

**Socio Economic Baseline Survey and Livelihood Assessment of
CHT Watershed Co-management Activity (CHTWCA),
Chittagong Hill Tracts Development Facility (CHTDF), UNDP**



*Empowered lives.
Resilient nations.*

**Study undertaken for CHTWCA,
CHTDF-UNDP**

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Abbreviations

ANC	Antenatal Care
ARI	Acute Respiratory Infection
BBS	Bangladesh Bureau of Statistic
BRDB	Bangladesh Rural Development Board
CBN	Cost of Basic Needs
CBO	Community Based Organization
CHSW	Community Health Services Worker
CHT	Chittagong Hill Tract
CHTDF	Chittagong Hill Tracts Development Facility
CHTWCA	Chittagong Hill Tracts Watershed Co-Management Activity
CI	Corrugated Iron
CoA	Commercialization of Agriculture
CSBA	Community-skilled Birth Attendant
DCI	Direct Calorie Intake
DFID	Department for International Development
EPI	Extended Program on Immunization
FGD	Focus Group Discussion
FP	Family Planning
GR	Green Revolution
HDRC	Human Development Research Centre
HIES	Household Income Expenditure Survey
IGA	Income Generation Activities
IPM	Integrated Pest Management
KII	Key Informant Interview
MPI	Multi-dimensional Poverty Index
NGO	Non-Government organization
PDC	Para Development Centre
PNDG	Para Nari Development Group
SAAO	Sub-Assistant Agriculture Officer
SLA	Sustainable Livelihood Approach
UNDP	United Nations Development Program
USAID	United States Agency for International Development
VCF	Village Common Forest
WASH	Water, Sanitation and Hygiene

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Executive Summary

Introduction and Methodology

The socio-economic baseline survey and livelihood assessment has been undertaken to set a socio-economic baseline and identify possible sustainable livelihood options for the target communities living in project-supported 55 (fifty five) Village Common Forest (VCFs) areas in CHT.

Both qualitative and quantitative methods were used to collect data in order to fulfill the objectives of the study:

1. To establish a socio-economic baseline for the target communities in particular those who are dependent on 55 selected VCFs under the CHTWCA project; and
2. To propose sustainable livelihood options for the target communities.

Data were collected from 39 target beneficiary communities (*treated as treatment group*) and 39 non-target communities (*treated as control group*) of 47 VCFs (treatment- 24; control- 23) across 21 mouzas under 3 traditional Circles. A total of 1,054 households (524 households from treatment group and 530 from control group) were interviewed. Moreover 4 large group meetings were conducted with communities in 4 reserve forests areas to gather socio-economic and livelihood related key information of communities living in reserve forest areas. Moreover a number of FGDs and KIIs were conducted after the completion of quantitative analysis to find factual information and explanation to questions raised based on the analysis.

Key Findings

The average household size of surveyed households is 4.8 people in both treatment and control areas which is higher than the national rate 4.4¹. The sex ratio (number of males per 100 female) in treatment areas is 100.4 with 111.0 in control areas. Survey shows that a large proportion of the household members are of relatively young age: 39.2 percent in treatment and 42.2 percent in control are younger than 18 years old. The dependency ratio² in treatment area is 68.9 percent and 75.4 percent in control area (National: 72.7%).

Mean years of schooling for population of the treatment and control areas is 3.4 and 3.0 respectively. The reported literacy rate among population aged 7+ years is, 66.3 percent among treatment and 60.7 percent among control population.

Overall 86 percent households (88.4% treatment and 83% in control) are involved in cultivation. About 67 percent households in treatment and 75.8 percent in control communities are involved in livestock/poultry rearing. Among household members, 40.2 percent in treatment areas are farmers³ with 39.3 percent in control areas. Also 3.8 percent of household members in treatment area work as laborer (agricultural⁴ and non-agricultural); such proportion is 2.5 percent in control area. Overall, 43.3 percent of household members in treatment are involved in agricultural works and 21.8 percent are involved in non-agricultural works as primary occupation. Such ratio in control area is almost same; 43.8 percent and 20.3 percent respectively.

¹ Household Income Expenditure Survey 2010

² Authors estimate using 2011 Census Community Series data

³ involved in plough or *Jum* cultivation and/or both

⁴ Same as above

Most of the household members are not dependent on VCF for income (83.7% in treatment and 84.0% in control). Overall, 5.3 percent household in treatment area and 11.1 percent household in control area were reportedly dependent of VCF⁵ for household income. An estimated 34 percent treatment and 35 percent control households reported gathering at least one type of forest resources from the VCF. However 69 percent household in treatment and 71 percent in control reported having restrictions in gathering resources from VCF. Moreover, households perceive that 37 percent of them in treatment area and 44.3 percent in control area are to some extent⁶ dependent on VCF.

About 31 percent households in treatment and 28.3 percent in control areas are hardcore poor (i.e., per capita daily calorie intake below 1805 k. cal). However, absolute poverty rate is 71 percent among treatment households and 62 percent among control households (i.e., per capita daily calorie intake below 2122 k. cal).

About 47 percent household in treatment and 44 percent in control communities are living below lower poverty line (i.e., per capita monthly expenditure below Tk. 1,956). About 76.7 percent in treatment and 66 percent in control communities are living below upper poverty line (i.e., per capita monthly expenditure below Tk. 2,351).

Average distance between homestead and nearest VCF in both treatment and control areas is about 2 kilometers. Distance between *Jum* and VCF in treatment locations is 812 meter with 994 meter in control locations.

The most reported sources of drinking water across VCF communities are spring water (Treatment: 57.1%; Control: 63.0%) followed by dug well (Treatment: 40.3%; Control: 32.6%) and Tube well (Treatment: 19.8%; Control: 30.3%). Among treatment households, only 6.1 percent reported that the location of spring is within the VCF; in control 9.2 percent households reported the same. However, data suggest that none of the surveyed households have access to safe⁷ drinking water throughout the year. Irrespective of treatment or control communities, four months starting from Bengali month Falgun (Feb-Mar) up to Jaishtha (May-Jun) are the highest water scarcity months.

About 27 percent treatment households and 19 percent control households use improved latrine⁸. Open defecation is practiced by 11.3 percent and 12.8 percent households in treatment and control households respectively.

Average land holdings size of treatment households is 4.5 acres with 6 acres for control households. Households in treatment area have on average 73 decimal of timber garden, 51 decimal of fruit garden, and only 2 decimal of kitchen garden while the same among control households are 96 decimal, 83 decimal, and 2 decimal respectively. The rest of land possessed by household irrespective of areas (treatment and control) is non-useable hilly land. An estimated 30 percent of surveyed household regardless of treatment and control are involved in rearing cow and/or buffalo. A 69 percent household in treatment and 75 percent in control use chicken. However, proportion of households rearing pig is notable in VCF communities (51.1 percent in treatment and 52.1 percent in control)

⁵ For collecting bamboo as construction material (during the months when it is allowed) for their houses at a limited scale; some of the households use to catch fish, crabs, etc; some use to collect herbs and shrubs for medicinal purpose

⁶ The households were asked about their perception on dependency to VCF. Households those collect resources from VCF but will be able to get by without collecting them if necessary are considered as dependent to some extent on VCF.

⁷ Water from Spring, Tube well, and GFS has been considered safe for drinking for this survey considering CHT local context. (Source: Discussion with DPHE personnel).

⁸ Sanitary latrine (with water seal), Ring-slab without water seal, and Pit latrine with slab has been considered as improved latrine. (Source: Discussion with DPHE personnel).

All VCF community households' possess own homestead. Irrespective of treatment and control, most common house construction material in VCF communities is bamboo and wood. CI sheets are used as roofing materials. Most common type of house within survey area is "*Matchang ghar*"⁹. Only a few households own crop storage (treatment: 2.3% and control: 1.5%). About 68 percent households in treatment and 64 percent in control communities have mobile phone and 14 percent treatment households have televisions with 15 percent control. Proportion of households having electricity in treatment is 60 percent and in control is 64 percent. Only about 6 percent of household in treatment and 8 percent in control have connections to grid electricity and the rest is dependent on solar power.

Average amount of savings of each household in treatment areas is Tk. 7,846 with Tk. 8,181 for control areas. A 51 percent treatment household and 60 percent control household have savings in cash at hand. An estimated 54.4 percent treatment and 52 percent control households had taken at least one type of credit. On average, the payable amount of credit per treatment and control household is Tk. 14,128 and Tk. 9,240 respectively.

Per capita daily food energy intake among treatment people and control people respectively are about 2,156 kilo-calories and 2,260 kilo-calories. Rice is the key food item of diet. More than three-fifths of VCF community households have at least one food deficiency month in the previous year (treatment: 62.6% and control 64.5%). There are six high food deficiency months reported by the surveyed households between the span of Falgun and Shrawan (i.e., mid-February-mid August); among whom Chaitra (March-April) is the most food deficit month. The number of food deficient days in a year for an average household is 59 days (in treatment it is 51.5 days and in control it is 65.6) which is equivalent to 2 months. Most commonly pronounced strategy for addressing food deficiency is reducing food consumption (54.3% percent in treatment and 55.3% in control).

The average gross annual income in Treatment area is BDT 130,878 and in Control area is BDT 149,080 (overall BDT 140,030) and net average annual income of a treatment and control household is Tk.96,160 and Tk.109,319 respectively (overall BDT 102,777). An estimated 50.5 percent of net annual income in treatment and 55.1 percent in control household is generated from agriculture related sources which is the largest source of income. Wage labor (agriculture and non-agriculture together) contributes 16.5 percent and 13.7 percent of household net annual income respectively in treatment and in control households. Selling VCF products generated only 0.2 percent of household net income in treatment communities and 1.2 percent in control communities.

Annual average household expenditure among treatment households is Tk. 95,348 and among control households, it is Tk. 108,221. Food and non-food expenditure ratio in treatment is 75.6: 25.4 while it is 75.9: 24.1 in control. Of all food expenditure, the share of rice in treatment is 27.4 percent and 24.0 percent in control. Out of average household annual food expenditure, 32.7 percent constitute purchased items and only 3.2 percent comes from VCF sources. Similarly, purchased items constitute 22.7 percent of annual food expenditure for control household, while contribution of VCF is only 3.2 percent.

⁹Traditional house in rural CHT with platform and pillars made of Bamboo and or log

Fact Sheet: Socio Economic Baseline Survey and Livelihood Assessment

Broad category	Specific indicator	Treatment	Control	Total
Poverty	% of households below upper poverty line	76.7	66.0	71.4
	% of households below lower poverty line	46.8	44.0	45.4
	% of absolute poor households	71.2	62.3	66.8
	% of hardcore poor households	30.9	28.3	29.6
Expenditure	Average annual expenditure of households (in BDT)	95,348	108,221	101,821
	% Share of food items in annual household expenditure	74.6	75.9	75.3
Savings	% of households with any savings	67.2	67.2	67.2
Education	Literacy rate	58.6	52.7	55.7
	Average years of schooling	3.4	3.0	3.1
Land possession	Average amount of land possessed by household (in decimal)	455	608	513
	of households possessing <i>Jum</i> land	47.9	60.0	54.0
Major Crop cultivation	Paddy	98.9	98.1	98.5
	Turmeric	59.2	73.0	66.1
	Banana	53.3	50.3	51.8
	Chili	48.2	49.3	48.8
	Sweet gourd	38.3	42.6	40.5
	Marfa	27.3	48.8	38.1
	Binny paddy	25.4	39.0	32.2
Cow pea		24.1	31.0	27.6
Village common forest	% of households access VCF	24.8	27.5	26.2
	% of household reported VCF as income source	5.3	11.1	8.2
	% of household dependent on VCF	11.3	10.6	11.0
Frequently collected resources from VCF	Bamboo	15.1	13.8	14.5
	Crab	10.9	17.5	14.2
	Fish	12.2	14.7	13.5
	Vegetable	10.3	14.2	12.3
	Food and related staff	10.1	13.2	11.7
Sanitation	% of household practice open defecation	11.3	12.8	12.1
	% of household using improved latrine	26.7	18.1	22.4
Electrification	% of household with electricity	60.3	63.8	62.1
	% of household use solar panel for electrification	57.4	59.8	58.6
Occupation	% of household head who are farmers	82.9	80.8	81.9
	% of household member who are farmers	40.2	39.9	40.1
Training	% of males receiving skill development training	17.9	16.8	17.4
	% of females receiving skill development training	8.9	11.3	10.1
	% of household members receiving skill development training	13.4	14.1	13.8
Livestock	% of households with livestock	86.9	90.0	88.0
	% households owning at least one pig	51.1	52.1	51.6
	% of households with poultry	72.3	76.7	74.5
Access to media	% of households owning a television	13.9	15.3	14.6
	% of household owning a mobile phone	67.7	63.6	65.7
Farming techniques	% of household practicing <i>Jum</i> cultivation	50.3	54.9	52.6
	% of household using chemical fertilizer	18.4	19.7	19.1
	% of household using chemical pesticide	27.8	24.5	26.2
	% of household using homemade seed	68.7	70.4	69.6
Food security	% of household reporting food deficiency last year	62.6	64.5	63.6
	% of household received food assistance last year	17.7	22.6	20.2
	% of food item collected from VCF	3.2	0.8	2.0
Health and	Contraceptive prevalence rate	73.7	73.1	73.4

Broad category	Specific indicator	Treatment	Control	Total
health services	At least four (4) antenatal care visit	24.7	10.2	17.4
	Delivery at health facility	13.1	8.9	11.1
	Effective rate of child immunization	24.4	27.3	25.9
Female empowerment	% of household with female members in VCF management committee	10.7	8.5	9.6
	% of females involved in IGA	48.3	61.9	55.1
	Verbal abuse to women (% of households)	42.8	42.5	42.7
Awareness	% of household aware on preservation of VCF	67.3	58.7	63.0
	% of household aware on preservation of forest	61.0	64.3	62.7
	% of household aware on wild life conservation	59.7	49.6	54.7
	% of household aware on use of chemical fertilizer	83.6	81.9	82.8
	% of household aware on use of chemical pesticide	79.6	80.6	80.1
	% of household aware on reasons of soil erosion	48.9	40.2	44.6
	% of household aware on importance of safe drinking water	71.0	65.5	68.3
	% of household aware on pollution in watershed	55.7	47.9	51.8
	% of household aware on importance of safe sanitation	55.9	50.2	53.1