



SAPLING QUALITATIVE FORMATIVE RESEARCH REPORT



**Sustainable Agriculture and Production Linked to
Improved Nutrition Status, Resilience and Gender Equity
(SAPLING)**

**QUALITATIVE FORMATIVE
RESEARCH REPORT**

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Chief of Party Contact Information:

Treena Bishop
Chief of Party, SAPLING
Helen Keller International
House 10E, Road 82
Gulshan 2, Dhaka 1212
Tel: (088) 017-7109-1688; (088) 02-882-3055
E-mail: tbishop@hki.org

Country Office Contact Information:

Aminuzzaman Talukder
Country Director, Bangladesh
Helen Keller International
House 10E, Road 82
Gulshan 2, Dhaka 1212
Tel: +880-174-660-9064; +880-2-882-3055
E-mail: ztalukder@hki.org

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Contributors:

Dr. Meredith Jackson-deGraffenried

Senior Technical Specialist

Asia Pacific Regional Office, Helen Keller International

Meraz Rahman

Manager – Qualitative Research, SAPLING

Helen Keller International/Bangladesh

Han Han

Program and Research Analyst, SAPLING

Helen Keller International/Bangladesh

Samprita Chakma

Qualitative Research Data Analyst, SAPLING

Helen Keller International/Bangladesh

Md. Enamul Haque

Qualitative Researcher, SAPLING

Helen Keller International/Bangladesh

Md. Abul Kalam

Program & Research Analyst- Qualitative

Research, Learning, and Evaluation Unit

Helen Keller International/Bangladesh

Ibtesum Afrin

Qualitative Research Officer, SAPLING

Helen Keller International/Bangladesh

Acronym List

ANC	Antenatal Care
ASF	Animal-Source Foods
CF	Complementary Feeding
CHT	Chittagong Hill Tracts
CHSW	Community Health Service Worker
DFSA	Development Food Security Activity
DRM	Disaster Risk Management
EBF	Exclusive Breastfeeding
EIBF	Early Initiation of Breastfeeding
FGD	Focus Group Discussion
GBV	Gender-Based Violence
GESI	Gender Equality and Social Inclusion
GTA	Gender Transformative Approach
HCRM	Household and Community Resource Mapping
HKI	Helen Keller International
IDI	In-Depth Interview
IEHFP	Integrated Enhanced Homestead Food Production
IGA	Income Generating Activities
IYCF	Infant and Young Child Feeding
M&E	Monitoring & Evaluation
MCHN	Maternal Child Health and Nutrition
MOCHTA	Ministry of Chittagong Hill Tracts Affairs
NGO	Non-Governmental Organization
PLW	Pregnant and Lactating Women
PNC	Postnatal Care
SAPLING	Sustainable Agriculture and Production Linked to Improved Nutrition Status, Resilience, and Gender Equity
SBCC	Social and Behavior Change Communication
USAID	United States Agency for International Development
WASH	Water, Sanitation and Hygiene
WFP	World Food Programme
WRA	Women of Reproductive Age

SAPLING Introduction

Communities in the Chittagong Hill Tracts (CHT) region of southeast Bangladesh suffer from pervasive poverty brought on by a myriad of factors, including recurring human-induced and natural shocks and stressors that increase vulnerability and contribute to heightened food and nutrition insecurity. Conditions are exacerbated by inadequate systems, access to basic services and insufficient involvement of women, youth, people of differing abilities and ethnic communities in decision-making bodies. Social conflict, changing land-use practices and deforestation have accelerated environmental degradation, increasing soil erosion, landslides and loss of productive resources and assets. Water scarcity is a pervasive concern, and hunger periods occur in both dry and rainy seasons. Lack of quality road and communication's infrastructure limit availability of and access to health and nutrition services, education, skills training, and social safety net programs, as well as markets and opportunities for income generation. The poorest (often landless), are dependent on subsistence *jhum* (slash and burn/shifting agriculture) cultivation or day labor, have little capacity to withstand shocks of any type and lack belief in their own abilities to influence their circumstances.

On September 30, 2015, the United States Agency for International Development (USAID) awarded Helen Keller International (HKI) cooperative agreement No. AID-FFP-A-15-00010 to lead the pilot Development Food Security Activity (DFSA), Sustainable Agriculture and Production Linked to Improved Nutrition Status, Resilience, and Gender Equity (SAPLING) which is being implemented in collaboration with the Ministry of Chittagong Hill Tracts Affairs (MOCHTA). Under SAPLING, HKI, Catholic Relief Services, Caritas/Bangladesh, and three local implementing partners, (GRAUS, Toymu and Tahzingdong) are addressing food insecurity through an integrated, multi-sectoral approach that aims to sustainably improve nutrition outcomes for vulnerable populations, including women and children, and increase the resilience of households and communities to human-induced and natural shocks that threaten these outcomes. SAPLING has targeted approximately 50,000 poor and extreme poor households and those with children under two and/or adolescent girls in all 24 unions and two *pourashovas* (municipalities) of five upazilas (sub-districts) of the Bandarban District. These are Thanchi, Ruma, Lama, Rowangchari, and Bandarban Sadar, all of which have a high proportion of people living in extreme poverty, combined with high rates of stunting and undernutrition.

Background

The Chittagong Hill Tracts (CHT) are situated in the southeastern part of Bangladesh and comprised of three districts: Bandarban, Khagracharai, and Rangamati. Bandarban District has more than 11 ethnic minority communities, belonging to different languages, religions, and cultural backgrounds. Additionally, nearly half of the population of the CHT is from the Bengali ethnic group that migrated to the area during the early 1980s with support from the government. As one of the most remote and mountainous districts of the CHT, Bandarban has a high number of people living in severe poverty and experiences a recurrence of manmade and natural shocks and stressors that increase and contribute to food and nutrition insecurity and malnutrition among ethnic communities.

The CHT has a number of health risks for inhabitants that are less prevalent in other part of the country. According to the 2015 Millennium Development Goals progress report, during the previous 15 years, 53,013 cases of malaria were reported within Bangladesh, 90% of which were found in the CHT, where the majority of those affected were children under five years of age and pregnant women.¹ The 2011 Bangladesh census report showed 31% of households in Bandarban District travel 2.5 kilometers to collect water, whereas the national average is only 9%. The SAPLING baseline found 48.4% of households need more than 30 minutes round trip to obtain drinking water.² Women predominantly collect water from creeks and rivers in the CHT along unsmooth and hilly paths that become more treacherous during the rainy season.³ The dry season brings periods of drought and water scarcity to the CHT.

During certain periods throughout the year, communities of the CHT experience food shortages, with women and girls suffering the most during this time. HKI conducted a food security and nutritional assessment study among low income households of the CHT for the World Food Programme, which found that 35% of the households experienced periodic food shortages. Within these households, 53% of pregnant women do not have access to adequate and diversified diets necessary for the mother and unborn baby.⁴ The “Support to Preparation of an Integrated Project for Environment Friendly Agriculture in Chittagong Hill Tracts” study, conducted jointly by the Ministry of Agriculture, Ministry of Chittagong Hill Tracts Affairs (MOCHTA), and Food and Agriculture Organization of the United Nations, found that during periods of food shortages, at least one member within 80% of households eats smaller meals and one member within 40% of households skipped one meal a day. Experience in previous projects indicates those living in the CHT believe that pregnancy is a natural condition that does not need extra attention and giving more food to a pregnant woman would lead to the baby becoming too large, thereby causing problems during childbirth. Thus, women may be given less food during pregnancy even within households that have adequate food stores. In some ethnic groups, women eat only plain rice, salt, water and some (allowed) vegetables until a purification ceremony can take place.⁵

¹ General Economic Division. (2015). *Millennium development goal: Bangladesh progress report 2015*. p. 67

² May 2017. Final Report: Baseline Study of Food for Peace Development Food Assistance Projects in Bangladesh. ICF International.

³ Bangladesh Bureau of Statistics, Population and housing census, Socio-economic and demographic report. 2011.

⁴ HKI, Food security and nutrition assessment in selected unions of the CHT, September 2013.

⁵ Ministry of Agriculture, Ministry of Chittagong Hill Tracts Affairs Government of the People’s Republic of Bangladesh & Food and Agricultural Organisations of the United Nations. (2013). *Support to Preparation of an integrated Project for Environment Friendly Agriculture in Chittagong Hill Tracts*, pp. 26-36.

Food shortages for women during critical periods, such as pregnancy, have impacted the physical development of children within the CHT. In 2014, the Food Security and Nutrition Surveillance Project (FSNSP 2014) estimated that moderate and severe stunting rates among children under five years of age in the CHT were 23.4% and 10% respectively, which is in line with the national averages of approximately 25% and 10%.⁶ The SAPLING baseline found stunting (moderate and severe combined) for children under five at 36.6%, underweight at 33.9%, and wasting at 14.8%.⁷ These numbers indicate that the severity of malnutrition for children under five in SAPLING's target area is high for stunting and very high for undernutrition and wasting.⁸

While taps or tube wells with safer water are used almost exclusively throughout Bangladesh, over 30% of households assessed by HKI in rural areas of the CHT reported still using surface water and only eight percent reported using tube wells, piped, or public tap water. Participants in focus group discussions (FGDs) conducted during the proposal development period in the CHT said they retrieved water from rivers and streams, canals, ring wells, and upland waterfalls, where no water testing is done. Additionally, they pointed out that the mountainous and rocky terrain poses challenges to digging wells.

Sanitation facilities used by the extreme poor in areas assessed by HKI were much worse than those in the CHT as a whole.⁹ Only three percent of households reported using sanitary facilities and 47% reported using no facility at all, with an additional six percent using a hanging toilet. Twice as many rural households practice open defecation in the CHT than in the rural areas of the country as a whole. Half of the focus group participants in an initial context assessment conducted by HKI said they used pit latrines, although these were not always clean. Most individual households did not have a latrine and open defecation was said to be common. The 2013 "State of Food Security and Nutrition in Bangladesh" that HKI conducted indicated that only nine percent (9%) of caregivers in the CHT practiced appropriate hand-washing behavior (after using the toilet, before preparing food and feeding a child); 39% reported safe disposal of a child's solid waste, with 24% of those reporting safe disposal with sanitary toilets.¹⁰

In 1960, the construction of Kaptai Dam inundated 40% of prime agricultural lands in the CHT and displaced approximately 100,000 people, resulting in intensified cultivation in all three

⁶ Food Security and Nutrition Surveillance Project Bulletin of 2014.

⁷ May 2017. Final Report: Baseline Study of Food for Peace Development Food Assistance Projects in Bangladesh. ICF International. From the report: Stunting and underweight increase with age, whereas wasting does not show a linear increase with age over the span of 0-59 months of age. Higher rates of stunting are found in households in which the head of the household has no education; in households with higher poverty levels; in households with lower dietary diversity; and in households with poor sanitation and hygiene practices, specifically those households that practice open defecation, do not use improved sanitation facilities, do not use improved sources of drinking water, and do not have handwashing stations with soap and water available.

⁸ <http://www.who.int/nutgrowthdb/about/introduction/en/index5.html>. The WHO cutoffs for medium severity stunting are 20-29%, high is 30-39% and above; medium severity underweight is 10-19%, high is 20-29% and very high is 30% or above; and medium severity wasting is 5-9%, high is 10-14%, and very high is 15% and above.

⁹ Helen Keller International (HKI) and James P. Grant School of Public Health (JPGSPH). (2014). State of food security and nutrition in Bangladesh: 2013. Dhaka, BD: HKI and JPGSPH. <http://203.76.121.106/Reports/State%20of%20Food%20Security%20&%20Nutrition%20in%20Bangladesh%202013.pdf>

¹⁰ *State of Food Security and Nutrition in Bangladesh*. Dhaka, BD: Helen Keller International, the James P. Grant School of Public Health, the Bangladesh Bureau of Statistics. 2013. <http://sph/bracu.ac.bd/reports/FSNSPF>

districts of the CHT as those affected were resettled with more people cultivating in smaller areas. This event shifted the CHT from being self-sufficient in cereals to becoming a food-deficit area¹¹. The situation was exacerbated when in 1971, the government began settling ethnic Bengalis in the CHT to ease population pressures in the plains. Each Bengali family received five acres of land; the government also commandeered land for army bases, roads, and industry. Currently, approximately half of the population of the CHT is ethnic Bengali. In response, the insurgent indigenous group Shanti Bahini carried out an armed rebellion throughout the 1980s and much of the 1990s, demanding autonomy for the CHT. Although stability was restored with the signing of the peace accord in late 1997, the accord has never been fully implemented and many CHT residents are landless or have minimal land. The insurgency also damaged much of the rural infrastructure and depleted natural resources.

Disputes between Bengali settlers and indigenous communities over access to land are one of the most deeply rooted causes of conflict within the CHT. Before 1971, jhum lands were considered communal property and ownership was secured by consistent use. Few families registered their plots prior to the violence in the 1980s. When refugees returned, many found their lands occupied and their livelihoods controlled by Bengali settlers. Land leasing arrangements from Bengalis or wealthier Jumia (ethnic inhabitants of the CHT) are mostly exploitative, with day labor being the only other option, putting the landless in a vicious cycle of livelihood insecurity. Some former farmers are turning to fishing and other traditionally Bengali livelihood strategies, which prompts further conflict.

Discrimination and harassment are thought to occur because Bengalis consider indigenous peoples inferior and underdeveloped, due to different food production systems and consumption habits, women's immodest attire, and inability to speak Bangla¹². Indigenous people, especially women, report experiencing discrimination and rudeness from public service providers. Despite the peace accords, non-Bengali ethnic groups do not trust the Bengali-dominated formal justice structure, turning more to their internal traditional structures headed by ethnic Karbari/Headmen and Circle Chiefs.

The SAPLING project proposes to improve the gender equitable food security, nutritional status and resilience among the community people of five upazilas (Bandarban Sadar, Lama, Rowangchhari, Ruma and Thanchi) of Bandarban district in CHT. The project will adopt a gender transformative approach (GTA) to foster a more gender equitable environment among the project participant households. Formative research to inform an integrated Social and Behavior Change Communication (SBCC) strategy to address inequalities and improve nutrition, water, sanitation and hygiene (WASH), health-seeking practices, and disaster risk management (DRM) was conducted from December 2016 to April 2017.

¹¹ Gain, Philip. (1996). The ADB's Role in Asian Forestry (p.94-95) in Engaging the Asian Development Bank: Voices from NGOs.

¹² AIDA, Strengthening the socio-economic and cultural rights of indigenous women in Bandarban, Bangladesh", Gender Analysis report. 2012

Purpose

The qualitative formative research involved a comprehensive study and assessment of gender relationships between men and women, women's empowerment, adolescent aspirations, and social inclusion of marginalized communities; maternal and child health nutrition (MCHN), food security and livelihoods, WASH and DRM awareness and practices, keeping the socio-economic, political and cultural context of CHT in mind. The research included an analysis on how gender roles differ and are similar among ethnicities within CHT. WASH, MCHN, and DRM data were analyzed to identify issues that could be potential barriers to improving livelihoods and food security and nutrition. Analysis findings inform adaptation of project activities and messages to strengthen project activities based on drivers of participants' motivation, needs and recommendations.

Study Objectives

Gender and Nutrition

- Examine the intra-household decision making processes between men and women regarding income and expenditure, assets management and control, health services, and production work.
- Identify intra-household gender division of labor and how the household workload is distributed among the family members by their age and gender.
- Better understand culturally appropriate roles and responsibilities for men and women and potentiality for changes.
- Understand community perceptions, beliefs and attitudes about the roles men and women play in the community.
- Explore the existing customary laws and practices that hinder women from having equal access to information, decision-making, inheritance, productive work and entrepreneurship, and health care.
- Identify potential agents of change in the community.

WASH

- Identify water supply issues and how that affects people's everyday lives.
- Assess current WASH knowledge, attitudes, and practices in CHT target communities.
- Identify barriers to and motivating factors for improved hygiene and sanitation practices and access to safe water and sanitation infrastructure.

DRM

- Identify the major natural and human-induced shocks and stressors experienced by the community people and their different impacts on men and women.
- Assess present DRM knowledge and practices in the CHT.

Ethical Considerations

Under the Department of Health and Human Services regulations found at 45 CFR 46.101(b)(2), Chesapeake IRB granted an exemption to IRB oversight for this research (Pro00019477). All participants were read the informed consent prior to participation in either the interview or group

activity and discussion. Participants either signed or provided their thumbprint and, in some cases, a witness signed for them. For the adolescent groups, parents provided the informed consent.

Research Methodology

Data Collection Overview

Data were collected in two phases in 26 paras (Table 2). The first phase consisted of individual in-depth interviews (IDI) and the second phase consisted of group activity tools and discussions (Table 1).

Phase 1

Phase 1 data collection took place from February to March 2018, during which 93 IDIs were conducted in 26 paras. In each para, four (4) IDIs were planned: one interview each with a husband and a wife, and two interviews with community leaders (e.g., karbari, headmen and other male and female leaders). However, in some cases two community leaders were not available and only one IDI was conducted with a leader, resulting in three IDIs for 11 paras. After the data were collected for Phase 1, the research teams spent several weeks reviewing the data and writing interview reports. The SAPLING Head of Qualitative Research performed a quality check on approximately 75% of interview reports, comparing the transcripts with audio recordings and following up with the research teams. After reviewing the reports, the Head of Qualitative Research developed a short second set of questions to fill in gaps identified in the data. This set of questions was administered during Phase 2.

Phase 2

The second phase of data collection took place from April to May 2017 and consisted of six group activity tools and discussions adapted from participatory rural appraisal methods. The six tools included Daily Clock, Infant and Young Child Feeding (IYCF) Mind Mapping, Adolescent Aspirations, Household and Community Resource Mapping (HCRM), and FGDs on WASH and DRM. Seven groups of participants from each para were recruited for the tools (though not all for each tool), including wives, husbands, fathers-in-law, mothers-in-law, and adolescent girls and boys separately, except for the WASH FGDs and DRM FGDs, for which sessions consisted of 8 to 12 participants with two separate mixed male and mixed female groups. In total, 19 group activities were conducted in each para. During the second phase of data collection, the teams administered the follow-up questionnaire to the IDIs with the participants while they conducted the group sessions.

Table 1: Type and number of participants by data collection tool.

Participant Categories	IDI	Daily Clock	IYCF Mind Mapping	HH and Community Resource Mapping	Adolescent Aspirations	WASH FGD	DRM FGD	Total
Mothers/Wives	26	26	26	26	0	0	0	78
Mothers-in-Law	0	26	26	26	0	0	0	78

Local Leaders	41	0	0	0	0	0	0	0
Adolescent Girls	0	0	0	0	26	26	0	52
Fathers/Husbands	26	26	26	26	0	0	0	78
Fathers-in-Law	0	0	26	26	0	0	0	52
Adolescent Boys	0	0	0	0	26	26	0	52
Female, Mixed Age	0	0	0	0	0	26	26	52
Male, Mixed Age	0	0	0	0	0	26	26	52
TOTAL	93	78	104	104	52	104	52	587

Participants were interviewed, and group activities facilitated by a same-sex research team with at least one person in the three-person team who spoke the local language. Mixed group activities were facilitated with mixed-sex research teams. Informed consent was obtained from each participant prior to an interview or group activity.

Data Collection Tools

In-Depth Interviews

In total, 26 couples (26 men and 26 women) took part in the husband and wife IDIs, for a total of 54 individual interviews, with each of the 10 ethnicities represented by a minimum of one couple. Additionally, two karbari or other influential community members (both female and male) participated in IDIs in each para. Headmen, religious leaders, local government representatives or an influential villager were considered community leaders. A total of four IDIs took place in each para, however two influential leaders were unavailable in 11 paras, resulting in three IDIs in each of those paras. The IDIs consisted of a series of open-ended questions to better understand how people think about and behave with regards to women's empowerment and gender equality (decision-making, access and control of assets and resources, income generation, mobility), IYCF practices, food and nutrition, and productive activities, in addition to questions about access to health services, information, and financial services. A separate WASH and DRM section was given to community leaders only. Interviews lasted between 1 to 2 hours. All interviews and group sessions were tape-recorded and transcribed, then an analysis of each interview and group activity was written as a field report.

Group Activities and Discussions

Each group activity lasted approximately 1 ½ to three (3) hours and had six to 12 participants per group. All participants were from the same para.

Daily Clock

Daily Activity Clocks were conducted in order to gain insight into relative workloads between different members of household such as mothers/women, fathers/men, and mothers-in-law. Comparison between daily activity clocks illustrated who works the longest hours, who concentrates on a small number of activities, who must divide their time for a multitude of

activities, and who has the most time for leisure activities and sleep. Daily Clocks also delineated the seasonal variations that helped SAPLING design project activities so that any added workload could be minimized from project interventions. The Daily Clock investigated IYCF practices by analyzing the daily schedules of mothers, fathers, and mothers-in-law. Important data were gathered from this tool, which helped to explain changes that take place in the daily schedules of different groups when women in the household become pregnant or begin breastfeeding. Three Daily Clock activities were conducted in each para: one with mothers/wives, one with fathers/husbands, and one with mothers-in-law. Previous experience shows that fathers-in-law do not participate much in the daily household activities, and thus fathers-in-law were excluded from the Daily Clock activity.

Mind Mapping

The purpose of this exercise was to look in-depth at the feeding practices of infants and young children in the minds of the caregivers (especially mothers, fathers, mothers-in-law, and fathers-in-law) in order to learn about both “exclusive” and “complementary” feeding practices that exist in the community. Questions about foods fed to infants included why specific foods are selected for the infant, who decides what and when to feed the infant, how are the foods prepared, who prepares the food, the steps for feeding the infant and if there are any different opinions within the community regarding the practices. The information gained from this tool complements the data from the individual interviews with mothers, fathers, and community leaders, as well as the barrier analysis on exclusive breastfeeding (EBF) and complementary feeding (CF). Four Mind Mapping exercises were conducted in each para, one with mothers/wives, one with fathers/husbands, one with mothers-in-law and one with fathers-in-law.

Household and Community Resource Mapping

Community resources include anything that is useful to improve the quality of a community’s life, household resources include anything tangible owned by a household that has economic value and can improve the quality of life of household members. Household and Community Resource Mapping was conducted with four separate groups: mothers, fathers, mothers-in-law and fathers-in-law. This was done to understand men and women’s access, ownership and decision-making power over household and community resources critical for their daily lives. Data gathered from the discussion identified how men and women define “control” over resources-related decisions and to provide a better understanding of how different household members and community members manage and make decisions about the resources that are important for their families and community, as well as what roles men and women play in the management of these resources in the household and in the community.

WASH Focus Group Discussions (FGD)

In each para, four separate WASH FGDs were conducted with the following groups: adult mixed age male, mixed female, adolescent girls and adolescent boys. The objectives of the WASH discussion were to learn about the availability of safe water sources in the para/village, availability and usage of different types of latrines in the village, hand washing practices, and water, sanitation and hygiene-related illnesses in the village. A total number of 104 WASH FGDs were conducted in 26 paras.

DRM FGD

Two separate DRM FGDs were conducted with an adult male and an adult female group in each para to discuss the household's preparedness for risk reduction and response to disasters, the existing practices (preparations) they undertake to improve resilience to shock and stress before any disaster, and ways the household prepares to protect their productive assets and existing livelihood in case of disaster. In addition, practices and activities involving the protection of various types of livelihoods from various forms of disasters or stress due to climate change were also discussed. A total number of 52 DRM FGDs took place in 26 paras.

Adolescent Aspirations

In each para, Adolescent Boys and Adolescent Girls took part in separate Adolescent Aspirations group activity sessions resulting in a total number of 52 groups in 26 paras. The activity looked at early marriage from the perspective of adolescents and encouraged them to identify their goals and aspirations in life against the backdrop of traditional gender expectations. In addition, the activity explored the role of adolescents in IYCF practices and examined their views on these practices. Prior to the group activity, the participants and their parents signed both Parental Consent and Adolescent Assent forms.

Sampling Strategy

Participants were selected from the five SAPLING working Upazilas (Bandarban Sadar, Ruma, Lama, Thanchi, and Rowangchhari), covering ten ethnic communities found within the SAPLING working Upazilas (Bengali, Marma, Mro, Tripura, Tanchangya, Chakma, Bwam, Kheyang, Lusai, and Khumi) in order to obtain well-represented and diversified data from each of these groups. Two additional groups (the Pangkhua and Chak) reside within CHT, but do not live in the five SAPLING upazilas and thus were not included in the study. In addition, monitoring and evaluation (M&E) data found that the Bawm and Lushai, despite being two distinct ethnic groups, live together in the same paras across Bandarban, and thus one rather than two separate teams were assigned to collect their data. However, once the team arrived in the paras and started to recruit research participants, it was discovered that none of the potential Lushai participants met the sampling criteria, so no Lushai individuals took part in the qualitative research.

Selection of Paras

Paras with 50 or more households within the five SAPLING working upazilas in CHT were purposefully selected in order to represent each ethnic group. The HKI M&E team compiled a list of 58,462 households in all paras in the five SAPLING working Upazilas, which was collected from secondary sources (the Bangladesh Bureau of Statistics and field monitoring data from partner non-governmental organizations [NGO]). From this list, the HKI M&E team selected 1,641 paras that had 50 or more households, to ensure enough potential participants in each para for the SAPLING formative research team to limit individual participation to one of the following two methods of data collection: Mind Mapping, Daily Clock, and Resource Mapping; WASH and DRM FGDs.

A sampling frame was established to purposively select the paras from each ethnic group. In most paras, Karbari IDIs were conducted before Individual IDIs with mothers and fathers,

allowing the community leaders to be involved in facilitating the process of recruitment. However, the research team were careful not to involve the Karbari in the selection process, apart from seeking their help in identifying households that met the selection criteria. Prior to conducting IDIs with participants, each research team went to the paras to identify and recruit potential participants for the IDIs and group tools.

Table 2: Formative research para distribution (upazila level) by ethnicity

Upazila	Total # of Paras Included in Research	# of Paras per Ethnic Group
Bandarban Sadar	10	Marma=1 Bengali=2 Mro=1 Tripura=1 Bawm=1 Chakma=1 Tanchanya=1 Kheyang=2
Rowangchari	3	Marma=1 Tripura=1 Tanchanya=1
Thanchi	4	Marma=1 Mro=1 Khumi=1 Chakma=1
Ruma	4	Bengali=1 Mro=1 Bawm/=1 Khumi=1
Lama	5	Marma=1 Bengali=1 Mro=1 Tripura=2

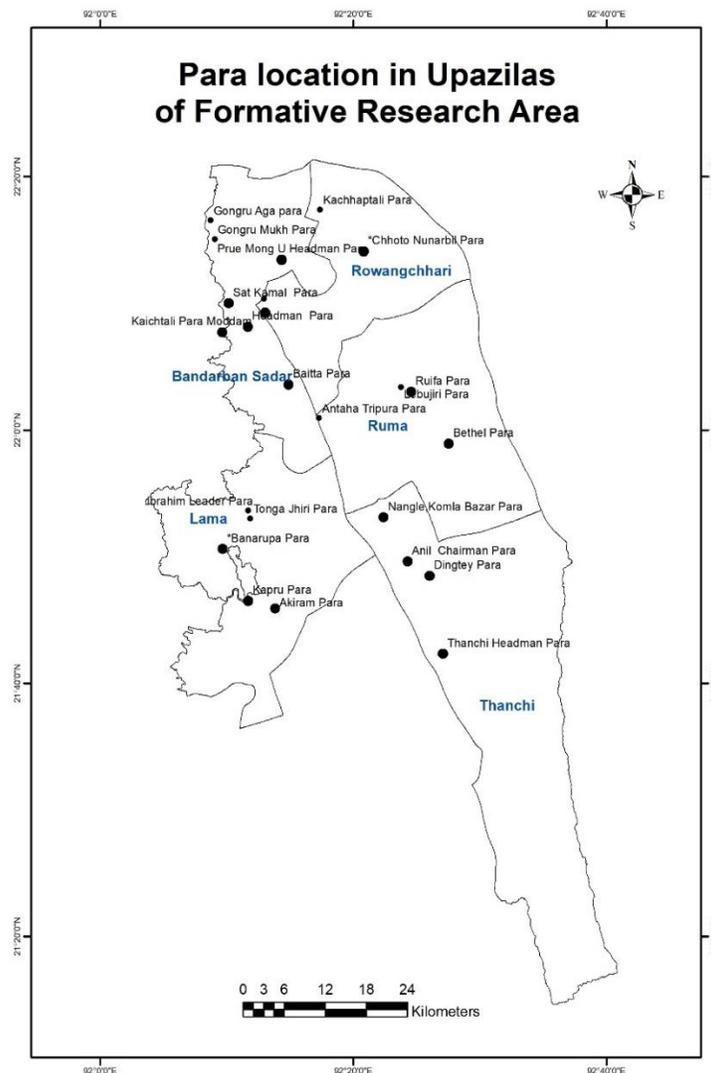


Figure 1: Formative Research Paras Across Five Upazilas of Bandarban District

Participant Selection Criteria

The formative research sample included participants from households that met eligibility criteria for SAPLING (i.e., poor or extreme poor, all households with pregnant and lactating women (PLW), children under two and adolescent girls). The research also wanted to talk to community leaders as a type of “key informant” or expert in their own culture and community. The following criteria were used for inclusion in the study:

- All participants were selected from households eligible for SAPLING projects, except the community leaders.

- Community leaders/influential members were individuals who lived in the sampled village, but who may or may not be from a household that is directly participating in project activities.
- Married and/or cohabitating couples who had at least one child (below 5 years of age, preferably under 2 years of age) were recruited to participate in IDIs as well as in the men and women's group activity tools
- Only fathers-in-law and mothers-in-law of 40 years of age and above, and who had a married daughter/son with children living in the same locality within 30 minutes walking distance, were selected to participate in the father-in-law and mother-in-law groups
- Only 12-17-year-olds who are unmarried, either in school or out of school, were selected to participate in the adolescent groups
- For the DRM FGD, participants who were men and women 18 years of age and older were selected from each para

Participant Recruitment Procedures

The research participants were selected from 26 different paras of five Upazilas and from 10 ethnic communities. One or two days prior to the first phase of data collection, the research team visited each para and met with the local leaders (karbari, headman, other local leaders) and to gain the approval of community leaders to work in the village. Afterwards, each research team conducted a transect walk of the para and met with different potential participants, explaining the objectives, timeline and procedures for data collection to them and soliciting initial consent from purposively selected villagers/participants for the individual IDIs. In a few paras, the local leaders helped the HKI team in identifying potential participants and introduced them to households that met SAPLING eligibility criteria for data collection. Out of respect for the traditional governing system in the CHT, engaging the karbari and other local leaders was crucial as a cultural icebreaker for the formative research as it helped to build good rapport between the participants and research team members and made the research possible. It should be noted that by approaching the karbari and other community leaders first (and in those cases where the leaders helped identify and introduce households) responses from participants could have been biased toward what the leaders and participants thought the data collector wanted to hear.

After the completion of the 1st phase of data collection, prior to returning from field, each research team made a list of potential participants for the group activity sessions after visiting different households and asking participant's permission to participate in the sessions. The research team explained the objectives, duration and other necessary details of different group activity tools to the potential participants, asked when and where they would be available and willing to participate in the activity tools for two to three hours, and obtained verbal consent from the participants. Before beginning the 2nd phase of data collection, each research team contacted the participants over the phone or in person to coordinate a suitable date, time and place for conducting the group activity sessions with different groups in each para. While making an itinerary for IDIs and group activity sessions, each research team tried to schedule the most suitable time and place for the participants to meet together for the group discussion sessions considering their age, gender, social obligations and other circumstances (for instance, scheduling discussions for women in the afternoon after all the children have gone to school and household work has been completed).

Study Team

The data collection team consisted of 54 facilitators with experience in conducting participatory and qualitative data collection in CHT, and who were familiar with CHT cultures and ethnic communities. They were divided into nine teams consisting of six members each, including two qualitative researchers with qualitative research experience, one male and one female, two co-facilitators with qualitative research experience, one male and one female with regional knowledge, belonging to one of the 10 ethnic groups, and from CHT, and two note takers, one male and one female who fulfilled similar criteria as the co-facilitators. Each team was assigned to collect data for one specific ethnic group, and one person from each group, often the qualitative researcher, was the team leader who reported to the Head of Qualitative Research. Each team was further divided into two groups: a male group of facilitators included one male qualitative researcher, one male co-facilitator and one male note taker, with a separate female data collection group including one female qualitative researcher, one female co-facilitator and one female note taker. This was done in order to develop a safe, trusting, comfortable and confidential environment for both male and female participants.

All note takers and co-facilitators were bilingual in Bangla and the predominant language spoken in the villages where they collected data, were from that same indigenous group and in a few cases were inhabitants of the same para from which formative research was conducted. The co-facilitator and note taker helped the qualitative researcher during the IDIs and group activity sessions and in many occasions facilitated the sessions when participants were more comfortable conversing in the ethnic language. In addition, note takers and co-facilitators wrote verbatim transcription of the interviews and group activity sessions in Bengali after translating from the local language in addition to notes taken during data collection to the qualitative researcher for final report writing.

Two formative research coordinators were hired to provide logistical help, emergency support and troubleshooting to the nine groups throughout the whole period of data collection. The coordinators also contacted all nine teams on a daily basis to receive a daily report from the data collection teams. The formative research coordinators as well as the head of qualitative research made field visits during both phases of data collection, and observed interviews and group activity sessions (approximately 80% of the interviews and group sessions) for quality control and troubleshooting. During data collection, whenever any facilitation groups faced difficulties with the formative research tools or had questions and/or concerns, they were able to obtain advice from the two coordinators and head of qualitative research.

Training for the Research Teams and Field Test

All the qualitative researchers, co-facilitators and note takers participated in a 10-day residential training on data collection using the participatory tools included in the research, with three teams at a time taking part in in three batches of trainings. The training sessions were held in Bandarban District from January 22nd to February 27th, 2017. A group of senior research consultants was hired and was responsible for designing the training materials for the research teams, working closely with the SAPLING Head of Qualitative Research. The consultants, along with the SAPLING Head of Qualitative Research, facilitated these training sessions. During the

training, the research teams were trained on basic facilitation skills, data collection, note taking, different qualitative research techniques, and how to accurately transcribe interviews, group activities and FGD data. A field test was conducted during the fourth, sixth and eighth day of training, in which the research team practiced the group activity tools and conducted IDIs with different groups of participants. After each field day, the research team sat together again with the trainers to share their findings and experience, and to receive feedback on their performance. Additional adjustments and rephrasing of a few of the questions were made in the questionnaires based on the findings from the field.

As most of the co-facilitators and note takers belonged to the same ethnic group and in some cases were from the same para in which the research took place, one major focus during the facilitator training was to ensure that the researchers, co-facilitators and note takers were aware of personal biases and were sufficiently trained in ways to avoid personal bias during the interviews, note taking and transcribing. Additionally, they were trained on how to conduct interviews and run a group activity session without intentionally or unintentionally leading the participants to answer or perform the group activity in a way that would result in particular responses.

Translation of Reports and Data Analysis

All interviews and group activities were audiotaped and note takers took notes, with the research team transcribing and reviewing the notes taken during the sessions afterwards. From each team, co-facilitators and note takers convened to transcribe IDIs and group discussions into Bengali from the local language the discussions took place by listening to the recordings and their written notes. Once the transcriptions were completed, the qualitative researchers were provided with the Bengali transcripts, and used them to write the final reports in Bengali.

Subsequently, a team of 20 translators was recruited to translate the final reports from Bengali into English on a rolling basis starting from June 2017. After being translated, the reports were checked by the SAPLING head of qualitative research, who compared the Bengali reports with the translated reports to ensure accuracy and quality control. Simultaneously, four Qualitative Research analysts were hired for data analysis, who along with the SAPLING head of qualitative research and the HKI Asia Pacific Regional Senior Technical Specialist, coded the data using MAXQDA, a software designed to help researchers organize and analyze qualitative data. The team developed a master list of codes from the group activity sessions at the end of the research period. Deductive coding was first applied to the data, followed by inductive coding based on what the data said. Coded data identified themes across different communities, age, and gender, dividing into sub-themes for detailed perspectives across the CHT. All other data (information from the follow-up questionnaire, Household Census and transect walks) were further analyzed to identify findings relevant to intervention, strategy, and message design. A report synthesizing the data collected was written by a technical advisor who has qualitative research experience and was presented to HKI and partners.

Results

Community Needs

“Our village is situated in a remote area. The condition of the roads is not good here. We don’t get proper medical treatment when we get ill. We don’t have enough road, too. So, we can die by any problem. We are in need of more clinics, doctors and roads. We have to face problems to walk on our roads during rainy days.” Khumi leader

From the respondents’ perspectives, money and a change in mindset (for those who are said to resist change) are the stated essential ingredients needed for change in communities, and education underscores both of these. There were no observable differences between community needs with regards to ethnicity or geographic location, apart from basic services (water, electricity, sanitation) for the communities that do not have access to these services. When respondents talk about change they mention gender norms and equal rights and change related to improved access to income generating opportunities, basic services, schools and education, and skills training. For most communities, there is a need for job opportunities, access to water, better management of tourism, improved roadways and access to transportation, improved communication networks (including electricity, mobile network, and access to internet), schools, healthcare services, improved agriculture technologies and skills, and skills training centers. Respondents in several communities mentioned more control and regulation of tourism and ways to bring more tourism into their communities to create jobs and revenue. Other needs mentioned include cold storage for food preservation,

During the rainy season, respondents in the formative study said agricultural production is down and many people try to find work as day laborers. However, there is a lack of job opportunities, limited access to markets, and limited mobility during that time, and little available to forage, leading to food insecurity during this time. SAPLING will help address these issues by increasing yield of foods traditionally grown and stored for these times, promote year-round food production, promote savings and investments in assets, and promote diversified income sources to support year-round income generation and year-round access to food, while also working with households to strengthen intra-household relationships and improve communication and mutual understanding and respect to enable and support sustainable livelihoods.

Population Pressure, Natural Resource Management, and Agricultural Yield

The pattern of jhum cultivation has changed since British colonization. Policies were put in place that prohibited the jhum (shifting cultivation) practices (and later repealed) and internally displaced the ethnic minority groups (i.e., the non-Bengalis), favoring Bengalis and, more recently, the military, to have land rights to desirable pieces of land. Increasing population pressure is the result of migration and relocation of Bengalis to the CHT and the establishment of Kaptai Dam (and lake) and the subsequent flooding of arable land, which further pushed people into other areas of the CHT. The loss of available arable land and increased population means people have been forced to shorten fallow periods and utilize land that has not had time to replenish. This has resulted in increasingly low yield.¹³ Longer fallow periods (12-15 years) would allow the soil to stock up on nutrients before planting again. Deforestation and poor land

¹³ ADB, Second Chittagong Hill Tracts Rural Development Project, RRP-BAN 42248.

management practices not only affect yield, but have also increased erosion and the risk of flooding and landslides.

Additionally, because of lower yields, farmers plant in larger areas. Having larger or more fields means the family will need to weed a larger area – this can become an almost impossible task without hiring day laborers to help, a luxury many people cannot afford. The Imperata grass that grows in the fields and is not weeded can take over and use the same nutrients that are needed for the paddy, making the field useless for a number of years.

The low yield has also affected coping strategies for the lean season. In this formative study, respondents described how, in the past, they were able to produce enough squash and tubers to store for long periods of time. Now, they do not produce as much and, consequently, do not meet their food needs year-round. Furthermore, access to markets can be limited, especially for more remote households and during the rainy season, when respondents said they are more likely to face food shortages. Heavy rainfall can cause transportation complications, making roads and footpaths impassible, delaying shipments to markets and preventing people from getting to the market. As in other contexts, food prices are higher when this happens, adding to the risk of food insecurity.

Self-efficacy, Aspirations, and Locus of Control

The qualitative study identified the characteristic of fatalism, or external locus of control (belief that successes or failures are not in your control, but they are determined by external forces, such as fate or divine will), among project participants, especially with regards to their ability to prepare for and mitigate the impacts of climate-related events. Adolescents were asked about their hopes and dreams and, thus, shared their aspirations for their future (e.g., what they want to be when they grow up and how they want to get there), while at the same time saying they would have to overcome poverty (“become financially solvent”) to be successful and achieve their goals. Although adults were not specifically asked about their hopes and dreams, themes of hope and future did not come out of the data. Adult participants across the project area expressed resignation to their fate of poverty and repeated impacts from disasters. According to the participants, lack of financial resources limits their ability to prepare for and recover from disasters. According to adolescents, lack of financial resources will limit their ability to achieve their education and career dreams and, thus, overall goal of being “successful.”¹⁴

These findings are important within the sustainable livelihoods framework and resilience framework and are supported by evidence that lower perceived self-efficacy, perceived barriers in the broader environment, and an external locus of control (i.e., fatalism) are associated with

¹⁴ As part of the formative research, a barrier analysis was conducted to identify commonalities among mothers with children ages five to 10 months who do or do not practice exclusive breastfeeding (doers and non-doers). Knowledge and awareness of the importance of EBF was high across both groups, indicating other factors influence the adoption of this practice. Doers expressed more self-efficacy (i.e., believed they had the ability to practice EBF) and more support from family for EBF than non-doers. Furthermore, a significant number of non-doers believe it is God’s will when a child becomes malnourished or gets diarrhea while, on the contrary, doers do not think it is God’s will when a child becomes malnourished and gets diarrhea, indicating more fatalistic viewpoints among women who do not practice EBF, despite having sufficient knowledge.

lower rates of adoption of practices, despite similar cues to action and knowledge of appropriate behavior.^{15 16 17}

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Gender Equality

Gender Division of Labor and Prescribed Gender Roles

"Women are not able to do men's work and men cannot do what women do." – Khumi Wife

Among all ethnic groups, there are defined roles for men and women, with women largely occupying their time with activities at home and men largely occupying their time with activities away from home. A general opinion across the SAPLING area is that there are jobs that only men can do and jobs that only women can (or should) do. The division tends to be:

- For men: jobs that require perceived hard physical labor, unrestricted mobility, or knowledge and experience
- For women: jobs that are not as labor intensive (usually men can do these, too), can be done at home or within the community, and do not need perceived business, legal, financial, and political acumen

"In every religion and in every nation, men and women are different races. Every race is committed to their different jobs, so the job of men is to decide about productive work outside the home, and the job of women is to decide about the work inside the home and cooking," explained a male Marma karbari.¹⁸ This common perception of men's and women's jobs is countered, often

¹⁵ Kosec, Katrina, Huma Khan, Alemayehu Seyoum Taffesse, and Fanaye Tadesse (2014). Promoting aspirations for resilience among the rural poor. In Fan, Shenggen, ed.; Pandya-Lorch, Rajul, ed.; Yosef, Sivan, ed. 2014. Resilience for food and nutrition security. Washington, DC: International Food Policy Research Institute (IFPRI). <http://dx.doi.org/10.2499/9780896296787>

¹⁶ Tanguy Bernard & Stefan Dercon & Alemayehu Seyoum Taffesse (2011). "Beyond Fatalism - An empirical exploration of self-efficacy and aspirations failure in Ethiopia," CSAE Working Paper Series 2011-03, Centre for the Study of African Economies, University of Oxford.

¹⁷ Favara, Marta. (2017) Do Dreams Come True? Aspirations and Educational Attainments of Ethiopian Boys and Girls. *Journal of African Economies* 26 (5): 561–583.

¹⁸ A karbari is a traditional leader for a geographic area that loosely conforms to the government administrative unit of a para (para → union → sub-district → district). Each ethnic group (excluding Bengali) has their own succession or appointment process. Some of the karbari positions are passed from fathers to sons, some must come from the same family, some are based on wealth, etc. Karbaris are under a Headman and govern their area, providing mitigation,

by the same people who speak it, with language supportive of more gender equality in productive roles. In practice, a minority of women in Bandarban earn an income. Data from the baseline study show 71.2% of men earned cash in the previous 12 months, compared to only 18.3% of women.

Ethnic differences in women being able to work outside the home are observed between Bengali and non-Bengali respondents. Primarily among the non-Bengali groups, respondents discussed a range of activities that women undertake to supplement the family income or provide food, in addition to working in the jhum field, garden, paddy, other crops, raising livestock, and foraging. For example, women may make wine, gather broomsticks, work as day laborers, or make blankets. As a Khumi karbari described, household members engage in a variety of activities to sustain their lives and livelihoods: *“Besides doing household chores, our women rear different animals and birds, cultivate jhum, work in the garden, plant crops, take care of them and work as day laborers outside, as well. During jhum harvest jhum and burning jhum fields, there is a huge demand for labor, such as harvesting jhum, burning jhum, weeding, planting paddy seeds.”*

Across these groups, respondents reflected that people’s mindsets (i.e., sociocultural norms and acceptable behavior) are shifting. According to a Marma karbari, in current times, if someone wants to make fun of a man for helping his wife with domestic chores, they will not do it in front of him. Not everyone in his society agrees with this, though. A female Marma leader said men would be ridiculed if they helped their wives. As with any behaviors, there is intra-cultural variation and households in which men and women work together, households in which men sometimes help women at home, and households in which men do not help at all – and this variation exists across all ethnic groups. Despite this variation, it does appear that women in non-Bengali households not only can engage in earning income, but many are expected to because it contributes to household finances and ability to meet needs. As households become more integrated into a cash economy, the need for more household income and assets that can be exchanged for income will grow, possibly necessitating more women to become active agents in the economy.

Bengali households tend to have bounded roles that dictate men work outside the home and women work inside the home, which could include earning income through vegetable cultivation, rearing poultry, or other activities. However, there are exceptions. Bengali women from poor households often have to work as day laborers to help support the family and women from more educated households may have career-oriented jobs. Likewise, some Bengali men said women should be supported in their domestic duties, recognizing that women have a heavy workload. Responses indicate that some men may only view this as necessary when the women are sick or away from home – in other words, they temporarily help while the woman is unable.

Across all ethnic groups, women discussed how, if men do help in the home, it is not sufficient. They need more help with their daily tasks. Results from the Daily Clock group activity illustrate that women from all ethnic groups bear a significantly larger workload than men, which causes intensive time management and leaves little time for leisure. They must manage their tasks,

making decisions on land use, marriages, etc. The karbari is the respected leader of a community and, generally, his constituents follow his lead and advice. Karbaris have traditionally been male, but the Marma have recently begun to allow female karbaris.

which include food collection, preparation, childcare, collecting water and fuel wood, and other household chores, in addition to time spent on agriculture and livestock management. In the past, men were ridiculed for doing women's work more than they are now. If someone saw a man doing his wife's chores, they might think she was lazy and not being a contributing member of the family unit. Now, some men say that if the wife is busy with other tasks, it is appreciated by the community if a man helps his wife with domestic work, such as fetching water or cooking.

Both men and women agree that women have no problem to do productive labor outside the home, such as weeding and clearing out bushes for jhum or other cultivable land, collecting firewood, fetching water, spinning yarn, and even cooking and childcare. However, the latter (cooking and childcare) are considered the domain of women and "major work", such as constructing houses, carrying heavy loads, driving (e.g., motorbike), and buying land are the domain of men. Male and female leaders tended to have a slightly more optimistic perception of gender division of labor than non-leaders, with men and women describing shifts in the sociocultural norms for gender division of labor. A female Bawm leader said, "*with the passing of time, tremendous development has taken place in Faruk para and communities have changed in many ways, so that there's no longer the idea of people being bound to perform tasks that are traditionally assigned by the community where they live.*" She has witnessed this change personally, having been ridiculed in years past for her husband cooking and getting the kids ready for school while she worked on her business. Now, she says everyone does this kind of mutual support within their families. Respondents say perceptions have changed and it is now culturally acceptable for men to help with domestic chores and it makes families happier. However, a frequent observation was there are older or more traditional people in all communities that still follow the old ways, or more traditional communities, where there is a resistance to change.

In general, people recognize that allowing women to earn income is good for the family. Communities have observed that when women work, it has created more jobs and made life easier for families because they have more income. Children's health and education as an asset and the desire for them to be successful financially may be drivers for shifting norms about men's role in domestic work. A Bawm karbari said that husbands and wives should work together if they want to raise their children well. He said men cannot earn enough on their own to support the family and to pay for the education needed for the children. A Khumi karbari said that men and women have to work together, that men cannot do it all, or the family will not eat. Some respondents articulated that men and women have different roles because that is how the family functions as a unit, but they should understand and help each other with their tasks. As a Mro karbari put it, "*Husbands and wives should cooperate with each other for their work. They will love each other. That's why people get married.*"

Perceptions of Men's and Women's Capabilities

Women's access to power and autonomy is rooted in traditional and religious customs that dictate leadership ascension, inheritance and property rights, mobility, and wages, in addition to sociocultural perceptions that women are inferior to men, both physically and intellectually. The physical inferiority is contributed to biological dimorphism. Men's size and physical strength is considered evidence that they should earn more money and be allowed to roam freely for work and communication without security concerns. Women's mobility is limited due to fear of violence and harassment or fear of ridicule and stigma for breaking custom and traveling outside

of the customary boundaries. For some ethnic groups, religious teachings restrict women's mobility (e.g., Bengali) or influence inequality between men and women. For example, a male Bawm respondent explained, *"While managing the family, sometimes I make a decision by myself and don't inform others, but women cannot do it, they have to inform men before doing anything. This is according to our religion, and as per that, men will manage women."*

As a consequence of being restricted in where and when they are able to move, because of limited mobility and because of their role to perform work inside the home while men perform work outside the home, women do not have the same exposure to people outside of their ethnic groups or communities, or the opportunities to gain knowledge of and experience with business, legal, financial, technological, and other matters. This is true for all ethnic groups, although it can vary from community to community and household to household. Non-Bengali women are further isolated from the political economy if they do not learn Bangla. Although there is no quantitative data on what languages women in SAPLING households speak, the inability to speak Bangla was given as a barrier to non-Bengali women's access to information and a reason they do not interact often with people outside of their communities. In the baseline study, data show women have significantly less access to financial and agricultural services than men (financial – 28% of female farmers 38.9% of male farmers; agriculture and livestock – 9.1% of women and 13.2% of men), indicating they do not interact with service providers and, thus, gain experience and knowledge.

This lack of exposure, experience and knowledge provides the rationale (given by both men and women) that, intellectually, men are more capable heads of household and should have the responsibility and decision-making authority over major household decisions. The group discussion from a Kheyang HCRM with senior men sums up this sentiment, that was expressed across ethnic groups. In sum, the man is the head of the family and he makes the final decision, but he consults his wife and others. When asked if they value the opinions of the women, the men responded that they consider them when women give intelligent opinions. Thus, men determine whether the opinions of women are intelligent or not and should be considered.

Decision-Making Dynamics in Productive and Reproductive Activities

In the base values survey conducted by SAPLING to inform indicator targets, respondents were asked who should make decisions about women's healthcare, children's healthcare, making food purchases, what food to cook, how food is distributed within the household, and what foods children need to grow well. The results (Table 6) show a disparity between what men and women think about healthcare and food-related decisions. Women across ethnic groups said decisions about their own healthcare should be made jointly with their husbands (60%), by their husbands only (16%) or by themselves alone (20%), while husbands are split between saying this is a joint decision (40%) or their wives' decision (55%). Very few (2%) men thought they should make decisions for their wives about their healthcare. Women's responses may reflect a lack of belief in their own abilities to make decisions regarding their healthcare (low self-efficacy), limited control of household resources to make a decision, or a belief that a decision about healthcare is too important to be made alone. Most women and women feel that children's healthcare (73% and 72% respectively) and children's food needs (72% and 79% respectively) is a joint decision. The remaining proportion do not appear to share the same opinions on whether men or women should make those decisions.

Table 9: Proportion of Female and Male Respondents to Decision Making Questions in Base Value Survey

Issue	Female - Women Alone	Male - Women Alone	Female - Husband Alone	Male - Husband Alone	Female - Jointly	Male - Jointly
Women's Healthcare	20%	55%	16%	2%	60%	40%
Children's Healthcare	10%	15%	11%	9%	73%	72%
Making Daily Food Purchases	24%	30%	26%	16%	45%	50%
Types of Food Cooked	59%	3%	6%	56%	29%	35%
Distribution of Food in Household	57%	5%	4%	46%	35%	42%
Child's Food Needs	16%	5%	3%	9%	72%	79%

For food-related decisions, other than who makes decisions on food purchases, a similar pattern of disconnect exists between men and women (see Table 9) who believe themselves to be the decision-makers. However, the proportion of men and women who feel these decisions should be made jointly is similar. For example, 57% of women said they should decide on how food is distributed in the household and another 35% said it should be decided jointly. In contrast, only 5% of men said women should decide, while 46% of men said they should decide on food distribution within their household and 42% said it should be decided jointly. The same pattern can be seen for deciding on what types of foods should be cooked. Food purchases, like healthcare, require access to resources to make those purchases, which may be why more men than women think women should make those decisions. For deciding what to cook and who eats it, women clearly believe they should make those decisions either by themselves or in consultation with their husbands, despite the finding that men feel the opposite. It is critical to understand that neither the healthcare nor the food-related decision-making results are driven by any single ethnic group, but, rather, these responses are similar across ethnic groups.

The qualitative research found across ethnic groups and locations, men and women both say decisions are discussed together first, but only the man has the power to unilaterally make a large household decision because he is the head of household and responsible for the family. The determination that he is head of household comes from: 1) the ownership of the house and/or assets, either from inheritance or purchasing, 2) men (usually) make more money than women in the household. Money buys the assets and denotes control of those assets, and 3) the perception that men are more capable of making decisions because they are more knowledgeable and experienced.

“Men inherit family property/assets in our community. For that reason, they have more decision-making power over family production and assets in the household. Though women work more than men, but they don’t get equal rights on assets. Even in the case that a couple divorced, women get always get fewer assets of the family compared to men.” – Bawm Female Leader,

Inheritance rules in all ethnic groups but Marma dictate assets go to sons and not daughters. However, in Bengali communities, there is variation among households regarding what happens when a male head of household dies. In some households, the eldest son or brother takes over assets and decision-making, but in other households, the wife inherits properties from her husband and has decision-making authority over them. There are indications this is tied to education and if the wife has a job and is an income earner outside the home. Among the Marma, women can inherit their parents’ property, but it is unequally distributed between sons and daughters, with sons getting a larger proportion of property than daughters. For the property she does inherit, there is a risk that a Marma woman’s husband will sell her property without telling her and she may face difficulty with her male siblings if they protest her property rights. An additional risk comes from unequal power distribution in the society in general, whereby powerful men are rumored to illegally grab land, presumably from both women and men. Although there is agreement among all respondents that inheritance rights provide men with assets and, thus, ownership and decision-making power over those assets, male Kheyang respondents provided additional insight into the rationale for unequal distribution of property, explaining that inheritance customs are not what give men dominance over assets. Instead, men are more qualified to be responsible for assets through experience, exposure, knowledge and understanding of matters related to assets, such as legal matters.

Women who have businesses are usually able to make decisions about purchasing inputs and equipment for their business, as well as sales, but the norm is for men to have general decision-making over how money is spent, even money that is earned by women. *“My husband makes all the decisions because it’s his house. But he discusses with me before making any decision,”* says a Bawm wife, who also said she makes her own decisions about her weaving business needs, such as if she needs to buy more yarn. *“I just buy yarn and weave traditional textile but my husband controls because everything in the household is his. I buy yarns with my own money, but I cannot control it.”*

In most households in all ethnic groups, men and women describe a consultative process in which the family acts as a sort of council, depending on how many adult members of the household there are. While men are usually heads of household, there are some cases where a mother-in-law controls the resources and makes decisions. The interview and group activity data demonstrate variation in decision-making practices among households, but, in general, the head of household shares his knowledge on an issue with relevant family members (including his wife, who may be the only person he consults) and they discuss and give opinions and he makes his decision.

The same decision-making processes and patterns observed in households is also applied to community resources. For the most part, men participate in committees and have leadership positions that invest authority for them to make decisions. Even in communities where women are members of committees, respondents described a consultative process like in the household,

where women's opinions are largely discounted (noting that this is not universal and there is variation among households). Access to most community resources, such as wells, community centers, schools, roads, etc., is said to be open to all community members. Depending on the community, some resources, such as a temple, may be restricted to only male use as dictated by custom or religion.

Women say they feel they are victims of the broader environment and context. Their roles do not take them outside the home often enough to gain the experience needed to be perceived as having the capacity to make good decisions. Historically, men have received more training, building their skills, while they work outside of the home. The women themselves said women are not considered skilled enough to make good decisions because of their low educational status and low position in society and that is why men have the advantage to make important decisions. However, there is hope among the women (and men, especially karbari) that they are in the middle of a transformation. Although they feel their opinions to be less important than men's opinions, they do think attitudes and practices are shifting as they are gaining ownership of some assets and playing a more important role in the betterment of the family through use of those assets. This has helped their financial status and respect within their households and their communities.

Variation by ethnic group

Bawm

Most men and women said the husband as the head of household makes decisions, but almost everyone described a consultative process in which the head of household discusses decisions with his wife, and sometimes parents or other members of household. A Bawm karbari said, *"The head of the family sits with all the members of the family and asks about their opinions and how they did things in the past and then decides what they should do in the future."* Men can make decisions alone if they want or need to, but women cannot. The religion teaches that women should be managed by men, according to him. *"While managing the family sometimes he takes decision individually and doesn't inform others, but women cannot do it, they have to inform men before doing anything. This is according to our religion and as per that men will manage women."*

Responses support the findings from the base value survey that a significant proportion of women feel food-related decisions are their responsibility. A Bawm mother said her husband makes decisions about the family assets, such as the fruit orchard, but she makes decisions about buying food and other necessities for the household, as well as domestic work. As a woman and wife, she said she is mostly responsible for taking care of the household and family members. A female Bawm leader thinks women in her para are self-sufficient because they work and earn money, even more money than men, according to her. Women do weaving, gardening, collecting and selling forest products, and day labor. Although she first said men make decisions in the household, she went on to say that these days women also make household decisions that are not large decisions, such as construction of houses and purchasing land.

Bengali

While Bengali respondents described consulting with all family members, there seemed to be agreement that men make the final decisions on assets, resources, and production. As one male

respondent observed, “*the women in his family do not talk above the men,*” meaning the women do not contradict the men’s decisions.” Despite men’s ultimate decision-making authority as head of household, respondents described a consultative process in which husbands and wives make decisions together – the perception by some female respondents was that no one makes a decision alone. Men and women discuss decisions, which may even be reported as joint decision-making if they were asked, but ultimately men make the final decision. The marital relationship and communication style in the household really determines whether or not a man considers his wife’s opinion. Female heads of household, daughters who are responsible for caring for their parents, and women whose husbands are not living at home make decisions themselves, although for women who are in contact with their husbands, they jointly discuss, and the husband makes the decision. For a woman to be head of household, she needs to have the intellect required, said one male Bengali respondent. In his opinion, most of the female heads of household have become that way by default, when their husbands do not reside in the home. He did not explicitly say women cannot have the intellect to be a head of household, but other respondents, both male and female discussed how women do not have the intelligence needed to run a business and, presumably, a household.

Having the ability to earn an income is closely linked to having the ability to be a head of household. A Bengali husband said if a wife makes a decision in matters (such as children’s discipline), then she has to tell her husband later because he is the only earning person or head in the family. This line of thinking demonstrates the link between earning income and being head of household and, consequently, the ultimate decision-maker, even about children’s discipline. Upon elaborating, the husband says if a wife makes a decision on her own and it turns out to be a bad decision (“not successful”), then it will affect her mental state. Due to this apparent fragility, women should consult with their husbands before making any decisions, so the husband can guide them to make a good decision. Similarly, a Bengali wife explained how she and her husband make decisions together, “*We make decisions mutually. Mutually means, say I have an unused land, then my husband suggests how to utilize this or what vegetable should be planted here. So, we do this through this kind of understanding.*” Her husband guides her to make a good decision, but in her opinion, “*We mutually make decisions on every issue. We depend on each other. He doesn’t do anything without me, and I also don’t make any decision without him.*” This respondent and others pointed to family harmony as the reason husbands and wives should make decisions together. Some felt that more educated families were more conscious of this and worked together to make the family more successful and happy.

Chakma

As a Chakma karbari explained, each household is different, but some men come home and bring what they have learned from the outside back to their wives. They share their learnings and counsel with their wives before making a decision for his family. The karbari said that because he is educated, he thinks women have a right to express their opinions, but not all men think this way. Another male Chakma respondent from a different para said that most of the time men make the decisions, both for household and community affairs. A female Chakma leader echoed these responses and noted that men have more rights than women among the “hill people”, but that husbands consult with their wives. Another Chakma karbari (different para) said that women cannot do the major jobs, such as digging and cultivation, and that is why they only make minor decisions (this is due to perceived physical inability). Women’s main activities, considered

minor, are cooking, collecting water, cultivating vegetables, weeding jhum, and other minor jobs. Men make major decisions, such as production decisions, buying or selling livestock, and cutting trees from the garden. However, in households where the eldest man has died and the eldest woman is still active, she can be the decision-maker because she is now the head of household. Chakma women can work and earn money and keep the money, but some need permission from their husbands to spend it, while others are able to spend their earnings as they choose.

Kheyang

Similarly, Kheyang men and women say that men are responsible for major decisions in the household, but consult their wives, and, depending on the relationship between the husband and wife, some women can make decisions about small matters, such as buying clothes, general shopping, children's school snacks, and making wine – although men control the money, so women have to ask for money to use for these minor decisions. In some households, women need approval to shop for vegetables and other foods to cook. Kheyang men explained that there are no decisions in which they are fully dependent on women, but women are dependent on men as there are no major decisions a woman can make without getting approval from her husband. Kheyang women are permitted to work outside the home, but younger women must be accompanied by their husband or other women. Both men and women manage the household income and disclose to each other what they have spent, but women in some households should seek permission to spend money ahead of time in case the husband needs it for an urgent matter. In some households, women can make decisions regarding their own money as it relates to small inputs for their income generating activities (IGA) or small household purchases, but they should disclose to their husbands what is spent. A wife can make spending decisions if her husband is not around for several days, in which case she can purchase food or other necessities. Transparency in spending from both husbands and wives is to avoid marital discord. A male Kheyang respondent described a scenario in which he discloses what he has spent his money on to avoid conflict in the house: *“say I have had alcohol and returned home. Instead of acting drunk and creating chaos, I tell my woman I have had liquor and had to spend this amount on liquor. All this without any quarrel or dispute.”* However, one karbari noted that husbands sometimes take money from their wives without asking.

Khumi

In Khumi households, men are heads of household and control assets, thus they are decision makers over major household decisions. However, family discussion is common before a decision is made and wives are consulted. The value placed on the wife's opinion varies from household to household, as in all communities, with some households not making important purchases unless both spouses agree. In others, the elder son may have more consideration than the wife. One Khumi karbari articulated the reality of the impossible assumption that men must take all responsibility for the household. As he put it, *“It is not possible for men to work alone, because it is necessary [for the family] to eat. It is very difficult to run the family by working alone.”* This karbari recognized the value of women's contributions to household well-being, saying that in addition to household chores, women earn income and provide food by rearing livestock, cultivating jhum, cultivating the garden, planting crops, and working as day laborers, among other activities. The head of household is in charge of all money, including what is earned by his wife, and can decide how it is spent, but wives in some households have freedom to

decide on smaller purchases without asking. All transactions are discussed either before or after by husbands and wives, so they are both aware of their financial situation.

Marma

Despite being the only non-Bengali ethnic group in which women can hold traditional leadership positions and can inherit property from their parents, decision-making in Marma culture shows the same patterns as other ethnicities. Men control production, assets, and resources of the household and, in some households, women must consult with their husbands on production and large expenditure decisions, and with other male relatives (if she is widowed and a head of household) about property dealings. Joint discussion and consultation is, in part, practiced to maintain mutual understanding and awareness of what the other spouse is doing for the success and happiness of the family. However, with regards to income the woman earns herself, a Marma karbari explained that a woman does not need anyone's permission to spend her own money and that women have learned about financial management, so they jointly manage the household income with their husbands. Another male respondent had a different perspective, saying Marma women need permission to spend household income. It is custom, he says, for women to keep all of the household income, but for the man to decide how it is spent. The two different responses may indicate the juxtaposition of a sociocultural shift that could be delineated along lines defined by social status or education. In this case, the leaders (two karbaris interviewed) say women are more involved in decision-making, earning and financial management than before, and the non-leaders say they are not.

Mro

The Mro are no exception to the traditional discriminatory gender norms that are prevalent throughout Bandarban. A Mro husband rationalized, *"It's the men who have been taking all the responsibilities for women and have been making decisions, like what is good or what is bad for the family, in our society since the ancient times. That's why women do not have any role in terms of making decisions."* A widowed woman controls the household assets until her eldest son is old enough to take responsibility. Husbands consult their wives before making decisions, but Mro women do not have decision-making authority over major decisions. For example, if a woman wants to raise pigs, she discusses with her husband and they decide how many to buy, and the husband will buy them. Any financial matters are decided by the men and men have responsibility to control and make decisions over all family income, including what women earn. Wives must ask their husbands before spending any money, although spending very small amounts without permission may not cause conflict. One Mro wife attributed women not being able to make household decisions to the Mro patriarchal tradition, stating that *"there is no value for women."*

Tanchangya

Tanchangya men are heads of household and make major household decisions through a family consultative process, in which family members share their opinions. Women feel their opinions are not always considered. The community accepts that Tanchangya women earn income and women have decision-making authority over their income. They can spend it on themselves and their children without taking permission. If the husband and wife want to buy land, a solar panel, or build a house, for example, they discuss with each other and both contribute from their earnings. According to both male and female respondents, women make decisions about their

own tasks (e.g., weeding, working in the fields, household chores, gardening, weaving, buying cloth/threads, buying their clothes) and men make decisions about their tasks (e.g., building the house, cultivating the land, cutting trees/bamboo, day labor, buying their clothes). A Tanchangya wife said men and women make decisions on their own production tasks separately *“because there is separation between their jobs. It doesn’t look good if the men do women’s work. There are some jobs on both sides which can be done by one and the other can’t do them. Just like women can’t do the heavy jobs.”* The division of decision-making over production and household affairs is also attributed to knowledge, skill, and physical capability. *“Men do not know how to weave a pinon (traditional women’s wear), so women have to weave. On the other hand, men cut trees and bamboos. As the women are weak and less powerful than the men, they cannot do this work.”* – Tanchangya karbari

In the HCRM group activity, the women’s group insisted that they are victims of environment and situation. They can rarely go outside the home. Men are more likely to receive training and achieve more skills and experience because they work outside home. The Tanchangya women said they are not considered skilled enough to make good decisions because of their low educational status and low position in society. They claim men take advantage of this disparity to rationalize their control and authority in the household.

Tripura

Major household decisions are made by Tripura men, although heads of household discuss with wives and other family members first. This is because men are the “chiefs” of the families and understand the well-being of families better than women. Some respondents said women need permission from their husbands to go anywhere or make big decisions, but others said women could make decisions regarding productive activities they oversee, such as livestock rearing, and a husband may have to get permission from his wife before selling the livestock. Because men and women are different, they do not perform tasks in the same way and, therefore, they are responsible for different items and tasks. A woman can be the primary decision-maker if her husband is absent or deceased, when the responsibility to be head of household falls to her (the wealth may also be transferred to her at this time). Women can earn money outside of the household, but their control of that income varies from household to household. In general, it seems women can keep some of their earnings for their own needs and contribute the rest to the household finances. One male Tripura respondent said women do not manage the finances of the family because they are not capable, while others said men and women manage finances jointly.

Decision-Making on Healthcare

“Suppose, she (wife) is going to the doctor’s; then she will ask me, whether I can accompany her or not? She can be sick or the child can be sick. Then I will definitely tell her “yes go”. If I don’t have money today then don’t go today, go tomorrow instead.” Bengali husband

This quote illustrates the limitation women have on making their own healthcare decisions because they do not have access and control over money to be able to go to a health service provider. They must ask their husbands for money and, for some women, ask permission to leave the house or travel to the healthcare provider. Although individual households have varying approaches, this practice is common across all ethnic groups and all locations in the SAPLING target area.

SAPLING is educating husbands, wives, men and women from the community, and adolescent girls about women's health and nutrition, especially during pregnancy and lactation, and about children's health and nutrition. The expected result is that increased knowledge of health and nutrition and increased appreciation of women's capabilities as decision-makers will provide women with more autonomy over their own healthcare and that of their children. Increased income or saved income as a result of growing more in the gardens can be put toward transportation and fees for healthcare.

The decision-making over healthcare may also be influenced by access to services. Overall, women (and their households) have limited access to all healthcare services because the services are not available near their homes. Accessing services requires travel, time, and money, in addition to the perceived risk of leaving the para. For example, only 5.4% of women of reproductive age (WRA) in the baseline had access to antenatal services and 2.9% had access to postnatal care and Vitamin A supplementation. For non-reproductive healthcare, access is also limited. Only 17.1% of WRA had access to medication and deworming and 17.5% had access to take their children for routine immunization and Vitamin A supplementation.

Decision-Making Women's Mobility

Women's mobility is restricted across ethnic groups for two reasons:

- 1) fear of gender-based violence (GBV)
- 2) sociocultural norms regarding husband or father's permission and traveling alone.

Non-Bengali ethnic groups claim that women are at risk for being attacked by Bengali men or other men from outside their para. Bengali women do not fear for their safety in their own paras, but do fear going out at night. There is insufficient data from the CHT on GBV to know if these fears are based on a real security threat, but, regardless, the perception of the threat is real and that perception influences behavior. It is socially unacceptable for women to go out at night in any ethnic group unless she has permission and is accompanied. Exceptions are made for women who travel far to work (e.g., garment factory) and must return late at night. In these cases, women usually travel to and from work in groups for safety and to avoid suspicion that they are being deviant. Most women and adolescent girls need permission or need to tell their husbands and fathers where they are going. Despite this, women and girls in all communities move about their para and visit with each other. Women may be less restricted than adolescent girls in some ethnic groups. For Bengalis, staying at home and staying covered is a sign of piety and also may be related to socioeconomic status and perceptions of civility:

“(The issue of girls leaving the house) it is related to the family. Girls from some families go outside. But girls from some families are not allowed to leave the house without taking a family member with them. Educated families allow less their girls to leave the house. They would want to keep their girls covered in the house. But those who are not educated, parents working outside- they are disorderly in nature. As mother and father is not in the house so they just go (whenever they want to go outside), go here and there like this.” – Bengali wife

In this woman's opinion, more educated families understand socially acceptable behavior and follow the rules of purdah¹⁹, keeping their girls and women secluded and covered. However, other Bengali respondents indicated educated women sometimes work outside the home and hold leadership positions, although they may need permission from their husbands to do so.

Summary on Decision-Making

From the data, a common narrative about decision-making formed among all the groups: Inside the house, everyone has access and use of resources, women maintain resources in the home (except for appliances, such as the TV and water pump) while men maintain resources outside the home (agricultural lands, other lands, solar panels, pagoda, water source, and other large assets). Men control the money. Usually, women do not have control or ultimate decision-making power over any major assets or resources, although there is variation.

The rationale for these norms is that men are heads of household and earn the money that is used to purchase large assets. Men make decisions over spending money because they are usually the ones to do the spending since they spend a lot of time outside the home. Having the flexibility to leave the house affords men the perceived capacity to make decisions because they gain experience and are more informed by interacting with others. Because gender divisions of labor means that women spend most of their time at home, they do not get the same exposure to information or experiences. People who are viewed as having the capacity to operate or control assets are given that right. In general, women are perceived to not have that capacity – part of that capacity is to have an understanding of the asset. Because of inheritance customs, sons are raised to learn about the assets that their father take care of, eliminating the possibility that daughters will have the same knowledge. Ownership of assets, such as land, gives people a higher status and, thus, they are viewed as being more qualified to make decisions over other resources, such as community resources.

While there is a group decision-making process whereby all adult family members are consulted, the head of the household ultimately makes the decision and his opinion carries the most weight. In his absence, someone else will make the decision if they are not able to reach him by phone or the majority opinion makes the decision. Women feel that their opinions are not always taken seriously and considered in household decision-making. Women in interviews and group discussions said they are not satisfied that both men and women produce and earn income, but the opinion of the wives are either not listened to or not reflected in the decisions that have been made by the men. They want authority and control over resources and for their opinions to be listened to and considered.

Gender Wage Gap

A gender wage gap for day labor was noted repeatedly throughout the discussions. Both men and women said men earn more, sometimes twice as much, for the same amount of time worked and both men and women justified this wage differential by citing women's weak physicality and intelligence. Physical strength was the most noted reason because women are unable to do the "heavy" jobs that men do, such as cutting and carrying trees and bamboo, clearing jungle and

¹⁹ Purdah is a practice that was inaugurated by Muslims and later adopted by various Hindus, especially in India, and that involves the seclusion of women from public observation by means of concealing clothing (including the veil) and by the use of high-walled enclosures, screens, and curtains within the home.

<https://www.britannica.com/topic/purdah>

burning jhum fields. These jobs earn more money and, therefore, men get paid more than women because men do these jobs. Two schools of thought emerged from the data: women and men who believe the wage gap is justified and women and men who believe it is unfair and should change.

From one group discussion with Kheyang women, the female participants explained that men can work and produce more, so they get more money. Women cannot stay all day and have to go home for different household chores and to feed children. One group participant said, *“As women work slower than the men, and women always work less than the men as we have to go home for feeding children. How can we go to work without feeding baby?”* A Bengali wife asked, *“Why would they give us (equal wage)? Could we do the tasks of men? Yet we get paid?”* Another participant said, *“Men can put in more labor, women cannot do that.”* According to a Marma karbari, Marma society and families are patriarchal and men are dominant, stronger, and able to move around more, so it is natural that women would have less expertise and get less money than men for the same work.

Another group of Bengali women had a different opinion. Their conversation is as follows: *“But men and women do the same amount of tasks. They put the same ‘thing’ (effort).”* Another participant agreed to this opinion and said, *“We have done equal amount of work. It is not like we are standing by and they are working.”* The one sitting beside adds, *“We keep working the equal amount of tasks.”* Another participant explains in detail that, *“Suppose they (men) have filled the basket and we carried it on our head or we filled the basket and they carried it. In that way, we have done equal tasks.”* Even if women are aware and do not agree with the wage discrimination, some just accept it because they need the money for their families. For example, *“If we can get 200 taka, that is still earning 200 taka. If we sit at home, no one would give us 200 taka, so if we work instead and get 200 taka, then it is good for our family.”* Other women realize they do not have the power or position to change the system. A group of Chakma women recounted an experience they had when they questioned the authority about getting paid a lot less than men for doing the same job. *“We demanded answers. We do the same tasks as them (men), but why do we get paid less? The authority retaliated back saying, **You are women. You would have stayed home, who would give you 200 taka instead? That is why.**”* Another participant says with regret, *“Yes that is the fault, we were born as women. They are men and we are women.”* The respondents say that they know that it is an injustice to them, but they cannot do anything about it because if they question the owner, he tells them there is no need to come tomorrow. Therefore, they have to keep working in a discriminatory situation to have the opportunity to earn income, even if it is much less than what the men earn for the same work.

Women said the wage gap between men and women for equal time at work means they have less money, which denotes a lower status and fewer rights to control resources and take part in decision-making. They said women need skills and education to be considered capable of making decisions and controlling resources, and they need to be paid equally for the same amount of work.

Women’s Leadership

Bengali women can and do hold leadership positions, but they need the approval and support of their husbands or father. Leadership positions can be on local committees or official elected positions, most of which are part of the female wing of the current ruling party that has reserved

positions for women. The women must campaign to try and win these positions, but they also campaign against men for other positions.

Women can become involved in local religious and social committees, but only if these committees are open to women. Ethnic minority women do not hold many local government positions, although there is a female Bawm Vice-Chairperson of Ruma Upazila. SAPLING is advocating for the inclusion of women on disaster management committees and other leadership opportunities. For non-Bengali women, only the Marma currently allow female karbaris, although respondents did mention a female Bawm karbari who inherited the position from her husband. There is disagreement among respondents on whether women should hold traditional leadership positions. Data indicate this reservation, primarily on the part of men, for women to hold traditional leadership roles may come from a male fear of losing power.

All ethnic groups, men and women, believe women can be leaders if they have education, can communicate with others effectively, have leadership skills, and, in some cases, access to money. Women who are in leadership positions fulfill their roles *“by their expertise. I mean, they know how to read and write, they are educated, they can manage a good relationship with their members, adding up to that, people of this area listen to them, if they say something logical then people of this area take it into account.”* – Bawm husband. For non-Bengali women, having the ability to read and write and to speak Bangla helps women to become leaders who can advocate for women’s rights and other issues. Most female leaders in the non-Bengali societies do not hold established positions, whether elected or appointed, formal or traditional government. Instead, they are leaders in their communities by virtue of being respected for their abilities to communicate, solve problems, listen to people, and speak intelligently in public. For example, in Faruk Upor para, Bawm respondents gave an example of a female leader who collects membership fees for a community group and speaks Bangla, allowing her to communicate with politicians and other leaders who visit the village, telling them about women’s issues in the community. One female leader described how it takes time to earn the confidence and respect of the community before someone can become a leader and a woman’s husband also needs to support her.

Respondents across ethnic groups identified various reasons, such as a language barriers, limited mobility, less education and tradition as the determinants for women not being able to become leaders. Some people believe women are not as articulate as men because they have limited mobility and limited exposure to the outside world. Because of this, women cannot hold a traditional leadership position. There are exceptions for women who belong to wealthy families and have been educated.

Women’s Access to Food and Nutrition

The baseline found 60.1% of women in the SAPLING target area were achieving minimum dietary diversity for women with an average dietary diversity score of 4.7 food groups. This does not represent quantity of food consumed, only the number of food groups and may not reflect annual fluctuation in food availability. For much of the SAPLING project area, access to fresh fruits and vegetables and animal-source food is limited by poor road networks, low yield in home gardens and jhum fields, high prices at markets, scarcity of markets and the poverty status of the people with limited finances. It is within this context that women make decisions every day about what to feed their children and husband and what to sacrifice from their own plates.

Prolonged food insecurity undermines women's access to food and nutrition and women tend to make a sacrifice for their families to eat last and less after children and male members. Thus, when a food crisis hits, women are likely to suffer the worst, sacrificing diet quality and quantity to protect the food consumption of the household members. For women, this is a sacrifice they make to be a good mother and wife. They also rationalize this practice because men are heads of households and perform harder work than women and, thus, need the choice pieces of food.

"I am always at home so if I eat less it wouldn't be a problem. But my children are studying. This is their time to grow up, so they have to eat. Or there is my husband, so I am also thinking the same for my husband. He always stays outside and have worry about different things. So he has to eat filling his stomach. I am always at home, so if I eat less it wouldn't be a problem. Biscuits or puffed rice are available in the house, I can eat those whenever I want. They won't get those in the outside. Thinking like that, I take care of them a little more."

"We are 5 people in our family. Everyone is my family, so who would eat without the other?... And mothers are like this, when there is less food in the house, I give my children a little more and I eat a little less. Mothers always do this. Say there are 4 or 5 members and I have prepared shrimp. Say there are 3 shrimp, so I gave one to my husband and the other two to my children, keeping myself restrained from consuming. It will always be like this."

Men are often unaware that their wives are sacrificing their own nutrition, but men also believe in the argument that they should have more food because they are out working hard. SAPLING's nutrition education approach, focusing on pregnancy and lactation, will raise awareness of nutritional needs for the whole family. With year-round gardening and poultry production, SAPLING participants should be able to distribute food equally within the household at all times.

Dietary proscriptions limit dietary diversity following childbirth and persist for up to a year, even two, in some cases. In the immediate period following childbirth, women's diet is limited to rice or rice with salt and warm water. The duration of rice and water depends on the mother's state and elders' recommendations. In general, in all ethnic communities, the postpartum regimen requires a mother adhering to a traditionally prescribed diet, which consists of a list of allowable food items introduced at a specified time following childbirth, directives of collection and preparation of foods, a list of tabooed foods and periods of prohibition. Elders determine what and when a mother should eat based on the individual conditions, which affect the period of dietary regimen to be observed by individual. Therefore, there is no set list of food items that each person consumes, although there appears to be agreement among elders in a community about which foods should or should not be eaten. SAPLING has not done a nutritional analysis to determine if the diet is sufficient in micronutrients and food groups, however, it may be insufficient given the propensity to avoid all foods other than rice for up to a month and even most fruits, vegetables and proteins for up to six months.

Social Inclusion

Communities that are not located in an urban area have far fewer resources than communities in the sadars (sub-district seat). Most lack schools, health clinics, financial institutions, adequate

road systems, year-round water access, access to safe water, sanitation facilities, electricity, and reliable access to the mobile phone network. Job opportunities become more and more scarce the further a household is from a town.

Respondents noted it was difficult to attend school as there were no schools within walking distance. They also noted a lack of teachers who speak the local language and limited to no opportunities to learn Bangla. One of the oft cited reasons for non-Bengali women being left out of income generation and limited in mobility is their inability to speak Bangla and, thus, communicate with people outside of their ethnic group. Furthermore, higher rates of education mean higher literacy rates, which increases access to income generating opportunities and inclusion in the social and political economy.

All individuals interviewed (n=104) thought women should not remain marginalized from the economy, but many did note that there are people in their paras who do not want to see change. It is possible that this is a perception that does not match the reality. It is also possible the respondents were providing what they thought were the “right” answers. However, the community leaders who were interviewed invariably said they have observed a shift in their communities in gender relations, gender division of labor, and girls’ education and they see this as positive and necessary. Respondents felt that respected leaders in the community should be trained to increase their knowledge and awareness on topics such as gender equality and how to be agents of change. Bengali respondents want income generating opportunities that women can do from home, so they can still observe purdah, but contribute to household income.

Access to Information

Respondents provided information on where they get information needed to maintain their daily lives. This is an important aspect of social inclusion that is linked to geographic location in relation to urban centers. The SAPLING household census found only 13% (n=7844) of households have a radio or TV and 64% (n=37,506) have a mobile phone (an additional 555 households, or 1% have access to a mobile phone). Overall, most people in the formative study reported getting information and news from television, mobile phones, and other people, including family, friends, and people in the markets and city centers. Newspapers are not a common source for news and information because of the high rate of illiteracy. Although TVs and mobile phones are commonly used, access to electricity and access to mobile phone service determines how much they are able to connect. For example, in Ruifu Para, Galangya Union, Ruma and Kapru Para, Saroi Union, Lama, Mro respondents said they do not watch television because they do not have electricity. However, they do use their mobile phones to listen to Mro songs, get information, and connect with relatives, friends, businesses, and job opportunities. Radio is also not a main source for information for most people, although in a few locales the radio is still in use (e.g., Tongo Jhiri Para, Sarai Union, Lama).

The different patterns of media use appear to be more influenced by location and access to the types of media than determined by ethnicity. An example of this is Suwalok Union in Bandarban Sadar where data were collected from one ethnic group in each of four paras (Faruk Upor Para - Bawm and; Headman Para – Marma; Satkomol Para – Tanchangya; and Kaichtali Para Madhum - Bengali). Responses on access to information and technology were similar across the four paras and ethnic groups and demonstrate the population is more connected than some of the other

communities and ethnic groups in more remote areas (e.g., television use is reported to be common and internet is used by some people).

Although geographic location is a determinant for access and use of media, the variation in historical privilege for different ethnic groups cannot be discounted and ignored. Ethnic groups that live more remotely and who are less empowered in the political economy (e.g., do not have representation or a voice to successfully advocate for upgrades and modern necessities in their communities) do not have access to adequate transportation networks, communications networks, schools, employment opportunities, health and other services, financial institutions, markets, etc. Having access to media, markets, city centers, and service providers directly impacts access to information. It also impacts the level of awareness an individual and community have about advances and innovations, such as in agricultural technologies and medicine. For example, communities with high rates of illiteracy do not read newspapers, but, if they have access to televisions or mobile phones, they can watch informative programs, even if the programs are watched in a communal setting. Having access to television is largely dependent on electricity and transportation access to the community. The more remote communities have inadequate road systems to provide access to towns and, also, lack electricity.

Due to the remoteness of the target area, agriculture extension officers said they are reluctant to perform their household visit duties far away from where they are stationed. Respondents to the formative study do not have much interaction with extension officers, nor are they well integrated into the market. The pre-assessment for IGAs identified the need to create better linkages between small producers and market buyers and input suppliers. Physical access to markets is challenging for households who do not live nearby. However, some respondents said this was not a problem because people in the village would sell foods. The market can take several hours to reach via the footpaths and all good purchased must be carried back up the mountains.²⁰ Several communities use their mobile phones to get pricing and other market information, as well as information on weather, disasters, and other news – SAPLING could help connect all SAPLING communities to this information via mobile phone. Mobile phones are even used for day laborers to secure a job and fix their daily rate before going to the farmer. Religious and social meetings/gatherings are popular to attend across ethnic groups. For the non-Bengali groups, karbaris are often a source of information as they may have a television and access to the internet.

Using small projectors to show edutainment videos could be an effective way to share information and disseminate messages, especially in the “media dark” areas. Another possible means of reaching people would be to put information on the agricultural television programs that are popular, such as *Mati o Manush*, and other TV channels that have lifestyle and learning programs, such as Channel I, BTV, *Zukti Bangla* and *Dipto TV*. Given the low literacy rates across the population, but the favored use of mobile phones, voice SMS may be a way to get

²⁰ The formative study identified that sanitary latrines, which were installed during another project, eventually end up beyond repair and, because of the distance to the shop to buy parts and the weight of carrying the parts up and down steep hills, deters people from allocating resources (including time) to obtain replacement parts. Access to health services is also limited in the areas not near a clinic or hospital. It can take over three hours to reach a hospital for emergency care, such as when a pregnant woman needs to transfer. Some respondents who worked for NGOs also noted that there is not a demand for health services, suggesting that people do not perceive a benefit from utilizing health services.

messages to people, and also to have videos available in the markets that can be downloaded for free to mobile phones and watched later at home or in the community. Videos could be distributed to agricultural input suppliers, extension officers, and also to popular hangout spots, such as tea stalls, and places where people go to charge their phones. Several communities use their mobile phones to get pricing and other market information, as well as information on weather, disaster, and other news – SAPLING could help connect all SAPLING communities to this information via mobile phone. Mobile phones are even used for day laborers to secure a job and fix their daily rate before going to the farmer. Religious and social meetings/gatherings are popular to attend across ethnic groups. For the non-Bengali groups, karbaris are often a source of information as they may have a television and access to the internet.

Access to Assets and Resources

In the SAPLING target area, the resilience sub-study derived from baseline data found that asset ownership and bonding social capital are low.^{21 22} Out of 18 possible durable assets, household-owned, on average, 2.6 assets and no household-owned more than four. The Household Census identified that 27% of households have electricity and 36% have solar power. Almost none of the households in the sample have informal safety net support, according to the resilience sub-study.

Few households in the resilience sub-study have informal safety net support. In the SAPLING household census, 91% of households were found not to utilize a social protection program. Responses indicate that people are now aware of the availability of the social protection schemes. Of total households in the household census, 66% do not have a savings account (including savings group). Many Bengali respondents interviewed during the formative research study say they have access to loans, which may be facilitated by living in Bandarban Sadar and Lama in areas that are easier to access and are more urban. According to respondents, women get the loans, but men use them. Only 22% of households in the resilience sub-study had a cash savings. The SAPLING household census found that 31% of all respondents had at least one type of financial account.

Communities that are not near a the upazila capital (sadar) do not have access to a bank. For example, in Rowangchari, participants said the only banks are located in Rowangchari Sadar para, not elsewhere in the upazila. Therefore, they do not have immediate access to banks. In Suwalok Union of Bandarban Sadar (Tanchangya and others), banks and NGOs offer loans to people and there is a small savings group with 12 members in the para. These are the only existing financial services they have access to. The interest rates for loans vary from 5% at the government bank to 14% by the NGOs. Respondents from Anil Chairman para (Chakma), Bolipara Union, Thanchi said they have access to social protection schemes and receive them. In

²¹ Bangladesh Resilience Research Report – Final. Prepared by TANGO International. August 15, 2017.

²² From Babaei, H., N. Ahmad, S. Gill (2012). Bonding, Bridging and Linking Social Capital and Empowerment Among Squatter Settlements in Tehran, Iran. *World Applied Sciences Journal* 17 (1): 119-126. Bonding social capital refers to strong, dense ties between people who know each other well, such as family members, close friends, neighbors, and members of primary groups. These are horizontal relationships. Bonding connects people who are similar in terms of socio-financial position and demographic characteristics, forming groups with a high degree of homogeneity that are restrictive to outsiders. Bonding social capital is a pathway to create shared identities, develop local reciprocity and trust, and provide emotional social support. See SAPLING Livelihoods Strategy for complete definitions of social capital and the resilience framework.

addition, they have access to loans. In communities with existing savings schemes, not everyone has access. These are usually initiatives that have been established by an NGO for households that meet project criteria. For those who do participate, they say they are able to save and some people do save money at home. However, people across Bandarban tend to think they do not have enough money to save.

Men and women said they have equal access to loans in their para, but people with more resources have more access to loans than people with fewer resources, because the banks want to see proof they can pay back the loan. In other places, men said they have less access to loans than women through development initiatives, but men also gave the reason that when financial service providers come to the house to collect installments, they usually find the women there and not the men because the men are outside of the home for most of the day. Therefore, they must take women with them to get the loan, so they are recognized as a loan recipient, too.

It seems the promotion of financial services to women has not had the full intended impact – families circumvent the requirement that women receive the loans by using the women to get the loans, but intra-household norms dictate men will still make decisions over the money. Women explained that if they get loans, they repay them, but men have a reputation for defaulting on their loans. Men complained they do not have access to loans like women do because of this and that it would be good for development initiatives to make financial services more accessible for both women and men. In some communities (e.g., Prue Mong Para U Headman Para, Kuhalong, Bandarban Sadar, Chakma) people said they do not want access to loans because they have trouble paying their debts.

Adolescent Aspirations

Adolescents from all ethnicities and all locations share a common desire to complete their education and be financially solvent as adults. There are a few exceptions in which adolescents have already ceased their studies to work in jhum or support their families (Kheyang, Khumi, Mro mostly). In these cases, they desire to become more skilled, so they can be successful in agriculture. Boys and girls have a wide range of career goals, much like adolescents around the world. Their goals include jhum cultivator, tailor, businessperson, government administrator, doctor, nurse, health worker, banker, teacher, mechanic, policeman/woman, engineer, driver, stay-at-home mom, artist, singer, journalist, missionary, social worker, military personnel, priest, photographer, pilot. However, career goals were only part of what adolescents mentioned when they talked about their goals in life. They also mentioned social and personal goals, such as being a good person, good mother, good member of society, respected, and also to be socially recognized for gaining wealth.

Parental support for adolescent goals vary from household to household. Some respondents said their parents wanted the same goals for them, and some respondents said there was conflict because their parents wanted something different for them. Parental support is an obstacle to achieving dreams in some areas, but not all. For girls, this is more of a barrier than for boys, although in some areas it is for both. Khumi, Mro, and Kheyang girls especially said their parents may not value their education. In fact, none of the Khumi girls involved in the study were in school, but they, along with Mro girls, tended to not have goals beyond becoming a wife and mother. For girls to have goals and aspirations was not a concept they had considered. However, in all areas, parents want their children to be successful financially so their children

will have a better life than they do and also to enable them to take care of their parents later in life – whether this is from education, agriculture, or marrying a man who is financially successful.

The stated barriers to achieving their goals are tied to access to income, access to educational institutions and skill-training institutions, and traditional or religious customs:

- Lack of money to pay for tuition, tutoring, books, etc. or to get agriculture inputs, land and other needs to be a successful farmer (some Kheyang, Khumi, Mro and other adolescents involved in the study had already dropped out of school)
- Dropping out of school to help parents with productive activities
- Early marriage for girls (this is to reduce financial burden on the family and to avoid the social stigma associated with girls becoming too old to be married).
- Lack of educational and skills-training institutions in their area (requires money to stay at school and some parents do not allow girls to go far away and/or stay)
- Poor road infrastructure and transportation requires them to stay away from home because they cannot go back and forth in the morning and night, which requires more money
- Lack of teachers that speak local languages (non-Bengali)
- Socially marginalized because of age within the family and community, their opinions and wishes are not respected or considered and their education may not be valued
- Uneducated parents cannot help them with their studies and, in some cases (Khumi), may not value education over work in jhum
- Ethnic discrimination (non-Bengali)
- Sexual harassment for girls as they walk to and from school or their own business ventures.

To address the financial difficulties and help their parents pay for tuition, some adolescents take on work outside of their normal family responsibilities. Adolescent girls in different areas tutor younger students, grow vegetables, collect saplings to make broomsticks and sell them, or other small jobs. Both boys and girls seek scholarships from the local government, banks, NGOs and other places.

Adolescent boys and girls discussed marriage as a social process to obtain a life partner, produce children, and as a form of social security later in life. They noted it is important to have a life partner to share sorrows and happiness with, giving each other a form of social support. Many respondents said that working as a team to maintain a household underscores survival is important– the chance of survival is higher with a partner than alone. These young people see marriage as a pre-cursor for household prosperity and food security because the husband and wife work together. Having children is also a form of survival and security for the time when the married couple is too old to take care of themselves fully.

Across ethnicity and location, adolescent boys and girls recognize that child marriage has both health and financial repercussions. They recognize that babies born to young adolescents are at risk for physical and mental problems, early pregnancy can cause complications in childbirth and physical problems for adolescent girls' bodies, and some also think boys may have physical problems if they marry early. Furthermore, adolescents are acutely aware that getting married

before finishing their education and finding a job can lead to financial difficulties that lead to unhappiness in the family and negative perceptions of the family from others. Several adolescent girls' groups also mentioned that if they get married after they are educated, they will have more respect from their mother-in-law. Early marriage has a clear link to poverty in the minds of these young people and they have a strong desire to finish their education before marriage, so they will be successful and have happy families.

Not all adolescent girls have expectations beyond marriage because, in some households, parents do not support their daughter's career goals. They do not always achieve their goals because their parents wish for them to get married and to contribute to the family productive activities with their mothers. Girls also explained that social pressures to leave the father's house and move to a husband's house limit the amount of time they could live with their parents and study or earn money for their studies. People may think no man wants to marry her if she is still in the house and she and her parents will be humiliated. For both boys and girls, they may have conflict with their parents if their parents wish for them to stop their studies to help in the jhum field or other productive activities. According to the adolescent respondents, most parents do not want to do this, but sometimes do not have a choice.

Girls also said marriage provides a daughter-in-law to work for the husband's parents. The Mro adolescents are aware of the legal age of marriage for men and women, but they say there is little awareness in Mro society that it is illegal to marry early – although the Mro adolescents seem to be aware. Girls from Khumi society are in a similar situation. None of the Khumi girls in the adolescent groups are continuing to study and some of the boys have also ceased their studies, as well. The groups said Khumi boys and girls are getting married by the karbari at 16 and 17 years of age. Parents choose to educate their boys if they are financially able, but no one is able to support both boys and girls in school. Many families struggle to educate any of their children. In some of the more remote areas, the adolescents want to become successful in agriculture and desire to have better skills and technologies to do this.

Gender Equality and Social Inclusion (GESI) Discussion

Overall, women in this study reported wanting to have more equal inheritance and property rights, equitable wages, have more access to income, participation in community-level and household-level decision-making, leadership opportunities, and for their opinions to be more valued by men. They are hindered from all of this by the widely accepted perception that women are incapable of making major decisions with intelligence and cannot articulate opinions well.

Four reasons emerged from the data for this:

- 1) women are physically inferior and cannot do the same jobs as men
- 2) women's jobs keep them at home more than men and, therefore, they do not have the exposure and opportunities to gain experience and access to information.
- 3) women do not have the constitution to handle the responsibility of being a head of household
- 4) traditional inheritance customs prevent women from owning assets

These factors provide the impression that women are not equipped to make major decisions or provide valuable input. A perception by some people that women are intellectually inferior underlies some of the discussions about women's abilities. Female heads of household, by

necessity, gain exposure and experience needed to successfully manage their own assets and resources, but may still consult male relatives for advice and financial support, validating the notion that women are not capable of making major decisions on their own.

Limited exposure to outside experiences, access to information outside the home, and knowledge and skills are barriers to transforming these perceptions and empowering women. Based on the logic provided by respondents, if women earn money to help the family, gain skills, have the right to inherit property, money to buy property, have access to information, and are able to speak with confidence and knowledge, then they can also provide input and be taken seriously in the decision-making processes at the household and community level. SAPLING's group-based approach to adult learning is designed to equip female participants with technical skills to produce nutritious foods for their families, earn income, make decisions and plan for production, safeguard the health of their families, and become leaders within their groups and communities. Women involved in IGAs gain skills to make them more articulate in negotiations and aware of how to find information and use it as it relates to their businesses. The skills, income, access to information, and success that women will have through SAPLING's interventions will position women to directly address some of the barriers to their empowerment.

Respondents say they have observed a change in recent years and women are more involved in the economy and decision-making than before. A transition in sociocultural norms can be identified in contradictory responses, often by the same person, in which someone says men make major decisions and then says husbands and wives make decisions together. This may indicate an increasing distance between actual practice and the stated norm. Leaders across ethnic groups shared their observations that norms for appropriate or acceptable behavior are changing and that this change is needed for families to have improved livelihoods. These observations by leaders and others give a promising scenario in which the foundation for a shift in norms may be beginning in SAPLING's target area, giving the program's GTA to supporting resilient livelihoods and improving food security a greater chance of success and sustainability. It is possible that the leaders were aware of the "right" thing to say to the data collectors and gave answers they thought were sought. Even if this is true, it does represent an awareness of the concept of women's empowerment.

Women and men across the region recognize the value of having women as active agents in the economy earning income, because it benefits their families and underscores successful livelihoods. Likewise, there is a shared agreement among respondents that men should share responsibility for performing domestic tasks to reduce the workload of women and that households would benefit from increased participation of women in decision-making. However, as stated above, there will be contradictions as norms transition:

"If there is a change in (distribution of) work and (in participation) in decision making between men and women, I don't think, there would be much resistance from the society, as long as there is no wealth, financial or any personal interest is involved, otherwise this would face confrontation." Mro Karbari

The above quote illustrates a sentiment that is an obstacle during the transition to gender equality. While men and women both recognize joint decision-making and income generation by

women is beneficial to the family, there is some resistance for women to have equal rights to assets and resources if it means men may lose assets and resources and power – men do not want to redistribute wealth and power that has been traditionally been theirs. One karbari explained that it will be difficult to change inheritance rights and open leadership positions to women because it will *“hurt the honor of men.”* In other words, the socioculturally-defined identity of men will be undermined and men will feel disempowered if they perceive they are losing to women. Respondents explained that with awareness raising, education, and involvement of respected community members and leaders, these types of changes will be possible. SAPLING interventions directly address sociocultural norms for men and women to create an environment that supports transformational change. During the men’s sessions, self-reflective discussions are facilitated with men on the burden and stress that comes with having the responsibility and accountability for making all decisions.

Men in the study said they make decisions regarding the household because it is expected of them. Respondents noted that society has placed the responsibility to judge what is good or bad for his family squarely on the shoulders of men, and the eldest man, if he still has his mental faculties, is usually the ultimate decision-maker. Other men and women in the household are consulted, acting as a sort of council for the head of household, but like other leaders, they consider the opinions of the council and make their final decision. Whether the decision turns out to be a good or bad one, they said they are held responsible for the outcome. SAPLING recognizes the pressure this responsibility places on men and the possibility that stress may increase alcohol and other substance abuse or lead to GBV. The SAPLING gender transformative sessions are designed to guide men and women to think outside the normative boundaries that limit potential for resilient livelihoods and recognize that true joint decision-making, shared responsibility, communication and mutual support and respect are critical to improved household well-being. The separate men’s sessions provide a safe space for men to discuss what it means in their society to “act like a man” and “act like a woman” and how they can make changes in their own lives and be role models for others.

A female Marma leader suggested that husbands and wives need to learn to communicate better to bring a change to gender disparities. She said a woman should learn to speak out and explain the problems and difficulties she faces daily and learn to ask for help. Men also need to be able to explain their problems and difficulties so that both spouses can come to an agreement of mutual support. Tanchangya women were explicit in their recommendations for what needs to happen to help bring about change: teach their husbands how to consider women equally and to value women’s opinions. SAPLING’s gender transformative sessions in the Integrated Enhanced Homestead Food Production (IEHFP) curriculum and the men’s sessions are intended to do what these women recommend. Men across ethnic groups (though not all male respondents) think giving women control of more resources and establishing more female leaders is a good idea. In one Chakma community, men explained how they have more access to the male leaders (karbari and headman) than women, and this gives them an advantage in discussing control and ownership of important assets, such as land. Furthermore, they said their participation in community meetings affords them the opportunity to gain respect and honor for their opinions. SAPLING is creating committees and groups with opportunities for women in public engagement and interaction with business and technical service providers. They are learning skills to manage assets (garden, poultry, income generating activities), and having the

opportunity to save income earned. These activities serve to increase women's visibility outside the home and improve her status as a decision-maker because she demonstrates capacity to her husband and the community.

SAPLING is aware that these activities carry the risk of adding to the time and work burden of women. That is why the GTA includes 10 sessions on intra-household relationships, as well as four additional sessions just for men that discuss, in part, working together for the betterment of the family, sharing in decision-making, and allowing women to earn and control income. These sessions also include in-depth discussions about the gender division of labor and women's work burden, compared to men's. The Daily Clock activity found women across ethnic groups spend more hours a day doing work for household (income generating and non-generating). While men and women both tend to perform tasks in the evening, men take more time than women to visit other men or take a rest. Women in group discussions and interviews said they needed more support in the home. A promising finding is the perception in many paras that attitudes are changing regarding men performing "women's work" in the home, such as carrying water, washing clothes, cooking, and childcare. Furthermore, men and women in leadership positions felt strongly that attitudes are changing. SAPLING has the opportunity to build on the existing momentum of change and collaborate with community leaders to be the changemakers and role models for change.

SAPLING's gender transformative sessions will teach women and men the skills they need to communicate their own needs and listen to their spouse's needs. Through participatory methods to understand daily activities, men and women gain a deeper appreciation of the contributions made by each to the well-being of the household.

The study revealed that adolescents' aspirations are hindered by their parents' financial status, traditional values that place importance on marriage and working for the family over education, and structural isolation through lack of access to facilities and services. The plight of the adolescents is reflective of a bigger inclusivity problem for communities that are not located near urban centers or are in areas that are marginalized and poor in the CHT. People in these areas have larger hurdles to improving their livelihoods that require involvement from local government and policy-makers. SAPLING is advocating for inclusion and representation of ethnic minorities on decision-making bodies. As SAPLING participants and their households become more empowered to take control of their own futures, they will recognize they can be instrumental in bringing needed changes to their communities.

Respondents link education as necessary to stimulate change: if children and adolescents complete their education, they will have a better life than their parents, economically, and they will be able to make changes happen in the community. They think that literacy and education can lead to less gender and other social discrimination and underscore progress in the community. Across groups, people recommended enlisting the help of traditional leaders, religious leaders, youth and elderly to help catalyze change for more equitable gender relations. As speakers of the local languages are needed to teach, government programs to train teachers from the communities could help solve the teacher shortage. Adolescents and women say they need to learn Bangla and English to have a better chance at success.

The study identified an important aspect of the research question design that is worth mentioning for future studies on gender equality and women's empowerment. When women and men were asked about decision-making in the household in general and specifically over income, income generating activities, healthcare, food, and mobility, they often gave two responses within the same set of questions: 1) husbands are head of household and make the final decision, and 2) decisions are made jointly. Later in the interview schedule, participants were asked what changes they would like to see in their communities. Whether influenced by the questions on differences between men and women that they had already answered to give the perceived "correct" answer, or emboldened to speak up for change, women declared they want their input to be valued in the decision-making process, they want property rights and to have more control and ownership of assets, and they want men to do more to help with domestic tasks in the household. Men also said they wanted to see more equality between men and women, although there were qualifications on their hopes for the future, such as not wanting to individually lose financially if women gained more economic rights (e.g., if daughters get equal inheritance rights, that means sons will inherit less than they expected). The takeaway from the response variation (by the same respondent) is that future research should include questions about desired changes and needs in the community. Without those questions, the data would not have identified women's stated desire to have more equal rights. Furthermore, if probing questions asking specifically about whether there are decisions only men make or decisions only women make had not been asked, and the researchers had stopped with "who makes decisions" they may have only gotten a partial view of the decision-making process in the household.

Finally, the discussions with individuals and groups of varying ages across ethnicities and locations revealed an issue of sustainability that SAPLING should be aware of. In communities across the target area, other projects have offered financial assistance and training to women that made them capable of earning income. When these projects ended, so did the income generation of the women (and men, in some projects). SAPLING's overall approach includes a focus on the broader environment and sustainable household resilience strategies to proactively prevent a drop-off of activity when the project ends. Interventions geared toward this include the group sessions to transform gender norms and intra-household relationships, support for social inclusion in decision-making bodies, linkages between producers and markets, training of market actors to be gender sensitive and provide appropriate inputs, establishment of savings and internal lending committees, and advocacy to help eligible participants enroll in social safety net programs through community disaster response teams that will persist beyond the life of the project. However, even with all of these interventions, change will not be sustainable without government involvement via appropriate and equitable support and service provision, inclusive decision-making bodies, and transparency in enforcement of regulations and resource allocations. Until the citizens of Bandarban perceive the broader environment enables them to improve their livelihoods and become more food and nutrition secure, their aspirations and future-oriented behaviors will continue to be informed and restricted by a perception that change is beyond their control and their commitment to sustaining interventions will wane.

Health and Nutrition

Both the qualitative data from the baseline and SAPLING's formative qualitative research study show that caregivers are aware of the importance of EBF. Respondents to the qualitative study were aware of the importance of EBF for the first six months of life and say they have heard this

from other NGOs and health service providers, but also believe the introduction of rice in the diet, beginning as early as one month, is good for the baby. Furthermore, there is an understanding that honey, water and other liquids are not recommended to give to children during that time, but these are commonly practiced. The rate of reported EBF in the baseline survey is 43.7%, however, it is possible that this is overreported given the results of the qualitative study. Respondents discussed EBF, but also did not appear to associate feeding rice or rice paste to infants under six months as counter to EBF. Additionally, respondents described how it is challenging for a mother to only feed her baby breastmilk when she must travel to the jhum field to work. It is common for mothers to leave their babies at home with a caregiver rather than take them to the field. During this time, the baby eats and drinks other foods. Therefore, when asked if they practice EBF, it may be that people answer “yes” when they are discussing breastfeeding at all, and not breastfeeding only, or when they are describing how they feed their own children, but not how others (e.g., grandmothers) feed their children.

Rice is an important cultural food and is believed to make children and people strong. The same attributes that are given by global health professional for breastmilk are ascribed to rice. For example:

“Women of Mro tribe work a lot outside of home, like working in jhum or the garden, gathering vegetables for the family, gathering firewood, gathering sticks to earn money, and bringing water. That’s why we believe it is better for the infant to start eating rice early to get stronger soon.” – Mro Father

In the baseline, 34.1% of children ages six to 23 months have a minimum acceptable diet, with inadequate consumption of animal-source food. Children’s minimum acceptable diet is higher in households above the poverty line and households where the head of the household has a primary education or higher. Additionally, 53.8 percent of children in Bandarban are reported to start complementary food from four to five months of age. There are diverging views regarding feeding young children protein-rich foods such as fish or other meat. SAPLING formative research study participants described how most babies are fed rice (in various forms) by the fourth month of age and some believe children under 12 months of age should not be fed vegetables and animal-source foods (ASF). Overall, children are not consuming ASF in adequate proportions. Elders caution against feeding (ASF to children under one year of age and have a varied list of prescribed and proscribed foods in the first two years.

During pregnancy, there are many dietary guidelines for women across ethnic groups, with considerable variation around specific foods. Variation exists within ethnic groups, as well. Some food proscriptions are advised because of the unwanted effects the food may have on the pregnancy, childbirth or on the baby. For example, a Khumi mother explained,

“If I eat rotten meat then there is chance of miscarriage. Bat is prohibited because the baby will have a face that is similar to a bat. Fish that are caught on a fish hook are prohibited because then my baby will get stuck and won’t be able to get out at the time of the delivery. Also, my baby might get stuck like a fish in the net, that’s why fish that get caught in the net are also prohibited.”

All newly delivered women from the various ethnic groups undergo certain postpartum regimens, which have long been established in their respective communities, based on culturally-influenced health beliefs and practices. In each community the traditional postpartum practices include a rest or confinement period, restriction on certain activities, maintaining a prescribed diet, prescribed newborn care and other rituals. In the non-Bengali communities, many mothers are required to stay inside near a fire for 7-15 days to help heal and close the womb. During this time, mothers are often restricted to eating only rice and water, must bathe in warm water, and cannot leave the room. The specifics of this practice vary across ethnic groups (see Mro example below). Essential Nutrition Actions promoted by SAPLING provide guidance to mothers, fathers, and senior women and men on the importance of optimal nutrition for lactating mothers and to help her body recover from childbirth.

Participants ascribe hot and cold properties to foods and bodily states and this can explain physical reactions in the form of illness, such as when a mother's body becomes overheated from work or being in the sun, it is thought her breastmilk has gone bad and can make the baby ill. It also provides a rationale for the traditional practice of heating the mother after childbirth (common in other parts of Asia and the world). It is believed that the mother's body is in a cold, open state, which makes it more susceptible, and that her womb is open and raw and needs to be heated and healed. The heating accelerates healing of perineal tears and the womb. The fire also protects the mother and child from evil spirits to which they are susceptible.

Although food proscriptions and prescriptions vary among households, communities, and ethnic groups, it appears to be common among non-Bengali groups for the mother to be on a diet of rice and water for a period that can persist from 1-3 months. Burnt salt may be allowed in the diet, but the time it is allowed varies. For example, one Mro respondent said mothers may eat burnt salt after 7 days, while a Khumi respondent said burnt salt is prohibited for two months. Once foods are introduced, they are usually vegetables with limited to no protein intake (no pulses or ASF). Newborns are usually fed breastmilk when they are born, but Bengali mothers who have access to purchase them may also feed milk powders, such as Horlicks. Bawm babies are fed water when they are first born and then snake liver (bile) because it will boost the immune system. Honey may also be given to newborns across Bandarban. Colostrum is commonly perceived to be bad for the baby because of its dark, yellowish color. Mothers also discussed difficulty in getting the baby to breastfeed and maintaining breastfeeding. Early initiation of breastfeeding (EIBF) is a crucial moment that can determine whether a mother and baby are successful and can sustain breastfeeding. SAPLING's messaging promotes feeding of colostrum and discourages the consumption of even water until six months of age and targets mothers, fathers, and senior women and men. SAPLING also provides lactation management training to community health service workers (CHSWs) so they can provide lactation counseling to new mothers.

Postpartum Diet and Care Example: Mro

A Mro mother must stay in confinement by a fire or stove for nine (minimum seven) days to help her body close and heal as it is believed to be in an open and "raw" state and susceptible to cold and illness. During this time, the fire helps the womb to "dry" and heal. The mother cannot leave this room, even to use the bathroom and typically uses new pots and kitchen utensils to prepare and cook her own food in that room, staying separated from the family. She cannot use any

cookware used by other family members. If she does not stay in confinement by the warm fire, her body may swell (presumably from an infection). Likewise, if she eats any vegetables, leaves, fish, pork or other meat during the nine days, her body may swell. The fire will also protect the mother and baby from evil spirits, since they are in a susceptible state. A mother who is not a primipara (i.e., first childbirth) does not have to follow the regimen rigorously, but must stay in the room for a minimum of seven days.

In Mro society, the postpartum dietary regimen is known as *Kan Khang*, and usually lasts anywhere from 2-6 months, after which the mother can resume her regular diet. However, depending on the mother's health, the period can be extended or resumed. For instance, one respondent described how she practiced Kan Khang for four months, then resumed a normal diet. After 2 ½ months of the normal diet, she became ill and reverted back to the Kan Khang diet for the remainder of the year. A typical Kan Khang regimen is as follows: During the 9-day confinement and for up to a month following, she may only eat plain boiled rice and warm water. She must drink warm water only for 2-3 months. After the first 7-9 days of rice and water, she can add burnt salt to her rice. The common practice is to continue rice with burnt salt for a month. After this month, leafy vegetables may be allowed back into the diet. For women who are deemed to need a more rigorous form of the regimen, burnt salt is allowed after 21 days and the diet of rice with burnt salt continues for three months. The period of proscription on vegetables, meat, fish and dried fish, varies across Mro paras and individuals within same community, with responses of one month, two to three months, and up to six months. Excessive bitter, sour, salty, and spicy foods are proscribed until at least three months or longer. After six months, unless a decision has been made to extend Kan Khang, a Mro mother may return to a normal diet.

“During this time, the mother’s stomach is empty and weak, so as long as her placenta isn’t healed, she needs to continue with this diet,” Mro

The Mro believe that if the dietary regimen is not observed, the health of both the mother and newborn will be adversely affected. The mother will suffer from a swollen body and *cha pang*, in which food gets stuck in the stomach due to indigestion, consequently causing other illnesses, and newborns will develop diarrhea.

During the 9-day confinement, the baby eats only the mother's milk. After the mother and child emerge from the birthing room, the baby is given a name and the family kills a chicken or pig and serves it to the elders and the midwife. This is when the mother first feeds rice to the baby. She chews the rice and gives it to the baby to help it become strong so she can leave it to return to work in the jhum field.

Access and use of health and nutrition services

Access to health services is limited in most communities, forcing people to prioritize and make difficult decisions about when to travel for healthcare. Government facilities are perceived to provide inadequate care, but private facilities (if available) are more expensive and require financial resources that may not be available. Most women do not go for antenatal (ANC) or postnatal (PNC) care visits (19.2% of women received four ANC visits in the baseline). In some areas, it can take over three hours to reach a hospital for emergency care, such as when a pregnant woman needs to transfer. Some respondents who worked for NGOs also noted that

there is not a demand for health services, suggesting that people do not perceive a benefit from utilizing health services. However, the data from the qualitative study suggest people determine when to seek biomedical care from a health service provider based on perceived severity of the health issue. First lines of health-seeking include pharmacists as primary providers, midwives for certain ailments, bonesetters, and other traditional healers. Seeking care from a certified biomedical service provider is often a last resort due to accessibility and cost.

Food Scarcity

“In my family, most of the times when we don’t have enough food occur in the rainy season and then I have to work as a day laborer more often... if a little money is needed, then it is lent from relatives, if the amount is big, then it is lent from the proprietor to buy rice, sometimes the shopkeeper also gives rice in advance, as a loan.”

A common narrative described by respondents across ethnic groups was that people do not have enough food during the rainy season. The rains pose challenges to travel for many communities and they are frequently cut-off when roads and paths become too slippery to walk on. Due to impassable paths, people cannot forage for foods, get to markets, or go for work outside of their village. This is especially difficult time for day laborers who may not be able to find work because the work has stopped from the rain and because they cannot travel to find work. Even for those who have money in the household, unless there is a market near their home, they are unable to reach a market to purchase food. Given the distance and steepness of slopes, during times of easy access and money, people are still only able to bring the maximum amount of food stores that can be carried. Food can also be scarce for 1-2 months during the summer (April – May) in addition to the rainy season, when there are no or few crops growing in jhum. An increasing population is blamed for lower availability of vegetables, fish and game animals to forage from the forest when food is scarce.

“You see, there are two seasons (of paddy) in a year. From March to May, the paddy shows up. The paddy cutting starts generally in December. In addition, this continues until February. After March, the stock starts getting limited. Gradually there comes a time when no one would have paddy stock. Then there is a shortage. However, by the start of June paddy starts showing up in the fields. Then it lasts until August. Then the following three months, again there is a shortage. Poverty strikes back.”

During the time that vegetables and fruits are growing in the jhum, gardens, orchards, and forest, respondents said they are able to feed themselves. Sometimes they occasionally purchase food from the market, such as from March to May when leafy vegetables are not growing as much. Also, during this time, the rice harvest is not ready and the demand for rice spikes. People grow and store potatoes and gourds to store for times of food scarcity. However, respondents described how, in the past, they were able to grow more of these vegetables that could be stored, but now production has decreased and they run out of the stores earlier than needed. They say the lands are not as fertile as they once were because they are being used too frequently for crops. In the past, jhum fields were left fallow for longer periods, but now because of the population and other reasons, the land available for jhum has decreased. This also means they do not have as much produce to sell and report they have less income than in the past. When they are in times of need,

people borrow money or food from relatives and others to help them get through the hunger period.

“We have to face food-related challenges from the month of April to July. We face a shortage of rice in the month of July. Four to five families go hungry because of food shortages. Therefore, they have to endure a hardship to collect foods. Members of those families have to work as day laborers during that period”.

“In jhum cultivation production isn’t always as expected, in some year they have less crops. My family needs 100 pots of paddy but we only got 20 pots this year (In every pot 20kg). That’s why for covering up for the lack of rice that is 9 month, had to work more in other people’s jhum or garden as day labor.”

Another reason that was given for being hungry is when guests arrive at the house. This is usually temporary, but lasts as long as the guest stays with them. During this time, women will serve the best foods to the guests and will sacrifice their own meals. Women say they will eat small snacks, such as puffed rice, to subdue their hunger while this is happening.

“I realized later that she didn’t have her food. Many a days later, she revealed to me, ‘there was a shortage in food, except for me, everyone had food.’ On several nights, I noticed that the baby was crying for not getting enough milk. When I asked my wife, she said she didn’t have her dinner because there were two unanticipated guests and she ended up sacrificing her food.”

This quote demonstrates how having food and other resources to share with guests is a critical mechanism of strengthening social capital, which is a livelihoods asset and linked to increased resilience capacity. All of these findings demonstrate the need for livelihoods to become more resilient and able to withstand the shocks and stressors that the people in the CHT experience regularly.

Coping strategies when faced with shocks and stressors measured in the baseline largely involved reducing food consumption, reducing expenditures, and borrowing money. Of household in the SAPLING area, 37% in the baseline reduced food consumption after a shock in the previous 12 months, with 71% of those eating fewer meals per day. ASF were the most commonly reduced in the diet, including meat (80%), fish from the market (61%), and eggs and dairy (42%). In other words, we can assume that over one-third, approximately 17,000 households in the SAPLING area reduce the amount of food they eat as a coping strategy at least two times a year and that ASF, a source of protein and other macro- and micronutrients, are the first foods dropped from the diet. In addition to reducing food consumption, 63% of households also reduce food expenditures (i.e., they are buying and eating less).

A number of different strategies to deal with food shortages were noted in the responses to the qualitative study. Consumption of ASF decreases during times of food shortage, but in normal times SAPLING participants say their diets are centered around vegetables and they eat meat once or twice a week because it is costly. When families anticipate an upcoming food shortage, they will often begin to eat smaller portions to make their resources last longer. Children and elderly are the last in the household to have to limit what they eat. Women are the first family

members to sacrifice and men tend to get more nutritious foods because it is believed by men and women that they do more physically taxing work and, therefore, need more nutritious foods.

“A woman always keeps food for her family. Even if she cannot eat, she keeps it for her children, parents and husband. I am a woman that is why I know this. If there is less food, I keep it for my husband. He works outside, doesn't he? I am staying home. This is the scenario in all households. All women surely do this.”

In some households, husbands and wives discuss how they will deal with and mitigate shortages of food. Although the husband may be the one to buy the food, the wife usually determines how much food to cook, although this varies household to household. Foraging is an important part of coping during food shortage, but, as stated above, availability of foods to forage has lessened with increasing an increasing population and competition for limited resources. When needed, people rely on relatives and neighbors for food and sometimes money and they will sometimes take out loans or get credit from a shopkeeper.

Water, Sanitation, and Hygiene

Open defecation is a common practice in the CHT, especially among the non-Bengali communities. This is, in part, due to access to sanitation facilities and access to water. The formative study identified that in places where sanitary latrines had been installed by another organization, the latrines were commonly no longer in use. They eventually end up beyond repair and, because of the distance to the shop to buy parts and the weight of carrying the parts up and down steep hills, people are deterred from allocating resources (including time) to obtain replacement parts.

Participants across ethnic groups and communities talked about using sanitary latrines as a hassle. Barriers to using latrines, even when they have been installed in communities by civil society or public entities, include:

- water shortage (need water to “flush” waste)
- need to collect water for the latrine
- small latrine water collection pots that do not hold enough water to “flush” the waste
- latrine water collection pots are unique vessels and it is embarrassing to walk from the water source to the latrine because people know you are about to defecate in the latrine (this is especially true for adolescent girls)
- latrines have an offensive odor because waste is not properly flushed due to lack of water,
- flies are rampant in latrines
- latrines should not be located near the home because culturally it does not make sense to have defecation waste near the home (this means latrines could be some distance from the house)
- latrines are dark at night and people are wary of snakes and other pests, and, finally, using a latrine with water requires a person to touch feces

Participants who are accustomed to open defecation were offended by this last point. To many in the discussion groups, they did not want to touch feces and were, understandably, disgusted by the thought of using a latrine and using their hand and water to clean themselves instead of

openly defecating in the forest and using the traditional bamboo stick to clean the bottom, which does not require contact with the feces. To participants in the CHT, their traditional method of open defecation (away from their home using a small bamboo stick to clean their bottoms and leaving feces that will be consumed by animals in a short period of time) makes more sense than using scarce water resources to partially flush feces in a smelly latrine and using their hand to clean their bottoms. Furthermore, for those who attempted to maintain latrines, eventually the latrines need new hardware, which requires carrying replacement parts long distances up and down the hills. There is a cost to maintaining latrines and someone has to both take ownership of the maintenance and provide the time and financial resources. Therefore, the latrines remain in disrepair. Based on these findings, SAPLING works with communities to identify an appropriate approach to reducing open defecation and containing waste without utilizing scarce resources, offending the senses, and requiring hard-to-access parts for maintenance. Additionally, SAPLING has capacitated WASH entrepreneurs in some areas to provide supplies and services in an existing market. Finally, Water User Committees are being set up by SAPLING to help resolve the problem of maintenance, although there needs to be a further understanding on why previous maintenance efforts by other NGOs and United Nations Agencies did not last.

Another finding regarding latrines has to do with jhum cultivation. Those families who work in jhum spend up to half of their time during the year in their jhum field. Many set up temporary shelter and spend days at a time. Others walk to and from the field during the day and spend the entire day there. Jhum fields do not have latrines. SAPLING is promoting a waterless, composting toilet model for use in the jhum field.

The research found that even in some communities where a gravity flow system had been established or people had access to a tubewell, there is a preference for water from the stream because it is perceived to be cold and reliable, as evidenced by the timeless use by their ancestors. Rainwater is not a preferred drinking water source because it is viewed as “slippery”. People will drink rainwater when they have no other source. Knowledge of how to purify water by globally recommended means was low (filtration and purification), although a common way to obtain filtered water is to dig a shallow hole beside a stream or river and wait for the water to trickle in. While this is an acceptable method for obtaining purified water, it should be considered temporary because it can easily be contaminated by surface water or debris. Water scarcity for drinking and other uses was noted repeatedly as a major challenge to daily life in Bandarban. There is little water for irrigation, women (although sometimes other family members) spend an average of 30 minutes to an hour per trip to collect water. That amount of time increases when during times of the year when there is less water because there are fewer water sources and the lines are longer, increasing the wait time to collect water. An additional challenge that emerged from the data was access to an existing tube well. While quantitative data may show the existence of tube wells in a community, not all families will have access to that tube well because one or several families may claim the well and control its use. Thus, while there may be “access” because the well exists, there may not be “access” in reality because of power dynamics and social inequalities.

Finally, handwashing practices are less than optimal. Many people have heard about appropriate handwashing times and methods for washing hands with soap from government service providers, NGOs, and media, but practice is low. Water scarcity may be a reason for not washing

hands. When people have a limited water supply, it is possible that using that water to wash hands may not be a priority. Furthermore, soap is expensive and not easily available in many places. SAPLING has incorporated revised messaging on handwashing to provide options (e.g., ash, using soapy water that has been used for other purposes) that are more salient to the context and will help establish appropriate handwashing as a practice. Participants are being taught how to construct Tippy Taps with a plastic bottle to give an option that uses a minimal amount of water to wash hands.

Disaster Risk Management

The qualitative study found a differentiated impact of disaster on individuals and households, based on age, gender role, socioeconomic strata, and location. On average, the baseline found households in the SAPLING area experienced 2.3 shocks in the previous 12 months. Considering the long-term, adverse effects that a shock can have on a household with low resilience capacity, this could mean a household has a recovery period every six months (or is hit doubly hard within a six month period). Flashfloods (16%), flooding from excessive rainfall (16.2%), water scarcity (19.6%), landslides (19.7%), pest attacks (23.7%), and loss of small livestock (16.4%) were the climate shocks that SAPLING households in the baseline reported experiencing most in the previous 12 months (using a cutoff of 15% of households to denote “most”). Economic shocks in the past 12 months include serious illness (22.4%), increasing indebtedness (7.9%), accident (7.3%), loss of assets (4.4%), low market prices (6%), and accidental fire (3.1%). Land grabbing (2.3%) was the only conflict shock with a measurable number of households experiencing it. Despite deforestation and erosion being documented underlying causes of food insecurity in the CHT, respondents in the SAPLING area baseline did not note these as major shocks or stressors in the previous year. This could be related to shifting land use where many of people do not own land, but instead use a plot for a few years before being assigned to another one by their headman. It could also be due to the slow onset of the shock (i.e., it is a gradual, not immediate shock). However, the problem of deforestation is a serious threat to food security and resilience in the CHT and this low level of reported impact may indicate a need for more awareness of deforestation and its impacts on livelihoods, rather than a lack of negative effects from deforestation.

Data from the qualitative study show that, each year, participants face poultry losses due to disease. There is little awareness or action to manage disease apart from vaccinations. For example, diseased birds are not separated from the flock to avoid spreading the illness. Although vaccination is claimed to be routine, disease incidence is reported to go up after a disaster and vaccinated birds perish. Participants said that they take few, if any, measures to secure their poultry before disasters because they say they do not have time. Furthermore, they do not view recurring climatological events as disasters (e.g., flooding, heavy rainfall), indicating the experience of loss to disaster is so common and cyclical that people accept it as normal. Data also suggest that people across all ethnic groups believe that any natural disaster is an act of divine will, therefore, they cannot possibly do anything to alter it. This is an example of having an external locus of control in which people do not believe they are able to change their situation within the context in which they exist, even if they themselves believe in their own abilities (self-efficacy). SAPLING’s resilience framework²³ considers an internal locus of control, in which

²³ See SAPLING Livelihoods Strategy for a detailed description of the resilience theoretical framework

people do believe they are able to improve their livelihoods within the context in which they live, to be a critical part of higher resilience capacity.

Every year, participants suffer from food insecurity in the wake of disaster due to less resilient livelihoods, including limited mobility, availability of work, and savings. Those who engage in daily labor are said to be the hardest hit by a natural disaster because farmers do not have resources to hire labor, daily wage laborers often are some of the most impoverished with no savings or access to food, impassable roadways limit their employment opportunities and access to markets. Apart from the villages where savings groups have been initiated by NGOs, most people say they have not been taught how to save.

Almost none of the households in the sample have access to preparedness and mitigation programs to counteract the impact of shocks (which may reflect a structural deficiency in community and social service infrastructure that supports shock preparedness). Households do not have a preparedness plan or know how to prepare one and measures taken to save food, animals, valuable documents are inadequate. The study found some people have access to early warning through cell phones and announcements in the village, while others say they look at the sky to determine if a storm is coming. A few communities use a school or local government office as a shelter, while others go to a stronger home. In general, people do not know where to get information on disasters or notifications for help in a disaster.

Recommendations

From a resilience perspective, the formative research shows there is opportunity in Bandarban to support bolstering resilience capacity and thus improve the food security and nutrition status of participant households and communities. Based on the findings, the following recommendations are made. SAPLING may not be able to implement all of these recommendations in the current project, nonetheless, these are potential interventions or modifications that could underscore transformational change, whether they are feasible now within the parameters of the current project or addressed in future opportunities.

Health and Nutrition:

- Because elders and in-laws are primary sources of information on nutrition and care of mothers and young children, enlist them as agents of change and support for optimal care of PLW and optimal IYCF
- Teach men and women about nutrition for PLW and children
- Specific messages for EBF, EIBF, and CF should be included throughout all interventions, if possible:
 - Highlight the qualities that are attributed to foods given to infants, such as “nutritious”, “makes strong”, “boost immunity” to colostrum and breastmilk.
- Teach mothers, mothers-in-law, grandparents, other senior women how to troubleshoot common breastfeeding problems
- SBCC materials on proper attachment and positioning
- Messages on health benefits of colostrum AND how it helps stimulate breastmilk

- Messages on breastfeeding on demand to help stimulate breastmilk (the more you breastfeed, the more milk you make)
- Messages that breastfed babies eat often – sometimes even every 20-30 minutes. The best approach is to breastfeed when your baby wants it. Even though they eat more often and get hungry faster, breastmilk is fresh, natural, and chemical-free and the only food your baby needs.
- Rice does not have the nutrition a baby needs. You may not see an effect now, but your baby can have “hidden hunger” – this is true for all nutrition – poor nutrition has long-term consequences, not just short-term
- Messages on the benefits of feeding vegetables to children 6-23 months
- Messages on the benefits of feeding ASF to children 6-23 months
- Cooking demonstrations with recipes for simple, nutritious foods for children
- Messages on handwashing and food safety

WASH:

- Find acceptable and appropriate solutions to the problems with latrines, such as the Arborloo and other types of latrines that do not use water or smell
- Set up Water User Committees with operational training and mechanisms, a fee collection mechanism, a savings group, and tools to help make repairs to increase the likelihood of continued agenda and action after the project ends
- Promote using the traditional bamboo sticks in waterless toilets to avoid having people use their hands to clean their bottoms
- Advocate with local authorities to appropriately budget resources for WASH
- Provide alternatives to washing with soap – using used soapy water, or even just water if no other alternative; ash; even sand
- Promote use of Tippy Taps as a low-cost, low-water, convenient handwashing station
- Messages to clearly link bacteria/germs from feces with illness and lack of growth (i.e., stunting) in children
- Promote water-saving technologies, such as fog harvesters, drip pans, sack gardens for irrigation, water collection pots
- Promote ways to protect the watershed and retain moisture in the soil for crops, such as thick mulching

Production:

- Water saving technologies for irrigating crops
- Promote thick mulch as a way to retain nutrients and moisture and control insects
- Erosion control methods: planting trees above the fields and around the perimeter, planting hedgerows with plants that put nitrogen back into the soil and can be used as fuelwood and possibly food
- Disaster preparedness and risk mitigation strategies and technologies, such as raised beds, sack gardens, vertical gardens, integrated pest management, planting on higher ground, drainage ditches
- Plant different compatible crops in small spaces to balance nutrient use
- Create and use compost and mix with bottom layers of soil to get more nutrients into the soil before planting

- Plan production and have access to information to know what to plant for maximum returns, know cost of needed inputs against projected earnings
- Post-harvest storage – plant for post-harvest needs, more foods that can be stored and how to keep protected in disaster; other ways to preserve food

GESI:

- Support women and other marginalized groups to have more access to information and expand their social networks to increase social capital
- Build human capital of women and marginalized groups
- Help improve self-efficacy, internal locus of control and aspirational capacity for women and other marginalized groups
- Shift perceptions that women cannot make informed decisions by helping them participate in groups and leadership positions and income generating opportunities
- Work with families to help break down barriers that prevent men and women from doing “men’s work” and “women’s work”
- Help men figure out how to deal with pressures of being heads of household and work with them to understand how household food security improves when men and women make decisions together
- Link adolescents with opportunities to have a voice in their community and promote education with their families
- Promote poultry production as an IGA for people with disabilities
- Invest in research to determine activities and messages to improve social cohesion within the CHT

Disaster Preparedness:

- Provide specific guidance to IEHFP participants on small, doable ways to minimize loss from a disaster – raised poultry sheds, put poultry away at night, reinforce poultry shed and housing posts, reinforce rooftops, store seeds for next harvest, properly store important documents, build drainage ways around gardens to divert water flow, plant on raised ground, plant on rooftops, plant in sack gardens, plant vertical gardens
- Link poultry producers to vaccine providers
- Give extensive guidance on poultry disease management
- Help households make plans to prepare, including what tasks each person will be responsible for if there is an emergency
- Create early warning systems
- Create or link corps of volunteers, disaster committees to work toward prevention and mitigation, such as natural resource management
- Engage youth for multigenerational impacts

Access to Information:

- Design methods of information dissemination accessible to communities with varying levels of resources:
 - Communities that do not have electricity, limited access to TV, limited consistent access to mobile phones, limited literacy
 - Communities that have electricity, access to TV, and access to mobile phones

- Potential media forms could be videos that can be downloaded onto a mobile phone when the owner visits a market area; billboards and posters that are primarily pictorial
- Videos can also be shown by FFs and CHSWs with their tablets and an inexpensive, homemade projector (e.g., box with a magnifying glass)
- Advocate for better governance, accountability and capacity for agriculture extension officers so they will conduct more community visits
- Link SAPLING female producers with market actors, including retailers, and sources of pricing information.
- Create demand for health services and support women to seek services during pregnancy by providing them with information about pregnancy and lactation needs and available services at health clinics.
- Help create a supportive environment for women to become more engaged with others outside of their communities by establishing income generating opportunities with linkages to input suppliers, vendors, and other market actors and by helping women become leaders with access to other leaders and information sources
- Advocate for Bengali language acquisition opportunities for non-Bengali speakers

Access to Resources and Assets:

- Repeatedly promote diversification of assets, including savings, throughout all interventions
- Teach people how to plan their production to maximize the use of their resources and minimize risk – lower cost, higher yield – and how to keep records so they know what their production history is
- Encourage savings, even a small amount
- Encourage women and others in the household to engage in income generation
- Encourage families to finish children’s education (savings for education)
- Link and monitor access to safety nets

Specific suggested messages

Production Messages:

- Growing your own vegetables at home does not take a lot of money or land.
- Cultivating at home is low cost, convenient, more nutritious, and no chemicals.
- Families can grow their own nutritious foods at home all year long.
- Buy local, nutritious foods from your community.
- Plan for the seasons and predict your farming and food needs.
- Protect your fields and gardens from the rains and winds.
- Cover your hands, arms, legs, and feet when applying chemical fertilizers and pesticides.
- Save small amounts of money each month. Even small amounts will help in times of need.

Disaster Preparedness Messages:

- Take preparations for the coming season
- Make sure your garden is well-drained
- Keep your chickens dry
- Keep your important documents dry

- Keep your seeds dry and in a high place
- Move animals to higher ground

For the garden and poultry sheds:

- Raised beds, pit molds, container gardening
- Drainage
- Fencing
- Strengthen poultry shed – rooftop and posts
- Make sure water can flow underneath

Exclusive Breastfeeding Messages:

- Colostrum is all the food your baby needs in the first days. It is a gift from mother to baby and provides immunity, nutrition, and helps baby clean the stomach.
- EBF means no water, no other milk, no rice, no rice paste from anyone in the household.
- Milk powder, biscuits, rice powder, Ovaltine, Milo, instant coffee mix, instant oats mix (Quaker) – these are all bad for the baby and do not give nutrition. Breastmilk is the only perfect nutrition for your baby. Feed only breastmilk for six months.
- Breastmilk is the purest, freshest, most nutritious food for baby. It is better than rice and builds the baby's immunity and makes baby strong and healthy.
- Breastmilk digests better than any other food or animal milk.
- Formula is harder for baby to digest than breastmilk. Breastmilk makes baby strong and healthy.
- Breastmilk has all the nutrition babies need in the purest form. Formula is artificial and made from chemicals.
- Breastmilk is convenient, no cost, no preparation, no mess. Formula is expensive, takes time to prepare, is not convenient, and can cause infections from dirty water and bottles.
- Babies who are breastfed get sick less often and recover faster. Water can cause infections in your baby. Breastmilk never causes infections in your baby.
- Mothers and babies bond when breastfeeding. It is time for pure affection.
- Breastmilk makes babies smart and successful. Babies don't need powders to be smart. Only breastmilk.
- Sometimes mothers and babies need practice to breastfeed. If you have difficulty, keep trying and ask the midwife for advice.
- Every mother can breastfeed, even mothers who work. Express your milk if you have to work. Breastmilk can be stored for a few hours in cool conditions.
- All mothers are fit for breastfeeding. Ask for advice from the midwife if you feel you are not fit.

Benefits of Breastfeeding Messages:

- Breast milk helps your baby fight off viruses and bacteria
- Breastfeeding lowers your baby's risk of having asthma or allergies
- Babies who are breastfed exclusively for the first 6 months, without any formula, have fewer ear infections, respiratory illnesses, and bouts of diarrhea and grow better
- Mothers and babies bond when breastfeeding

- Babies are more confident and secure when they are able to breastfeed as often as they want
- Babies who breastfeed have better brain development in early childhood
- Breastfeeding stimulates hormones that help keep mothers from being depressed and from getting cancer

Why do babies breastfeed?

- Hungry
- Tired
- Sick
- In pain (teeth are coming in)
- Want to feel close to mother
- Overstimulated by what's going on around her
- Unsure of surroundings, needs comfort
- Needs to defecate
- Has gas
- Suddenly wants mom
-because this is how babies deal with their physical AND emotional needs – this can go on for months and even years

Complementary Feeding Messages:

- Give baby vegetables with their rice, potatoes, eggs, and beans.
- Wash vegetables with clean water before feeding to baby, so baby does not have diarrhea, infections or reactions to chemicals.
- Chop cooked vegetables into smaller pieces before feeding to baby. This helps digestion.
- Follow the steps of “smart” cooking so that baby can eat fruits and vegetables and be strong and healthy.
- Grow or purchase locally-grown fresh vegetables and fruits to feed your babies and children.
- Feed children a variety of vegetables and fruits of different types and colors for the best nutrition.
- Vegetables and fruits have all the vitamins your child needs. Feed your child many types and colors.
- Feed your child healthy snacks in between meals.
- Eggs are perfect nutrition and affordable. Feed your children eggs often.
- Eggs are a great snack for children.
- Better to mash the food than have mother chew it because baby can get sick from mother's germs.

Other Nutrition Messages:

- Nutrition is not expensive. Everyone can eat nutritious foods grown at home and in your community.
- Nutrition is affordable.
- Protein can come from vegetables, such as beans, lentils, and others.

Handwashing Messages:

- Wash both hands with soap:
 - After defecation
 - After cleaning a child's bottom
 - After cleaning dirty diapers
 - Before eating
 - Before feeding others
 - Before food preparation
 - After handling livestock
 - After working in the garden
- Keep your kitchen utensils clean with soap or ash.
- Keep clean play spaces for the children. Remove animal feces from the area before children play.
- Wash children's hands after they have played outside.
- Wash children's hands regularly.
- Hang a Tippy Tap by the latrine.
- Hang a Tippy Tap by the kitchen.

Household Empowerment Messages:

- Happy families support and respect one another
- Happy families grow together
- Help each other with daily tasks to have more harmony in the home
- Plan your future together with each member of the family.
- Set goals with your spouse and children and make a plan to achieve those goals.

Conclusion

The findings from the formative research demonstrate how SAPLING can contribute to improving resilience capacity and food and nutrition security for the inhabitants of five upazilas of Bandarban. Although the findings do indicate that SAPLING's original proposed interventions can help achieve the overall goal, results have helped refine messages and revise interventions, even adding new ones. Several key findings are highlighted here to show how they were integrated into the SAPLING approach. For example, the study confirmed that senior women play a significant role in determining dietary intake for PLW and children under two. From the group discussions with senior women, SAPLING learned that PLW and children under two may not be getting enough protein and micronutrients due to prohibited foods. To address this, SAPLING has: 1) ensured messaging in the IEHFP curriculum and MCHN curriculum about the importance of protein from animal and plant sources and a diverse range of vegetables and fruits for newly delivered and lactating women and children 6-23 months; 2) designed senior women's groups where women who self-elect as "senior" discuss nutrition and health issues for women as they age to encourage women to come, but they also discuss optimal nutrition for PLW and children under two.

Another example is the key finding of the preference for open defecation compared to using a latrine for some of the participants. Previously, SAPLING considered the issue was access, but had not considered people may not want to use a latrine for other reasons. We realized the lack of water largely contributed to the reasons people gave for not wanting to relieve themselves in a latrine (e.g., visible feces, odor, insects as a result of being unable to flush completely). Therefore, SAPLING has identified four types of latrines that are suitable to different contexts and preferences, with a key attribute being low or no water needed for the latrine. Additionally, some of these latrine types can handle the bamboo stick that is commonly used for anal cleaning, giving people the option to use the latrine and clean themselves in the traditional manner.

The formative research results reveal a perception of an external locus of control, specifically coming out in the responses around disaster. This supports findings from the EBF and CF Barrier Analyses that SAPLING also conducted in which participants expressed a lack of control over children's health and the severity of children's health. Although not explicitly described as out of their own control, the community needs listed by respondents in almost all of the 26 paras are basic needs, such as electricity, roads, schools, and health services. These marginalized populations indicate they are limited in their abilities to influence those types of developments. Since the inception of the project, SAPLING has modified its strategic thinking to look at the theory of change through a resilience lens. The resilience framework provides a strategic framework that explains why and how interventions can increase self-efficacy and shift locus of control to internal and, thereby, positively affect resilience capacity. We now realize that we need to address self-efficacy and locus of control, as well as aspirational capacity, to increase resilience capacity and improve food and nutrition security. Just transferring knowledge and providing training is not enough. Therefore, we have made subtle changes to the messaging in the IEHFP platform and men's sessions to be more inspirational and make the interventions meaningful, so they will be motivationally salient. For example, the formative research shows us that financial gains are meaningful to participants. There must be a perceived benefit for someone to adopt a new practice – in other words, something about the new practice must be motivationally salient. SAPLING's messaging now continuously ties equitable participation in decision-making and production by husbands and wives to increased household ability to earn income and improve livelihoods. Husbands may be reluctant to relinquish their culturally-assigned role of decision-maker, but understanding how their wives participation in the economy and household decision-making over assets can benefit the family financially may be the factor that motivates them to transform.

This comprehensive study of 10 ethnic groups living in varied terrain and rural and urban access provides a resource of previously limited information on an understudied population. SAPLING hopes this will not only contribute to the current program, but that it will be used by anyone who wants to work, study, or visit this area of the Chittagong Hill Tracts of Bangladesh.