

# Challenges in Food Security While Strengthening Inclusive Development in the Chittagong Hill Tracts, Bangladesh

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## Abstract

This study evaluates the current level of food security in the Chittagong Hill Tracts (CHT) of Bangladesh from the perspective of sustainable development and suggests ways to overcome the challenges identified. Acute poverty is frequent in such far-flung places of CHT, and food insecurity affects some regions there. Maintaining reliable access to nutritious food is crucial to achieving the aforementioned goals. Equality of opportunity necessitates harmony in human interactions and the natural world. Household food security is profoundly influenced by factors such as land ownership, population demographics, employment, and agricultural goods. Some cultures engage in the practice of shifting farming, despite warnings about the negative effects on the environment. Moreover, in some of the most outlying CHT districts, concerns about food security have been exacerbated by issues such as property ownership, education, and distance from the market. The existing food insecurity situation in CHT may be improved by the implementation of all required communication development, adoption of agricultural technologies, and revenue production.

**Keywords:** Food Insecurity, Communication Network, Diversification, and Inclusive Development.

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## 1.0 Introduction

The food insecurity in the CHT region is much higher than it is nationally as a whole (Barua et al. 2015). Due to the increased risk of natural calamities in the monsoon season, the lean season is routinely extended into September, even though it officially ends in August. Every year, it grows harder to make it through the lean season when the harvest runs out, jobs dry up, and money runs out. While the extreme poor in Bangladesh consume 2,122 kcal per day on average, the rural population in CHT barely consumes 1,798 kcal. The Bawm community has the lowest energy density (1,440 kcal), while the Lushai, Chak, and Khyang communities have the greatest (1,600 kcal) (Barkat et al. 2009).

The four cornerstones of food security are availability, access, use, and stability, as defined by the United Nations Food and Agriculture Organization. Since its inception in 1948, the United Nations (UN) has frequently emphasized that the fulfillment of the Right to Food is essential to the realization of all other rights. The term "food security" refers to the "condition of having continuous access to sufficient, safe, nutritious food to live a healthy and active lifestyle." The physical, mental, and social health of a family unit can be protected through the availability of culturally acceptable meals, making this a vital component of food security (FAO, 2008). There is also a gradation of food insecurity depicted. When any member of the household goes hungry at least once a day, or more than four times a week, the situation is considered severe or chronic food insecurity. When both the quality and amount of food consumed suffer, it is considered mild food insecurity (FAO, 2008). When everyone has consistent financial and physical access to enough healthy food, we have achieved food security (FAO 2008, Hossain 2013, WFP 2016). All members of every household should be able to eat nutritious, delicious, and culturally acceptable foods (Gillespie and Mason 1991).

The rate of success or failure of CHT will have a significant impact on the progress of this country. There are many complex challenges, but the Government of Bangladesh (GOB) and other development organizations are working together to overcome them and achieve inclusive development in CHT. For their 17 Sustainable Development Goals, the United Nations (UN) has chosen the year 2030 as the target date for completion (SDGs). One of the seventeen criteria is food security, which is a big issue in some of the rural locations of the CHT over the course of the summer and into the fall. If this vital condition is met, then the remaining sixteen Sustainable Development Goals can be achieved. Because a number of SDGs are integrally tied to food and nutrition security in the CHT, SDG success is contingent on food and nutrition security (Rasul and Tripura 2016). Directly and indirectly, food and nutrition security affect the success of other SDG goals and targets. Maintaining a healthy lifestyle may require establishing reliable sources of nourishment. Other SDG goals in the area, such as ending poverty, ensuring healthy lives, achieving gender equality, decreasing inequities, and preparing for and adapting to a changing climate, could be jeopardized if food and nutrition security in the CHT, Bangladesh, is not achieved (Rasul 2015). Furthermore, Bangladesh must make substantial and sustained improvements in food security and nutrition if it is to achieve developed-country status by the year 2041. The purpose of this study is to

analyze CHT's food security from an inclusive development standpoint and propose solutions to the problems that have been identified.

## 2.0 Problem Statement

The CHT is comprised of the hill districts of Rangamati, Bandarban, and Khagrachari and is located in the southeast of Bangladesh, covering around 10 percent of the country's total land area (Khan et al. 2007). It is Bangladesh's most economically and socially vulnerable and disadvantaged region (Barkat et al. 2009). Contrary to other regions of the country, the CHT has emerged slowly in this region due to a number of factors, including social unrest (Rasul and Tripura 2016). Due to its extensive history of violence and political unpredictability, as well as its isolation, the CHT's mainstream growth impulses have not been fully integrated (WFP, 2017). There is still a socioeconomic gap between CHT and the rest of the nation.

## 3.0 Literature Review

Food security and environmental impacts have been the subject of numerous research, as have the methods used to predict these two phenomena. Access to culturally appropriate foods is an essential component of food security since it ensures the physical, emotional, and social well-being of family members (Coates et al. 2010). When the quality and/or quantity of food consumed is compromised, moderate food insecurity occurs (Coates et al. 2010; Mallick and Rafi 2010). Family members' physical, mental, and social health all benefit from having access to culturally appropriate foods, so this is a crucial aspect of food security (Coates et al. 2010). Moderate food insecurity exists when either the quality or amount of food eaten is diminished (Coates et al. 2010; Mallick and Rafi 2010).

The four components of food security identified by the United Nations Food and Agriculture Organization are accessibility, utilization, availability, and security (FAO, 2008).

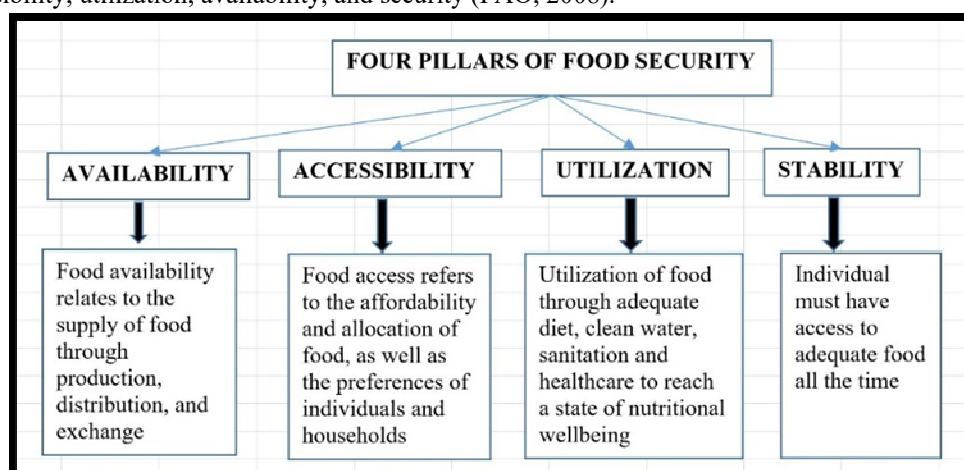


Figure 1: Four Pillars of Food Security

Policies and activities that promote ecologically friendly and commercially effective agricultural systems are needed to combat poverty caused by conventional agriculture and environmental degradation in CHT (Thapa and Rasul, 2005). However, due to a lack of knowledge about the history and causes of current land use systems, policies and initiatives designed to encourage alternative land use systems have failed to achieve their objectives (Rasul et al., 2004).

## 4.0 Methodology

This study was exploratory in nature. Primary and secondary sources of data were consulted. Primary source data were gathered through answers from tribal ethnic community members staying in the remote places of CHT, government, commercial sector employees, and public leaders in CHT, among others. The study has examined published books, numerous published research works, newspapers, magazines, government publications, and websites. To understand more about this part, the researcher has conducted the Delphi method.

On the basis of the suggested research question beginning with 'what,' challenges in food security within the context of CHT. To answer the first research question, the researcher conducted semi-structured interviews. For the initial selection of respondents, the researcher used a judgmental sampling method; he targeted the headmans, karbaris, local members and the inhabitants of remote places of CHT. The researcher initially confirmed individuals' basic knowledge about food security via the screening question. Consequently, only five participants were chosen for a longer interview during the initial sampling phase. Then, the researcher utilized the snowball technique. He asked them to suggest additional potential units for the study, resulting in a final pool of 25

suitable respondents. With the assistance of a transcription company, the researcher translated the Bengali interviews into English. All participants attended the interview voluntarily and granted the researcher permission to conduct interviews. The interviews, which lasted between 25 and 45 minutes and spanned four months, were recorded and transcribed into text format. Previous research recommended the snowball technique because it results in referrals to similar interviewee group (Haq N, 2021). The researcher conducted a semi-structured interview to broaden and moderate the discussion during the interview session (Easter by Smith et al., 2008). The interview consisted of six broad Bengali questions that were then translated into English. In addition, the researcher requested that the participants answer the questions in as much detail as possible. To conduct effective interviews on the topic of the food security impediments in CHT while achieving an inclusive development experience, the researcher used cycles of repetition to collect participant responses. Table 1 highlights the sample demographic profile, which describes the ethnic community's males and females who perceive themselves to be relatively cooperative and possesses basic understanding about food security.

Table 1. Socio-demographic background of the participants of semi-structured interview

| Code name                                     | Mean age   | Number of respondents | Gender                           | Summary of socio-demographic indicators  |
|---|------------|-----------------------|----------------------------------|--|
| P2, P3, P5, P9, P10, P13, P11.....            | 31.3 years | 150                   | Male                             | Jhum cultivators   |
| P1, P18, P14, P16, P25.....                   | 32.4years  | 70                    | Female                           | Small business owners, specially food sellers.   |
| P15, P22, P7, P8, P17, P6, P23, P24, P21..... | 24.7years  | 132                   | First 5: Female;<br>Last 4: Male | Headmans, Karbaris, NGO and IO representatives   |
| P4, P12, P19, P20.....                        | 36.8 years | 33                    | Male                             | Development workers, Mobile phone company and tobacco company staffs who visit in the remote places of CHT |

Note: Personal information (salary levels and individual assets and wealth) was treated in strict privacy and was not reported in this study.

### 5.0 Analysis and Findings

The study discovered various insights after examining the semi-structured questionnaire provided to three unique groups. Four questions were posed to the local community as part of the study. All of the questions were adapted from previously valid ones. When asked, locals responded, "1. What are the issues of food security in some of CHT's most remote areas?" This question was answered by 385 people. There were 250 ethnic community members (Chakma-120, Marma-75, Tripura-55), and 135 Bengalis among the 385. 80% of respondents believe there is a lack of food production owing to Jhum land scarcity (shifting farming), 15% believe there is a lack of adequate weather and climate, and 5% did not respond. The researcher next questioned them, 2. How might inclusive development be achieved? (The respondent was briefed about the term 'inclusive development') 70% of respondents believe that strong policies, concentration of economic activity, and convergence of living standards are required for attaining equitable development, 28% place more importance on customary practices, and the remaining 2% refused to answer the question. Later, the researcher questioned them, "3. How important is food security for promoting inclusive development?" 75% of respondents feel that food is a basic requirement; if the food has nutritional value, people can work to achieve inclusive development; and 20% believe that only economic activity can promote inclusive development; if people have money, they can buy vital commodities. The remaining 5% did not want to answer this question; they appeared anxious, scared, and bewildered. Finally, the question of how to avoid poverty and hunger has been raised. The researcher collected responses from 90% of people who feel that contemporary technology in agriculture, developed communication, and economic diversity can help the inhabitants to avoid poverty and hunger; 10% believe that good maintenance of customary customs can help better in these aspects.

Multiple crucial variables have been identified as exacerbating the impact of the lean season on the CHT; the region was already suffering from resource depletion due to a shortage of cultivable land. The monsoon season (May to September) exacerbates famine by destroying crops due to flooding and landslides. Thanchi Upazila in Bandarban and Sajek Union in Rangamati are typically the severely hit places. The Bandarban district is plagued by food insecurity. Despite increased efforts to incorporate remote populations, geographic isolation has played a critical role in social inequality.

Historically, ethnic communities have been accustomed to shifting harvests. This sort of cultivation is restricted due to land erosion and other environmental reasons. Ethnic groups are increasingly interested in high-value fruit farms. Mango, lychee, banana, and pineapple have all been grown in recent years. This practice has changed the normative practices of many ethnic communities.

Individual calorie intake can be calculated using a household's budget. Food security indicators and metrics

are frequently meant to capture some or all of the primary components of food security, such as availability, accessibility, and utilization/adequacy. Food shortages afflict the CHT sites indicated below almost every year between June and August. This unique problem manifests itself not in district and Upazila administrative headquarters, but in a number of CHT rural settlements. Following field research and interviews with distressed inhabitants in the following distant areas, it was concluded that people of these areas deserve special attention from relevant agencies:

Table-2: Statistics on Distressed Families Staying in CHT's Remote Areas:

| Serial | District  | Upazilla        | Village/Para/Location   | Number of Families in Distress |
|--------|-----------|-----------------|---|--------------------------------|
| 1.     | Rangamati | Baghaichari     | Notun Jopui and Puraton Jopui- 20 to 25 km North of Sajek Parjatan<br>Sajek Union   | 11                             |
|        |           |                 | Udolchari- 30 to 35 km North of Sajek Parjatan  | 12                             |
|        |           |                 | Tang Tang Para- 20 km North of Sajek Parjatan   | 15                             |
|        |           |                 | Tosui Para-15 to 16 km North of Sajek Parjatan  | 12                             |
|        |           |                 | Rannya Para- 10 to 12 km North of Sajek Parjatan  | 11                             |
|        |           |                 | Hajjya Para- 10 to 11 km North East of Sajek Parjatan   | 14                             |
|        |           |                 | Bolpia Adam and Dab Adam- 08 to 09 km North of Sajek Parjatan   | 30                             |
|        |           |                 | Komlapur Para- 17 to 18 km North of Sajek Parjatan  | 19                             |
|        |           |                 | Long Toan Para-10 to 12 km North of Sajek Parjatan  | 12                             |
|        |           |                 | Tarum Para- 09 to 10 km North of Sajek Parjatan   | 12                             |
| 2.     | Bandarban | Roangchhari     | Aungjai Para, Bang Chari Tripura Para, Bang Chari Punorbashon Para, Rounni Joydhor Tong Para, Fosao Para, Alekhhkong Para Murong Bazar, Bagan Para 07 Number Ward, Duluchari Upor Para and Niche Para, Gongkhan Khyang Para, Dochori, Buri Mro Para, Bagher Khumi Para, Marki Mro Para, Baroitoli Para, Abu Mro Para and Krong Lai Khyang Para. | 200                            |
|        |           | Bandarban Sadar | Sairong Bom Para, Girishe Wa Para, Thangkreee Marma Para, Roaza Para, Buri Upor and Niche Para and Gong Prue Aga Para(Marma and Khyang Community)   | 160                            |
|        |           | Ruma            | Porua Marma Para, Soigong Para, Sanaikrue Marma Para, Notun Para Pransa UP, Manlaigro Para, Alechu Marma Para and Thoabuthong Para  | 130                            |
|        |           | Thanchi         | Thiburi Karbari Para, Narikel Para, Mogotkree Mro and Marma Para, Bhaibon Para, Galegga Marma Para, Yanghegri Marma Para and Baro Madok   | 145                            |
|        |           | Lama            | Prongo Para, Tongbushey Marma Para and Lapaigoi Marma Para  | 45                             |
|        |           | Alikadam        | Thandajhiri Para, 22 Kilo Para, Moniram Para and Dukha Commander Mro Para   | 65                             |
|        |           | Naikhongchhari  | Banoful Para and Waga Para  | 35                             |

Children are the most vulnerable members of the afflicted communities in the aforementioned places. They are undernourished children widespread in all three CHT districts; Bandarban has 33.9 percent, Khagrachari has 35 percent, and Rangamati has 47.4 percent. It should also be noted that the CHT population has a hardcore poverty rate of about 25%. Aside from a lack of food grains in certain areas, their problem is exacerbated by a breakdown in communication.

While tremendous progress has been made in reducing poverty since the signing of accord, CHT remains significantly behind in terms of socioeconomic development and poverty alleviation. Bandarban has a greater poverty rate than the other CHT districts. Alikadam, Thanchi, Rowangchhari, Ruma, and Naikkongchhari are among the poorest Upazilas in CHT. Poverty incidence varies widely across ethnic groups, with the Lushai, Bawm, Chak, Khyang, and Pangkhua seeing the highest rates. However, thanks to the participation of the Bangladesh Army; tourist activities in the Sajek, Nilgiri, Rangamati, and Kaptai areas are significantly assisting these ethnic communities in overcoming terrible poverty.





## 7.0 Discussion

All members of the region's poor gain from inclusive development, notably women and children, minorities, rural poor, and those forced into poverty as a result of natural and man-made calamities. On the other hand, it derives from a number of discipline-specific notions. While some characterize inclusive development as merely political integration of social and economic components, it might also be defined as prioritizing social well-being and maintaining natural ecosystem services by rethinking political goals, particularly in the Anthropocene. This word has the ability to bring together hitherto divergent fields of study.

Shifting cultivation has been practiced for centuries in the Chittagong Hill Tracts (CHT) of Bangladesh. This type of cultivation is characterized by the slash-and-burn method of land preparation, cultivating the farm plot for a year and abandoning it for several years. Shifting cultivation was an environmentally suitable land use in the past when population pressure on the land was low and the fallow period was long facilitating the restoration of vegetation cover and the soil fertility (Nye and Greenland, 1960; Lal, 1973). This shifting cultivation has gradually become an environmentally incompatible land use system with the shortening of fallow period attributed to increasing population pressure, abolition of local people's use and management rights of forests, policies encouraging migration of lowland settlers to CHT, and low investment in agriculture (DANIDA, 2000; Knudsen & Khan, 2002; Roy, 2002). Normally, shifting cultivators' strong adherence to traditional values and culture is considered to be the major factor constraining the adoption of location-wise suitable land use (Hamid, 1974). Such a simple explanation cannot be considered satisfactory.

Despite annual budget increases, CHT districts continue to lag behind other regions of the country in terms of meeting basic human needs, ensuring social security, improving access to water and sanitation, health and nutrition, physical infrastructure, employment, and economic and social empowerment. In 2015, around 108 people died of cholera in the Shialdaha area, a remote location located 6 kilometers north of Sajek. There is a severe scarcity of potable water and food shortages. The tribal peoples of those backward communities had no concept of water sterilization. However, the Bangladesh Army did an outstanding job of establishing a temporary hospital in that area and rescuing numerous local residents. This incident demonstrates the insecurity of food and the backwardness of some of CHT's remote areas. The GOB is also attempting to effectively address the situation, as evidenced by the progressive increase in the CHT budget allocation. The development budget allocation for CHT was 44.80 crores in 1997 and increased to 1194 crores in the fiscal year 2019-20; the total budget of the Ministry of CHT Affairs was Tk.735 crores in the fiscal year 2014-15 and gradually increased to 1,235 crores in the fiscal year 2020-21.

The movement from extensive to intensive agriculture is conditioned and sometimes constrained by the national policies and laws (Lele and Stone, 1989; Vosti et al., 2001). Although shifting cultivation is still remains the dominant land use in the CHT region (DANIDA, 2000; Roy, 1995), in some areas, alternative land uses are gradually evolving. Some tribal communities practice horticulture and agro-forestry, which are considered to be both environmentally and economically suitable; others have diversified their agriculture by integrating trees and livestock with annual crops to improve their economic benefits and reduce possible risks of food shortage and low income (Khan and Khisha, 1970; Roy, 1995).

## 8.0 Way Forward

Since the Chattogram Hill Tracts Accord was signed in 1997, numerous prospects for realizing CHT's potentials have emerged. CHT is one of the underdeveloped and most backward districts in Bangladesh, yet it has achieved significant progress in a number of areas in recent years. In response to a demand, the GOB has established the General Social Safety Net Programs (SSNPs), which provide cash transfers, food vouchers, conditional grants, and low-interest loans to inhabitants of CHT areas. According to the Implementation Monitoring and Evaluation Department, the Annual Development Programs (ADP) of the Ministry of Chattogram Hill Tracts Affairs (MoCHTA) are not being implemented as intended and will be depleted by the end of the fiscal year (IMED). In other words, development on the CHT has stagnated despite the GOB's initiative. As was previously mentioned, the level of backwardness in some of CHT's most remote regions is significantly higher than at the district and upazilla levels. Relevant government authorities and NGOs/IOs could evaluate the following steps:

### 8.1 Economic Venture and Income Generating Steps by the Government

The Government of Bangladesh (GOB) intends to develop a total of one hundred export processing zones (EPZs) throughout the country by 2030. Mirershorai and Sonagazi are being built as the major EPZs due to their proximity to the Chittagong Sea Port. If the government establishes two or three EPZs in the CHT, the same service might be provided from the hill districts. This effort will increase the local population's economic well-being so that they can acquire nutritious food.

### 8.2 Conducting a Comprehensive Rehabilitation Program for Armed Group Activists

Activists who work for various regional tribal groups and own illegal firearms are given pitifully low wages. The

overwhelming majority of them are severely agitated. If they were aware of safer alternatives, they might abandon these armed groups. If GOB provides jobs or other comprehensive rehabilitation programs for these frustrated activists, there is a significant likelihood that, over time, the activists in these armed groups will choose peace for the sake of their children and grandkids.

### 8.3 Exploring Tourism Potentials of CHT

There is significant opportunity to capitalize on CHT's natural features by developing new tourism sites. Thanks to prominent tourist destinations such as 'Sajek' and 'Nilgiri', many jobs have been established for regular tribespeople and Bengalis. There are hotels, resorts, shopping malls, and taxis in CHT districts to transport tourists throughout the city. The Ministry of Tourism can now explore the viability of new tourist destinations and develop existing ones. As a result of these attempts, tensions between the tribal people and the Bengalis would decline. This effort of the Government would benefit the distressed people staying in the remote places of CHT.

### 8.4 National Social Security Strategy (NSSS)

National Social Security Strategy (NSSS), which serves as the roadmap for the government's future social security policies, must be implemented carefully. In carrying out this plan, the highest priority should be given to interventions that have the greatest potential to reach those in greatest need and are nutrition-sensitive. The Public Food Distribution System (PFDS), programs for impoverished and vulnerable women, a safety net for young children, and the School Feeding Program are examples of four major categories. The PFDS program must continue to play an important role in the food safety net. In the early 2000s, a growing consensus arose in favor of watering down the PFDS, in part due to cost concerns and in part due to the notion that a liberalized food market should be able to effectively manage price volatility.

### 8.5 Development of Agricultural Projects in CHT

There is a major agricultural shift from Jhum (shifting cultivation) to horticulture in CHT. This major shift has created scarcity of food grains. There should be some improvised agricultural inputs (crops, horticulture, poultry); but the inputs were also a chance for an intensive capacity development to boost agricultural production, diversity and sustainability – as well as nutritional awareness - to rural men and women staying in the remote places of CHT. Given the existing gender dynamics and the differing roles and responsibilities of men and women in CHT families, women were the primary target of horticulture and poultry interventions. In addition to promoting resource conservation in areas where natural resources are depleted, the combined efforts of distributions and training increased income and resilience in the communities, as well as nutritional benefits from increased availability and consumption of a broader range of nutrient-rich foods. The project will also help to train the farmers to become community seed producers, which could help alleviate the severe seed shortage in the area.

Food insecurity and hunger are essentially multifaceted issues. As a result, actions must be performed on multiple fronts at the same time. Agriculture must be marketed as varied, resilient, and nutrition-sensitive. Women must be recognized as critical to ensuring long-term food security and nutrition. A comprehensive social protection system must be in place to ensure that no one is left behind. At the same time, relevant knowledge must be generated and shared, in addition to using a rights-based approach to human rights.

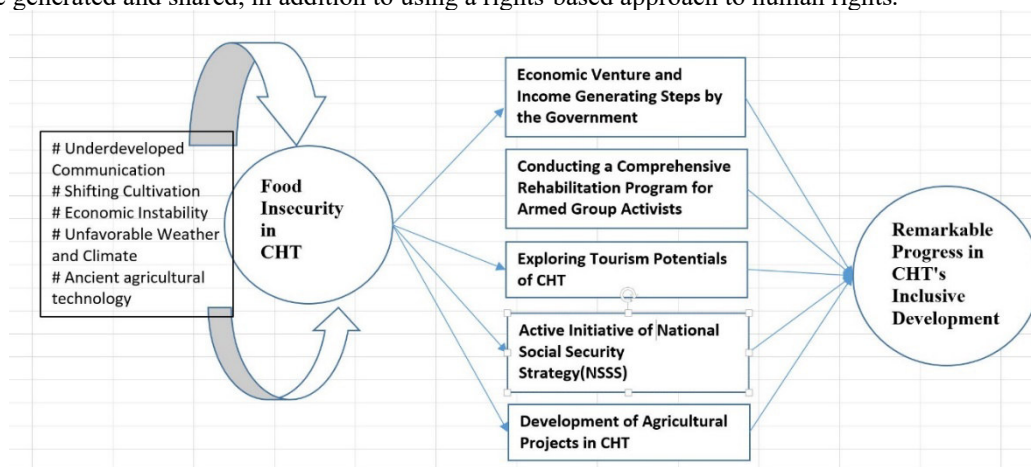


Figure 2: Way out to ensure food security in CHT

## 9.0 Conclusion

Food accessibility and availability are essential for human survival. Food security, as defined by the United Nations Committee on World Food Security, is the ability of all people to always have physical, social, and economic access to sufficient, safe, and nutritious food that satisfies their food choices and dietary needs for an active and healthy life. The Food and Agriculture Organization (FAO) identified four pillars of food security: availability, access, use, and stability. In 1948, the United Nations' "Declaration of Human Rights" recognized the right to food. The World Summit on Food Security stated, "Food should not be used as a means of political and economic coercion." Nonetheless, food security does not merely imply a full stomach; it must be evaluated in terms of calories to digest per person per day, and it must be proportional to income capacity.

The issue of food security is complex. Finding easily measurable problems that may be utilized to establish goals appears to be a prerequisite for national and international policy action, suggesting that single, streamlined indicators are necessary for policy evaluation. The "State of Global Food Insecurity" has to be evaluated. Chronic undernourishment and the more short-term, acute insecurity that reflects economic and food system volatility should both be included in the formal analysis of food insecurity because of the risks and uncertainties involved. Supplementing such formal research with multi-criteria analysis (MCA) of food security is an excellent idea. This should lead to comparisons of at least a qualitative kind. Extensive research into undernourishment is required because of the importance of understanding the relationships between undernourishment and insufficient food intake. Variability in climate as a source of volatility and short-term nutritional stress; health status, particularly variations in the incidence of communicable diseases, most notably HIV/AIDS; sources of dietary energy supply, such as diverse foods, patterns in food acquisition from subsistence to marketing. The geographic dispersion of poverty and food insecurity within nations, as determined by a joint effort by the Food Information and Vulnerability Mapping Systems (FIVIMS), the Food and Agriculture Organization (FAO) of the United Nations, and the World Food Program (WFP). Once in a while, it's suggested that Sen's entitlement theory be used in the real world. This would be less important than, say, representing entitlement failure in a formal MCA, if doing so required rebranding indicators of food insecurity as entitlements.

CHT is distinct from the plain regions of Bangladesh in terms of geography, population, and available resources. Bangladesh has made significant strides toward ensuring food security despite its rapidly expanding population. Sadly, food insecurity exists in some of CHT's most out-of-the-way locations; many members of ethnic communities lack the means, whether financial or otherwise, to regularly and reliably provide themselves with enough food to eat. One possible strategy to increase food availability to low-income households in CHT is the direct distribution of food grains given via food aid. This decline in food aid is attributable to a general tightening of funding for social welfare programs that assist low-income families. Long-term food and nutrition challenges persist despite significant progress in increasing food grain output and reducing price volatility. There is a lack of adequate food intake and chronic malnutrition among the impoverished in the far-flung areas indicated in this study. The lack of food security in CHT calls for bold action. The CHT is not capable of producing its own food due to its steep terrain and limited acreage for intensive agriculture for the cultivation of a number of major cereal crops; so, specific programs and policies are needed to meet the required food deficit in the CHT. Cereal commodities like rice and wheat, which aren't grown in the CHT, can be imported to help alleviate food insecurity in the region. The promotion of horticulture, agroforestry, and other high-value low-volume income crops such as off-season vegetables is necessary to increase food security in the CHT. The markets and demand for these agricultural products are growing. Due to the CHT's vast distances and sparse population centers, the region's food distribution system has largely failed. The rural road network in the region has to be updated to increase the effectiveness of food distribution. Improving food security in the CHT also relies on giving local communities more ways to earn money. If people's incomes improve, food insecurity will no longer be a problem. Off-farm employment possibilities in sectors like community-based ecotourism, agro-processing firms, livestock businesses, and so on are necessary. Farmers in the CHT should be educated on how to expand the value chains of agro-products, but much more importantly, new patterns of production and consumption must be embraced. There is still a lot of work to be done before we can address nutritional issues head-on. Malnutrition in CHT cannot be permanently solved by merely increasing food availability and household access to food. Nutritional education, food fortification, increases in water quality, and public health initiatives all need to be coordinated for maximum effectiveness.

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