	Child measured ..... 1 Child sick ..... 2 Child not present ..... 3 Child refused ..... 4 Mother refused ..... 5 Other(Specify: _____) 6

I

Signature or thumb print of respondent _____

	RECORD TIME THE INTERVIEW ENDED.	HOUR ..... MINUTES .....

Annex V: Guidelines and tools for MSS, KII and FGD

Component 1: institutional capacity assessment

The MSS (section 1) will be applied to 172 Union Parishads (UPs) in 11 districts through facilitated self-assessment sessions. In addition, facilitators will organize at least 20 key informant interviews (KIIs) to support the analysis of the MSS results, randomly selected from the final list of UPs (section 2). The final number of KIIs will be determined based on the logistical planning for the qualitative work. The topical outlines for the KIIs (annex 2) will follow the structure of the MSS and will probe on issues of governance and organizational change.

Component 2: climate change and disaster risk

The community-based qualitative techniques[42] on climate-related shocks and stresses, and changing disaster risk will be organized in 16 villages randomly chosen from the villages selected for the quantitative survey; 4 villages per region. In each village, a half-day combination of the techniques will be applied in the selected villages using a Focus Group Discussion (FGD) format. The FGDs will be stratified by gender (male/female) and WBA status (poor/extreme poor). This means that in each region two of the four FGDs will be with males and two will be with females; and two will be with individuals from extreme poor households and two from poor households.

Community-based qualitative techniques	
Focus group discussions format (FGD)	Semi-structured group discussions with 5-10 participants; male or female, no mixed groups; 1 facilitator with same gender as the FGD participants; 1 note takers/observer, ideally also same gender as FGD participants (section 3)
A. Trend analysis (TA)	Seasonal calendar are very useful means of generating information about seasonal trends within the community and identifying periods of particular stress and vulnerability. Variables can include: rainfall, crop sequences, labor demand, availability of paid employment, out-migration, incidence of human diseases, expenditure levels, and so on. Seasonal calendars are also useful as a climatic baseline and to make people aware of trends and changes over time. (section 4)
B. Vulnerability matrix (VM)	Focus of the VM is to determine the hazards that have the most serious impact on important livelihoods resources, which livelihoods resources are most vulnerable and to identify coping strategies currently used to address the hazards identified (section 5)
C. Problem, Impact, Solution (PIS)	PIS is a technique used to organize and summarize the information from the focus group discussion. It reviews what the main problems are, what the impact of those problems are at the individual/household/community levels, and what solutions could be proposed to address these problems (section 6)

1: SHOUHARDO II Management Score Sheet for Union Parishad

Purpose of the Management Score Sheet (MSS)

The main purpose of the using the Management Score Sheet (MSS) is to assess the institutional capacity of the 172 Union Parishads (UP) involved in the implementation of SHOUHARDO II. Following the assessment of institutional capacity undertaken as part of the SHOUHARDO II baseline, the MSS will be undertaken on an annual basis by SHOUHARDO II staff.

The MSS has specific themes with a series of questions and assigned scores to measure the performance and management capacity of the partner institutions as it pertains to SHOUHARDO II program implementation. The MSS is applied through a participatory self-assessment process involving key representatives of the project partners, which will be facilitated by designated SHOUHARDO II staff. The completed MSS score sheet (duly signed/ approved) will be submitted to the RMEM for data entry, processing, analysis and sharing with the Regional Management Team with a copy to CBHQ to determine change in institutional capacity of the SHOUHARDO II partners.

42 Adapted from CARE's Climate Vulnerability and Capacity Assessment and WVI's Resilience Framework

Instructions to the facilitators:

- Read the instructions, including the extra guidelines for the questions, carefully prior to using the tool and ensure that you understand them.
- Organize the participation of UP members and executives in advance and re-confirm their presence of prior to the session.
    a. Preferred/invited attendance: all 13 UP members and executives
    b. Minimum attendance: nine UP members and executives; including at least (1) two women, (2) the chairperson or his/her designate and (3) the secretary. Every effort must be undertaken to achieve the minimum attendance, including follow up by phone in the days prior to the MSS, and follow up and patience on the day of the MSS
    c. If despite the best efforts, the minimum attendance is not achieved, the facilitator may still proceed with the MSS if seven UP members and executives are present, including at least (1) two women, (2) the chairperson or his/her designate and (3) the secretary.
    d. If less than 7 UP members and executives are present, the MSS must be rescheduled
    e. In case of (c) and (d), MITRA will investigate and follow up with the UP
- Inform the participants that the assessment is aimed at helping the SHOUHARDO understand the UPs institutional capacity, and to determine characteristics, key issues and challenges faced by UPs in the project areas. The MSS findings will help SHOUHARDO II technical and management teams at regional and central levels to make the right decisions around intervention design and implementation. Do not in any way raise the impression that this is a performance evaluation that will result in the labeling of UPs as 'good' or 'bad'. Also, do not in any way raise expectations that the findings of the MSS will result in funding or other benefits for the UPs.
- Create an enabling environment for meaningful participation and facilitate interactive participation during the session. All participants must feel comfortable to give honest answers to the questions posed, and to express their opinions and concerns.
- Pose questions clearly and succinctly. Facilitate short discussion to achieve consensus on the answer. Once the answer has been provided, move on to the next question. Minimize any deviation from the MSS questions. Instead, use KIIs to have a more open discussion around broader issues
- During the session, synthesize the responses by entering the appropriate scores in the box. Do not mark the answer until you are certain that there is consensus.
- Each question has an assigned score for partner responses. The weighted score is calculated by multiplying the score with the weight. The aggregation of all questions gives a total of 100 percent score. A calculated average from the different categories of respondents will be used to generate the final score for the bi-annual score results.

Categorization of Union Parishad and PNGO scores will be as follows:

Percentage	Performance Zone	Status
49% and below	Red	Poor
50%-74%	Orange	Moderate/Fair
75% and above	Green	Good

Management Score Sheet for Union Parishad and PNGOs

General Information:

1. Name of UP: _____
   _____
2. UP contact person/address: _____
   _____
   _____
   _____
3. Date of interview (dd/mm/yy): _____
4. Name of facilitator: _____
5. Name of note taker: _____

6. Name UP Participants	M/F	7. Designation(s)
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		

Item/ Variables	Max Score	Weight	Max weighted Score	Score given	Score Given x weight	Means of verification / comments
1. UP regularly conducts proper planning meetings, progress review meetings and special meetings. ***When did you organize your last planning meeting / progress review meeting / special meeting?*** *Planning meeting in last quarter=1 pt* *Progress meeting in last quarter=1 pt* *Special meeting in last quarter =1 pt* *No meetings in last quarter =0 pts*	3	**4**	12	3	12	UP should have served notice, minutes of these meetings with attendance lists exist
2a. In the last quarter, the monthly UP Coordination meetings were attended by two thirds of the member / executives, and at least one NBD representatives. ***2a. In the last quarter, were UP Coordination meetings organized on a monthly basis?*** *If yes 2a = Y (go to 2b)* *If no 2a= NO then 2b=0, GO TO 3*	---------	---------	---------	Y	---------	
2b. In the last quarter, who attended the monthly UP Coordination meetings? *Two-thirds (9) UP attendance at ALL meetings =1 pt* *At least one NBD attendants at ALL meetings =1 pt* *No=0 pts*	2	**3**	6	0	0	UP should have served notice, and minutes and participants records lists are available that reflect member/ executive and NBD representative attendance.
3. UP ensures that female UP members participated in the planning meetings for the current annual work plan; and women's issues are incorporated (activities targeted directly at women) in the annual work plan. ***How many women (regularly) participated in the planning meetings for the current annual work plan?*** ***What kind of women's issues were incorporated in the last annual work plan?*** *At least 2 women participated in the planning meetings=1 pt* *Gender issues incorporated=1 pt* *No=0 pts.*	2	**5**	10			Participants record / Annual work plan should reflect the incorporation of women issues.

4. UP ensures that (selected) standing and other committees are formed and vulnerable people are co-opted as members. ***How many relevant committees have been established?*** ***For each committee, were vulnerable people (VGF/VGD) co-opted as members?*** *Each selected committee formed= 1, Vulnerable people co-opted in each selected committee=1 pt* *No=0 pts.* *NOTE:* *1 point extra if all 13 standing committees are formed* *1 point extra if vulnerable people are co-opted in all 13 standing committees* *NOTE: PLEASE ALSO CIRCLE THE COMMITTEES MENTIONED IN THE RIGHT COLUMN* *NOTE2: IF DMC IS SELECTED, PLEASE STATE WHETHER COMMITTEE IS COMPLETE (37 MEMBERS): Y/N*	12	**1**	12			Three standing committees: 1. Women and child welfare 2. WATSAN 3. Education Two other committees: 4. DMC |_| 100% 5. NNPC UP records show that VGF/VGD individuals are committee members
5. In the last year, UP representatives participated in the CAP[1] process and implementation of CAP community initiatives. ***In the last year, did UP representatives participate in CAP processes?*** ***In the last year did UP representatives participate in CAP community initiatives?*** *Participated CAP process=1 Participated Community initiatives=1* *No=0 pts.*	2	**4**	8			Evidence is available that UP provides technical assistance and resource support to VDCs
6. In the last quarter, UP Chairman (exclusively) participated meaningfully in all monthly UDCC[2] meetings. ***In the last quarter, how many UDCC meetings did your UP participate in and who attended?*** ***What issues were raised by your UP at the UDCC meeting?*** *Chairperson participated in all UDCC meetings =1* *Chairperson raised key issues =1* *No=0 pts*	2	**4**	8			UP chairperson participates in every monthly meeting. Meaningful issues raised by UP are evidenced by meeting minutes

7. UP received capacity building support from CARE SHOUHARDO II in the last year. ***In the last year, did your UP receive capacity building support from CARE SHOUHARDO II?*** *Yes=1 pt* *No=0 pts*	1	**3**	3			Can explain the SHOUHARDO II objective, evidence of training/material received-
8. UP undertook capacity building initiatives for VDCs in the last year based on training received from CARE SHOUHARDO II ***In the last year, did your UP undertake any capacity building for VDCs based on training received the UP from CARE SHOUHARDO II?*** *Yes=1 pt* *No=0 pts*	1	**3**	3			Example/ evidence of the initiatives undertaken
9. UP organizes and participates in observations of 5 selected National days. ***For which national days did your UP organize observations and did UP members participate in?*** *Each day observed/participated in=1 pt* *No=0 pts* *NOTE: PLEASE ALSO CIRCLE THE NATIONAL DAYS MENTIONED IN THE RIGHT COLUMN*	5	**1**	5			Only these days: 1. Immunization 2. Women 3. NDPD 4. Health 5. Sanitation
INSTRUCTION: If in Q4, DMC was not selected as an existing UP committee – the questionnaire ends here. Please score Q10-14 as '0'						
10. UDMC has available and utilized up to date Risk and Resource Mapping following the standard guidelines from CARE/ government ***Has your UDMC developed a Risk and Resource Map following the standard guidelines from CARE/government?*** ***If yes, when was it developed or last updated?*** ***How has the Risk and Resource Map been utilized in your UP in the last year?*** *Up to date mapping available=1 pt,* *Up to date mapping utilized =1* *No=0 pts.*	2	**6**	12			UP DMC can provide an example of a recently completed Risk and Resource Map Utilized= awareness raising, capacity building of VDCs in the last year Up to date= developed/ updated in the last year (2010) See criteria

11. UDMC has available and updates the disaster contingency Action Plan at 6 month intervals. ***Do you have a disaster contingency Action Plan?*** ***When was the Action Plan updated?*** *Action Plan available=1 pt* *Updated Action Plan updated=1 pt* *No=0 pts*	2	**4**	8			UP DMC should provide evidence of the updated disaster contingency Action Plan. Updated = plan was developed or reviewed in the last 6 months (July – Dec 2010) See criteria
12. In the last six months, UDMC (full committee – all members) organized bi-monthly meetings (according to standing order for disaster management (SOD) of GoB) ***In the last six months (July-Dec 10) how many DMC meetings were organized and when were they held?*** ***How many members does the UP DMC have? How many members participated in each meeting?*** *Meetings held according to SOD=1 pt* *Full members attended each meeting=1pt* *No=0 pts.*	2	**1**	2			UP DMC meeting notices and meeting minutes
13. UDMC organizes simulation/drills and/or awareness activity to prepare the community for disasters and make the community people aware. ***In the last year, what types of activities have you organized to prepare communities for disasters and/or raise awareness?*** ***When did you organize these activities?*** *Organize at least once in the last year=1 pt* *Organized at least once a quarter =1 pt* *No =0 pts.*	2	**4**	8			Evidence that UP/PNGO DMC regularly organizes simulation/drills and/or awareness activities that highlight local coping mechanism to prepare the community for disasters.
14. UDMC early warning and forecasting system is operational. ***Does your UP currently have an operational early warning and forecasting system?*** *Yes=1 pt* *No=0 pt*	1	**3**	3			Evidence that warning and forecasting system exist. (Trained Vol. & Equipments.) See criteria
TOTAL			**100**			

2: Key Informant Interviews

Draft Topical Outline for KII Data Collection

Location (Village/UP/Upazilla)_____

Name of the UP _____

Name of key informant _____

Gender _____**M**_____**F**

Role/job description of key informant _____

Facilitator _____ **Recorder**_____

Number of people in group discussion: _____

Date _____ __

Duration of discussion: _____ **minutes**

NOTE: What follows is not a list of formal interview questions, but an outline to guide the key informant interview. Explain that the discussion will take about 1 ½ hours.

UP ROLE AND PERSONAL ROLE/INVOLVEMENT

1. Institution. What is the mandate of your organization? What area do you cover? What types of activities does your UP do?
2. Roles/responsibilities. What is the nature of your work? What is your work load like? Who reports to you and who do you report to? Please describe a typical day
3. Duration and reasons for engagement. When did you start? Why did you apply for/take this job? Why do you do this type of work?

UP DECISION MAKING (INTERNAL ARRANGEMENTS)

Probe for planning/management/HR/progress review meetings

1. Financial decisions: amount of funding held? Sources? Who keeps the money? How is money requested? How is money spent? Who is involved?
2. Management decisions
3. Meeting process. What types of planning meetings are you involved in? How often are these organized? How are these meetings announced? Is there any way to provide input to the meeting agenda? Who else is attends these meetings? How many people are involved? Please describe the type of interaction between meetings participants – is it formal or informal? Who makes the final decisions in these meetings? How are meeting decisions carried out?
4. Gender. How many women/men are involved in these meetings? Are there any differences in the types of meetings than men/women are involved in? Are there any differences in the types and number of inputs men and women provide in the meetings they are involved in? Are there any differences in the types and number of decisions made by men and women in the meetings they are involved in? Are there any meetings where women/men are purposively excluded?

PARTNERSHIPS (EXTERNAL ARRANGEMENTS)

1. Partnerships. Who are the main partners (government, civil society, private sector) that you deal with in your work? What is the nature of the partnership?

For each main partnership (probe for community partnerships, if not mentioned):

2. Partnership development. How was the partnership developed? Which partner took the lead/initiated the partnership? Why?
4. Benefits. What are the benefits for the partners involved?
5. Cost of participation by partners. Were there any (unforeseen) costs of the partnership (bribery, higher investment than expected, unexpected costs, conflict, other problems)
6. Problems in partnership. Were there any problems in the partnership working relationships? Why? When? How were these resolved?
7. Change in partnership. Was there any change in the partnership? Why? When did this occur?

COMMUNITY ENGAGEMENT (If not discussed before)

1. Community issues. What types of community issues do you deal with? What types of community issues are you most concerned about? What types of community issues do you spend the most time on? How are community needs/issues inventoried and prioritized? Who do you think are the most vulnerable among the communities you work with? Why? How do you address these issues through your work?
2. Decisionmaking/Meetings. How often do you meet with community representatives? What types of community representatives have you met with? Where do these meetings take place? Who attends these meetings? Would you consider these meetings formal or informal? What types of issues are discussed? What types of decisions are taken, if any? Are there any records of the meeting discussions? Are these records shared with the community representatives? What types of follow up are there after the meeting?
3. Community visits. When is the last time you visited a community for work? What was the purpose of this visit? Who else from your institution attended? Who did you meet in the community? Was there an agenda for your visit? Was there an opportunity for community members to raise other concerns with you? What was decided after the visit? What follow up was there after the visit? When is a next visit planned?
4. Progress made/result. What has changed? Any good practices? Any bad practices? Why? Innovative approaches?
5. Satisfaction. What do you consider indicators of satisfaction? How satisfied do you think community members are with the work your institution does? Please elaborate on the satisfaction level? How do you know this? Is there any formal/informal channel for community members to express their (dis)satisfaction? How does your institution deal with complaints or compliments? Can you give a recent example?

ORGANIZATIONAL EVOLUTION OF THE INSTITUTION

1. Institution. What organizational changes have occurred in the last year? Have procedures/policies been changed? Have decision-making responsibilities changed? How? Why?
2. Performance. How is performance of staff measured? How is organizational performance measured? Do you have KPIs? What types of external assessments (i.e., audits) have been undertaken in the last year? What were the results of these assessments? Was there any follow up? Has anything been changed since those assessments?
3. Future outlook. What types of institutional changes are planned in the next year? Why? Who was involved in the decision to do this? What do you think should be changed to improve the performance of your organization? Are there any management/capacity gaps? Why? Are there channels for you to communicate this within your institution? Do you think these things will de addressed/changed? Why (not)? What do you think your organization will look like in 5 years? In ten years? Who will be involved in this? Will you still be working here then?

3: Focus Group Facilitation Field Guide

Before Going to the Community

Plan carefully

1. Acquire background information before going to the field. Be aware of community or group history, past or present conflicts and power dynamics which may be important in selecting focus groups or in facilitating dialogue.
2. Prepare the agenda for the community visits. The agenda should ensure that participants are able to move at their own pace, but that the required ground will be covered in the available time.
3. Find out about literacy levels in advance if possible to ensure that you plan exercises accordingly.
4. Don't forget to allow time for clarification, questions and answers, discussion and 'learning moments'.
5. Keep in mind that community members are very busy, so visits should be kept short and be spaced out over time as much as possible so as not to take too much time away from their regular activities.
6. Plan to provide refreshments when appropriate.
7. Decide on focus groups.
8. Ensure that facilitators are functional in local dialects.

Get support of community leaders

1. Explain purpose of fieldwork and get their permission to work in the community.
2. It may be helpful to have a preparatory meeting bringing together local stakeholders, including community leaders, local government representatives, CBOs, and other local organizations to explain the approach and its benefits and to plan the timing of the community visits.
3. Review the agenda with stakeholders to clarify objectives, how much time will be needed, and where the discussions will take place (ensure that this is an appropriate venue which is accessible and comfortable for women or other less mobile community members).
4. Agree on focus groups. If enough facilitators are available, it may be helpful to have concurrent sessions in the same community to allow participants in different groups to speak freely without being concerned about being heard by other groups.
5. Decide how information on focus group discussions will be communicated to participants.
6. Agree who will introduce the facilitators to the communities.

Be prepared

1. Ensure the objectives of the community visits are agreed among all members of the analytical team.
2. All facilitators must have a good grasp on the tools and analytical methodology. It may be helpful to practice facilitating the tools before going to the communities.
3. If you are working as a facilitator team, decide who will actively facilitate which parts of the agenda, and who will take notes.
4. The facilitation team should include both men and women, and should be trained in gender-sensitive facilitation. In some contexts it is very important to have female facilitators work with women's groups to increase comfort.
5. Agree with co-facilitators on how concepts such as hazard, livelihood resources, etc. will be described in local languages.

Note that the concept of climate change may be difficult to explain. Community members may be more comfortable talking about seasons, weather, the environment, etc.

Be ready to handle conflict.

1. The process can draw out issues of inequality that need to be addressed in order to reduce vulnerability. With these issues, facilitators must tread carefully, as there are generally established levels of power and influence within communities, or between communities and other groups.
2. Having a grasp on conflict resolution techniques will help facilitators manage the process should any conflicts arise.
3. Engaging a wide range of stakeholders in the gathering and analysis of information can assist in mitigating conflicts.

Ensure you have the materials you need.

These may include:

- Flipchart paper
- Thick-tipped markers in a variety of colours
- Coloured paper
- Masking tape
- Local materials such as stones, sticks, seeds, etc.
- Recording device (with permission and ensure that this is culturally appropriate)
- Camera to document the process (with permission and ensure that this is culturally appropriate)
- Notebook and clipboard
- Snacks/lunch/water (depending on how much time the meeting will take, and where it will take place)

During the Focus Group Discussions

Prior to the start of the discussion, take note of number of participants and location and positioning of participants and facilitator/note taker. During the discussion the note taker should take note of facial expressions and changing physical demeanors as the discussion progresses.

Manage expectations

It is important to manage expectations during the fieldwork. Communities have often been "assessed" many times for different projects, and may have expectations that the fieldwork will lead to a project or program. Facilitators should be aware of this, both because it may influence the issues that are raised in the discussions, and to ensure that expectations are not being raised for follow-up projects.

Create and maintain a trusting and 'safe' space

- Allow a trusted community member or local representative to introduce the team.
- Be gracious and welcoming.
- Allow everyone to introduce themselves.
- Ask permission to take photographs or video, and refrain if participants are uncomfortable with it.
- Provide refreshments if appropriate.
- Value participants' knowledge and experience
- Interrupt any "attacks".
- Admit to and correct your errors.
- Be impartial.
- Allow time for participants to ask questions.

Animate and balance participation

- Ensure that the venue is conducive to participation.
- Develop ground rules with the participants.
- Explain the process and ensure that all understand instructions and questions.
- Support those that are timid, and gently silence those that take the floor too much or consider themselves "experts"
- Find ways to allow people to drive the process (e.g. building the map themselves, marking symbols on the matrix).
- Allow participants to raise issues, but keep the process on track. Ensure that you are moving quickly enough to cover the necessary ground in the time allocated.
- Probe for more information if the discussion is lagging, but try not to lead participants

Finish gracefully

1. Explain what the next steps are.
2. Schedule a time to return to validate the analysis.
3. Thank the group for their participation, and give an opportunity to ask questions.
4. If the participants would like to keep the products of the focus group discussions, make a copy and leave the original behind.

4: Seasonal Calendar

Seasonal calendars are very useful means of generating information about seasonal trends within the community and identifying periods of particular stress and vulnerability. Best undertaken in the context of a group discussion (to help verify the information obtained), seasonal calendars are often drawn on the ground with the relative trends depicted using stones or seeds, as in a preference-ranking matrix. In other instances, simple line graphs can be drawn to show seasonal increases or decreases. A whole series of seasonal variables can be included in one calendar to give an overview of the situation throughout the year. These variables can include: rainfall, crop sequences, labor demand, availability of paid employment, out-migration, incidence of human diseases, expenditure levels, and so on. Important periods, such as religious festivals, can also be shown.

Objectives

1. To identify periods of stress, hazards, diseases, hunger, debt, vulnerability, etc.
2. To understand livelihoods and coping strategies
3. To analyze changes in seasonal activities
4. To evaluate use of climate information for planning

How to Facilitate

This activity should take approximately 1 hour and 15 minutes including discussion: 30 minutes for the calendar, and 45 minutes for the discussion.

1. Use the ground or large sheets of paper. Mark off the months of the year on the horizontal axis.
2. Explain to the participants that you would like to develop a calendar to show key events and activities that occur during the year.
3. Ask people to list seasons, events, conditions, etc., and arrange these along the vertical axis. The list should include:
    - Holidays and festivals
    - Planting and harvest seasons
    - Periods of food scarcity
    - Times of migration
    - Timing of hazards/disasters such as cyclones, droughts and floods
    - When common seasonal illnesses occur
    - Etc.
4. When the key events have been listed, plot the timing of them in the table based on agreement among the participants. The note taker should note any events for which the group has difficulty deciding on timing.

Learning and Discussion

When the calendar is complete, ask the group members the following questions:

1. What are the most important livelihoods strategies employed at different points of the year?
2. What are current strategies to cope during the difficult times? Are they working?
3. Are there any differences in the timing of seasons and events compared to 10/20/30 years ago?
4. Have livelihoods/coping strategies changed based on the changing seasons or events?
5. How are decisions made on timing of livelihoods strategies?

Communicating Climate Change

When discussing coping strategies and changes, there may be opportunities to examine whether existing coping strategies are working in the context of the changing environment and/or to identify innovative strategies that have emerged as a result of the changes. It can provide an opening to discuss the need for new strategies in the context of climate change, and to introduce the concept of adaptation. The note taker should carefully transcribe the key points of the discussion.

An example of a seasonal calendar:

Item	*Jan*	*Feb*	*Mar*	*Apr*	*May*	*Jun*	*Jul*	*Aug*	*Sep*	*Oct*	*Nov*	*Dec*
Light meals	000	000	0	0	–	–	–	–	–	–	–	00
Begging	000	000	0	–	–	–	–	–	–	–	–	00
	000	000	0	–	–	–	–	–	–	–	00	000
Migration	000	000	00	0	0	00	–	–	–	–	–	–
	000	000				0	00					
Unemployment	000	000	00	–	–	–						
	000	000			–	–	0	000	000	000		0
Income	–	–	0	00	00	00	000	000	000	000	000	0
				00	00	00	000	000	00	0	0	0
Disease	–	–	0	0000	0000	000	00	000	00			
Rainfall	–	–	0000	0000				0	0	000	000	00

The zeros (0) in the table above represent markers used by participants to indicate the degree of change by month. Thus, three zeros in the January column for "Light Meals" means that light meals are three times more likely that month than they are in March or April. The greatest stress was found to be from December to May, a period when food stocks, employment opportunities, and income are at the lowest. People cope by begging for food and eating "lighter meals." During this period, men and, to a much lesser extent, women engage in seasonal migration to bigger farms, tea estates or wherever they can find work. The highest incidence of disease, especially malaria and diarrhea, coincides with the long rainy season from April to July. Trends need only be shown as rough, qualitative ones. Quantification is not necessary. The finished calendar can be useful as a way of indicating, for example, whether project-related activities generate alternative sources of income or food when they are needed the most.

5: Vulnerability Matrix

Objectives

To determine the hazards that have the most serious impact on important livelihoods resources

To determine which livelihoods resources are most vulnerable

To identify coping strategies currently used to address the hazards identified

How to Facilitate

This activity should take approximately 1 hour and 30 minutes including discussion: 45 minutes for the matrix, and 45 minutes for the discussion.

1. Prepare a matrix in advance. This can be done on the ground or on flip chart paper.
2. Ask the group to identify their most important livelihoods resources. These do not have to be resources that they currently have, but those that they consider to be most important in achieving well-being. They may create a long list of resources. You may want to organize the list based on the different categories of resources – human, social, physical, natural and financial.
3. Ask the group to identify the five resources that they consider to be MOST important in achieving well-being. List these priority resources down the left side of the matrix on the vertical. Use symbols if this will help participants to better understand.
4. Then ask the group to identify the greatest hazards to their livelihoods. Hazards may be natural or man-made. Do not limit the discussion to only climate-related hazards, but you may want to prompt the group if they are not identifying environmental hazards.

NOTE: It is important to be specific in the hazards, and to ensure that the issues identified are actually hazards. Participants may identify conditions such as "food insecurity" as hazards. It is up to the facilitator to ask the group to break down these conditions to determine if they are caused by hazards (e.g. food insecurity may be the result of a drought, which is a hazard). Similarly, some groups may identify scarcity of resources, such as "lack of money", as a hazard. In this case, it should be determined whether the lack of a resource is the result of a hazard, or in some cases, whether the resource should be added to the list of priority resources identified in the previous step.

5. The four most important hazards should be listed horizontally across the top of the matrix, again using symbols if necessary.
6. Ask the community to decide on a scoring system for the hazards against the livelihoods resources, identifying significant, medium, low and no hazard. The scoring system should be as follows:

   3 = significant impact on the resource

   2 = medium impact on the resource

   1 = low impact on the resource

   0 = no impact on the resource

   You can use stones, symbols, tip or different colors of markers (e.g. red = significant risk to resource, orange = medium risk, green = low risk, blue = no risk). Ensure that all members of the group understand the scoring system.
7. Ask the participants to decide on the degree of impact that each of the hazards has on each of the resources. This will involve coming to consensus as a group. The note taker should note key points of discussion that lead to the scores assigned, and any disagreements on the scores.

Discussion Questions

When the matrix is complete, ask the group members the following questions:

1. What coping strategies are currently used to deal with the hazards identified? Are they working?
2. Are there different strategies that you would like to adopt which would reduce the impact of hazards on your livelihoods?
3. What resources do you have that would help you to adopt these new strategies?
4. What are the constraints to adopting these new strategies?

The note taker should carefully transcribe the key points of the discussion.

6: Problem, Impact, Solution (PIS)

PIS is a technique used to organize and summarize the information from the focus group discussion. It reviews what the priority problems are, explores impacts of the problems ranked as highest, and identifies ideas to mitigate the impact of problems or to resolve them.

Problems, impacts and solutions **(30mins)**	*a) Examine community perspective on highest priority problems* *b) Explore impact on households of the problems ranked as highest* *c) Identify ideas to mitigate the impact of problems or to resolve problems*	What do you consider the most important problem in this community? *(prompt each person individually for his/her opinion, as well as a description: note on flip chart and add hash marks for each repetitive answer. Tally the responses.)* What is the impact of …. on families and children? How are they affected by ...? *(DO NOT write impacts on a flip chart—just discuss in regular FGD format)* What kinds of solutions can you recommend for…..? What resources are there in this community (*natural resources, skills, strong relationships, etc*.) that could be useful in resolving these problems? *(DO NOT write solutions on a flip chart—just discuss in regular FGD format)*

Instructions

Explain to the group that we are now interested in their opinions about the most critical problems their community is facing these days. Tell them to think about what they consider to be their most difficult challenges, and out of all of those problems, what is the one most important or difficult of all. We will ask each person, one by one so that everybody has a chance to give their opinion. Assure participants that it's ok to say the same thing as someone else, and it is also ok to say something different. What's important is to say what you, yourself consider to be the most important problem, regardlesss of what others have already said.

On flip chart paper, write the problem ***and short description*** from every person, one by one. Put hash marks next to repeated answers. After every participant has spoken, tally the responses and select the top three with the most hash marks.

Next, tell the group how they voted and that we are going to focus on their critical issues with the highest rankings. Then go through each of those problems separately and ask the group how they and their families are affected by each. Start with the top problem, then the next, and the third until the impacts of all three most important problems have been discussed.

Next ask about community ideas and resources which can help to resolve the problems or lessen their impacts on families and kids. Ask about the top problem first: what can be done to resolve this problem or to help families get through it easier? Go through each of the problems to ask about solutions.

PLEASE NOTE: the only time the facilitator will ask for individual responses is ***during the first question to identify the problems.*** After that, impacts and solutions will be discussed by the whole group. Also, only use the flip chart paper for the problems—after the problems are tallied, ***do not write on the flip chart paper for impacts and solutions***. Additionally, even though the facilitator (or observer) is writing on the flip chart, note takers must still continue to take full notes because many great quotes will result from this part of the FGD.

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We seek a world of hope, tolerance and social justice, where poverty has been overcome, and people live in dignity and security.

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