ABC Research Alert
Vol 10, Number 1
Published Online: 08 April 2022
https://abc.us.org/ojs/index.php/abcra

Water Scarcity and Sufferings of The Tribal People: A Study on Bandarban Hilly Area

Dr. Nasrin Zahan

Assistant Professor, Department of Social Science, BGMEA University of Fashion and Technology, **BANGLADESH**

* (nasrinzahan76@gmail.com)

Abstract

The aim of this study is to provide an extensive layout of water scarcity and the challenges that face the tribal people in hill tract area. Considering the nature of the problem, this study has followed the stratified sampling method of a total of forty respondents of Chimbuk hill area in Bandarban district. Primary data were collected through a structured questionnaire with the assistance of a number of trained university students of this area under the direct supervision of the author. Besides these, secondary sources of national and international level have been used in this study. In addition to the study found that lack of infrastructural facilities as well as not having deep water bodies force them to depend on water fall. These are the main source of water supply which is responsible for sufferings of the hilly area as water fall dry out in winter season. The study has made an exploratory study and seek to provide an insight into different types of challenges as well as the adverse effects of such issues. So, obviously the study will provide an exceptional idea and intensity of the problem. Though innumerable studies of water scarcity of hilly area have been published, fundamental issues are not properly focused on. Therefore, it would genuinely help for future study as well as formulating the policy of the development of the hilly area.

Keywords

Water Scarcity, Tribal People, Hill Tracts Area.

INTRODUCTION

Bandarban hill district is situated in the southeast region of Bangladesh. The land of this area is very steep and high as well as distinct from plain land in Bangladesh. In the dry season, water scarcity makes their life harder because most of the time of the day goes for water collection that flows from the hills. (UNICEF, 2019) According to the world health organization, around 97% of the people in Bangladesh get opportunities to access water and 40% for proper sanitation as well as nearly 60% remain under unsafe drinking water (Saima Hedrick, water in crisis-spotlight on Bangladesh). Overall Infrastructure facilities are not suitable to save water in the rainy season in order to fulfill the needs of the dry season. Several aspects of water supply- demand are closely associated with water scarcity. The fact becomes severe due to many reasons like as increased demand for water, lack of water and rainfall distribution

is not equal, etc. (Biswas et.al, 2012) According to Safe Drinking Water Foundation (SDWF, 2018), most diseases of developing countries are results of contaminated water and frequency of water borne diseases. Around three million people die every year because of water-related diseases and a large part of them are children (DFID, EC, UNDP, and WB, 2002). Water scarcity is common across the world. According to UNICEF due to intense water scarcity around 700 million people might be displaced by 2030.

OBJECTIVES

This study aims to find out the level of water scarcity and the sufferings of the tribal people. More specifically, the objectives of the study are:

To assess the reasons for water scarcity in the hilly area;
To know the sufferings of the tribal people due to water scarcity;
To identify the challenges that women face in the water crisis.

Operational and conceptual definition

Water scarcity: Water scarcity indicates a shortage of available water and can be occurred due to many reasons: Like - physical shortage which happened for not to ensure regular water supply by the institutions and insufficient infrastructure. (UN-water).

Water scarcity means unavailable fresh water to meet the standard needs. It can be classified into two categories: physical and economic water scarcity. Physical water crisis implies the area where all demands are not fulfilled sufficiently with the smooth functioning of the ecosystem. While economic water scarcity is happened due to not having technology or infrastructure facilities to withdraw water from different water sources. (Wikipedia).

Tribal people: Tribal people are those who have distinct culture, tradition and own languages which distinguish them from others segments of the national population as well as their status is controlled by their own customary rules or special laws (ILO).

Ethnic minorities in Chittagong Hill Tracts area are commonly known as indigenous people in Bangladesh.

BACKGROUND OF THE STUDY

Around two million people live in a tribal area in Bangladesh, and one-fifth of them are victims of climate change-related disasters like droughts, declining levels of groundwater are the notable cause of the suffering of this area (F. Mahamud, 2021). A number of hills are not used for cultivation due to lack of water supply even a very few animals left to hunt because of the same reasons. All these things force many tribal to change their habits. Consequently, soil fertility decreased drastically and environmental is frequent in this hilly area F. Mahamud, 2021). [The silent climate migration on Bangladesh's unforgiving high altitudes.]

Water scarcity causes various health problems such as water- borne diseases and leads to poor sanitation as well as household conflicts. Most people depend on the stream as a source of water, and it dries out in the winter season. So, conflict among the community is common during the time of water collection and bathing. Also, insufficient water supply disrupts the domestic activities and cooking process which encourage family feud in the hilly area (sheel Aditya chakama, 2021).

Hill streams in Chittagong hill tracks are on the verge of disappearing. Bandarban, Ranamati, and Khagrachari are three districts of CHT in danger as the hill streams are declining due to climate change. According to the expert of these communities, food habit has been altered in this region because of drying out hill steams. Besides, different types of forests like reserved natural and meadows of this area are losing their beauty as well as the ecosystem of this hilly area. Moreover, streams of the hilly regions are associated with memories and emotions in certain aspects of tribal people (bijoydhar, 2019).

Not getting available drinking water is the major cause of suffering in many families in the Chittagong hill tracts area. Water collection goes down to mothers or young children and three to four times they do

it as males work in the field. The most difficult time of the year starting from March to June because at this time water flow falls drastically. A number of villagers in CHT (Chittagong Hill Tract) receive a gravity flow system for smooth water supply but in the winter season, people do not get opportunities from it because of lack of pressure (UNICEF, Bangladesh, 2019).

According to the local people and experts of the hilly area, spring and streams are drying out due to deforestation. Forty-one percent of people of Bandarban remain out of smooth water supply according to the engineering department of this district. The situation is worsened from March and went on till the rainy season. Many people in this area cannot take baths regular basis because of water scarcity.

Several hundred jhiris from spring have flowed in Bandarban but now they are dried out due to lack of natural water. Except for the rainy season, people of this area face severe water crises. Tribal people used to bathe, wash, and collect water from jhiris. Even the water of the river remains muddy due to many reasons like when a boat passes by local; people tried to establish deep tube with support of upazilla union parishad but it was not possible due to rocky soil.

LITERATURE REVIEW

According to Sulayman Hossain, 2021 in pictures. Global warming forces Bangladeshi tribes to migrate. Showed that tribal people have changed their region as water resources are dried out due to global warming. As per the opinion of forest experts around 10% of the hilly area in Bangladesh are at risk of losing their natural sources of water. He also demonstrates the important news reported by the foundation of manusher jonno that lack of fresh drinking water is the pivotal challenge of the hilly area in Bangladesh.

Authors of climate change, water scarcity and health adaptation in southwestern coastal Bangladesh demonstrates that 80% diseases in developing countries are associated with unsafe drinking water. Moreover, around 70% of the respondents replied that waterborne and skin diseases are result of safe water scarcity (Abedin, Collins, & Rajib, 2019).

In a study of UK aid (climate change vulnerability of drinking water supply) infrastructure in coastal area of Bangladesh, stated the importance of safe drinking water which has been adopted by MDG of united nation in 2000. According to declaration of UN general assembly safe and clean drinking water and sanitation a human right as well as essential for full enjoyment of life and other human rights. Currently 1.42 billion people with 450 million children resides in acute water vulnerabilities area (UNICEF, 2021). Around 3.2 billion people live intense water scarcity in agricultural areas and 1.2 billion people of them resides in acute water -constrained agricultural areas throughout the world (FAO, 2020).

Abu Siddique demonstrate in his writing "how deforestation damaged water sources in CHT, 2017". That every woman in chimbuk have to go a long way two or three times every day for fetching water. He also showed several families have been migrated to the new place where a large creek flows as the previous village was for away from the creek. But currently the creek gradually dries out practically in winter season. Total hill forest in Bangladesh is nearly 9.33% as per information of Bangladesh department. Hill areas are mainly khagrachai, Rangamati, and Bandarban and population increases in this area that leads demand for agricultural land. So rapid deforestation has been occurred to meet the needs which is leading cause for water scarcity.

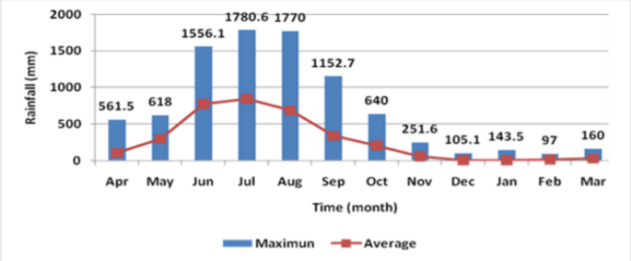

Figure 1: Annual rainfall over the Bandarban

*Source: Water aid Bangladesh.

Figure-1, depicts the annual rainfall over Bandarban in which it is clear that maximum rainfall occurs from June to August and gradually declines in the month of September. However, moderate rainfall counted in April, May, and October of the year. While the lowest rainfall is estimated between November to March.

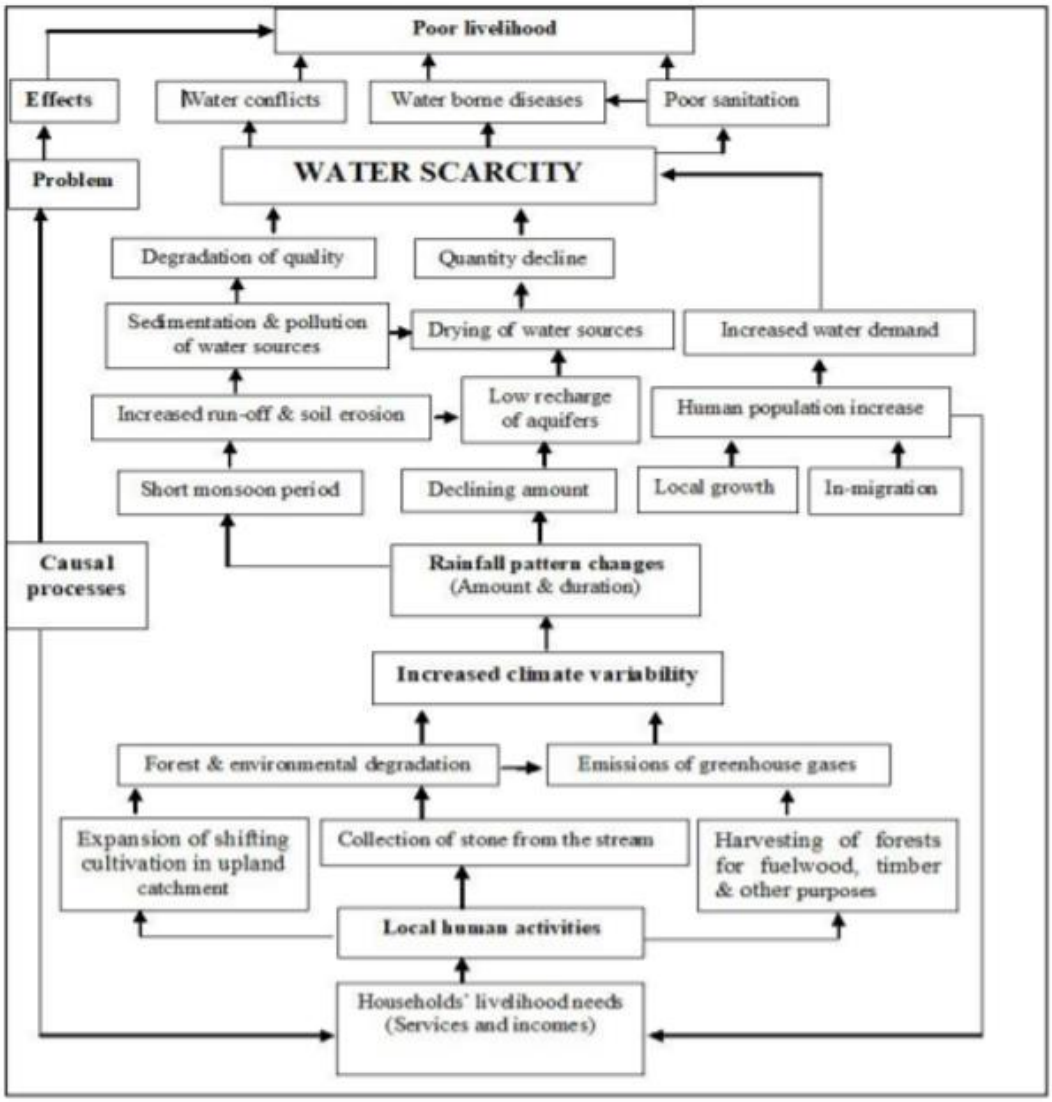

Figure 2: Cause-effects link model of water scarcity.
*Source: Grassroots Journals of Natural Resources, Vol-4, No.1.

Figure-2, illustrates the cause -effects link model of water scarcity which presented the causal process of changes rainfall patterns. Increased climate variability is the main cause of changes of precipitation which is the result of many reasons like as: forest and environmental degradation, emission of greenhouse gases and local human activities etc. Moreover, degradation of quality and quantity as well as drying of water sources and many more are the main problems of water scarcity. It also presents water borne diseases, poor sanitation and poor livelihood is the result of water scarcity.

METHOD AND DATA COLLECTION

Considering the nature of the topic, this study has focused on the existing literature of national and international levels. Moreover, in order to full fill the objectives, the study has followed the stratified sampling techniques to select the respondents. A total of forty respondents of different occupations in the Chimbuk hill area of Banderban district have been selected. Primary data were collected through a

structured questionnaire with the assistance of some trained University students of this area under the supervision of the author. Besides this, documents of both national and international have been used as a secondary source. The collected data have been analyzed systemically and carefully.

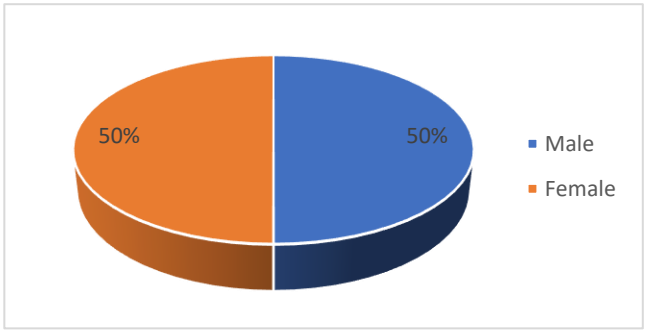

Figure 3: Number of male female respondents

Figure-3, presents the male and female proportion of the respondents of which fifty percent male and fifty percent female.

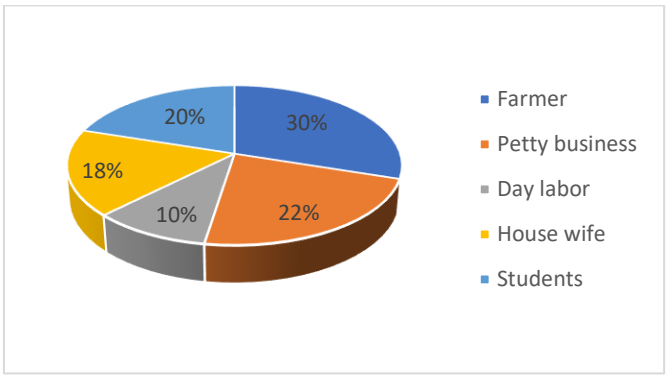

Figure 3: Occupations of the respondents frequency

Figure-4, illustrates the occupations of the respondents of which 30% of the respondents are farmers, 22% are petty business and 10% are day laborer. Besides this, 20% of respondents are students, as well as 18%, are housewives.

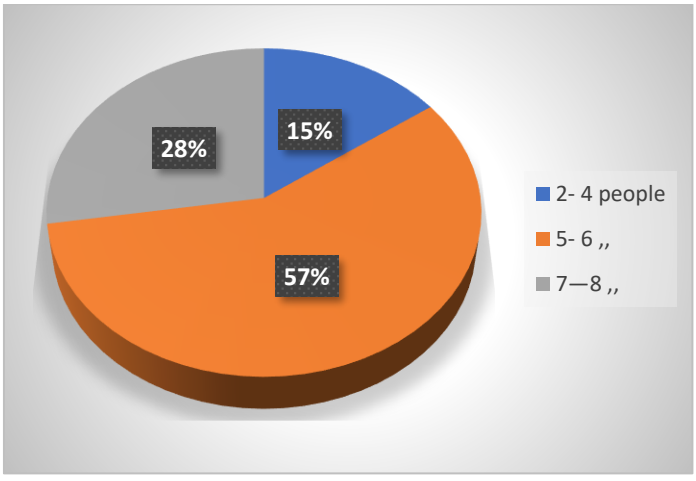

Figure 5: Number of family members of the respondents

Figure-5, shows the family members of the respondents. Among the respondents, 15% have two to four family members and 57% have five to six family members. Moreover, 28% belongs to the joint family.

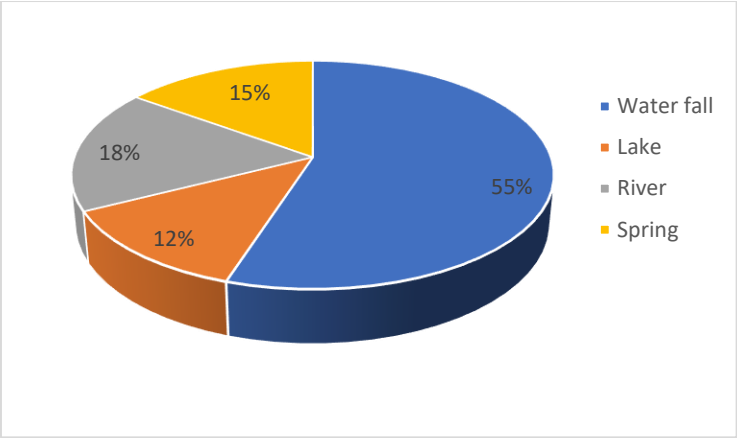

Figure 6: Water Sources from which respondents collect water

Figure-6, states from which respondents collect water. It presents 55% of the respondents collect water from water fall.18% and 12% of respondents from River and Lake respectively. Rest 15% of them collect water from spring.

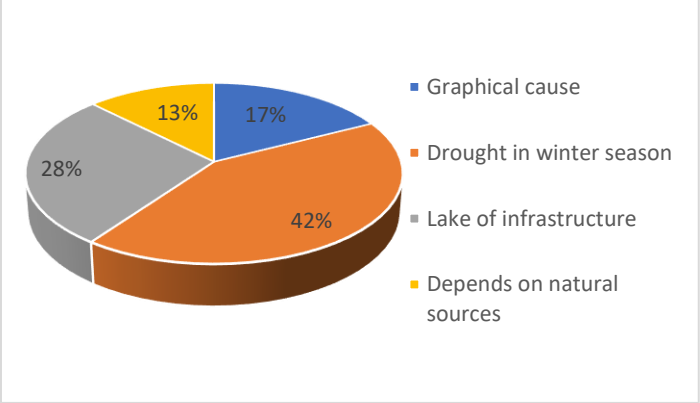

Figure 7: Reasons of water scarcity

Figure-7, illustrates the respondent's opinion related to the causes of water scarcity in the study area. Of which 42% opining the major cause of water scarcity is drought in the winter season and 28% said lake of infrastructure, as well as 17%, replied geographical condition is responsible for the water crisis.

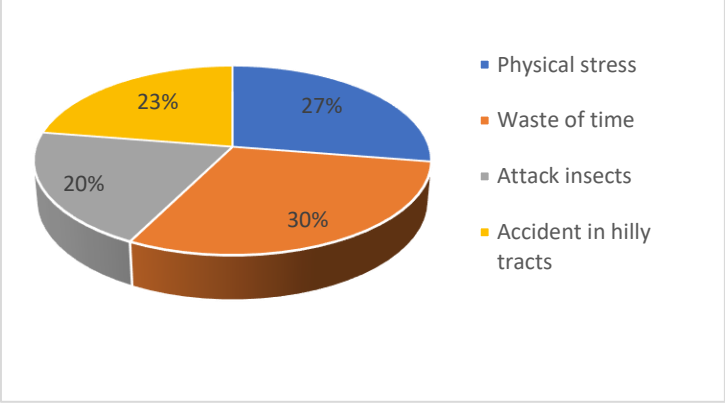

Figure 8: Sufferings that women face

Figure-8, presents the sufferings that women face in the study area. Among the total respondents, 27% said they face physical stress and 30% replied waste of time.20% and 23% of respondents identified sometimes they were attacked by insects as well as occurred accidents in hilly tracts respectively.

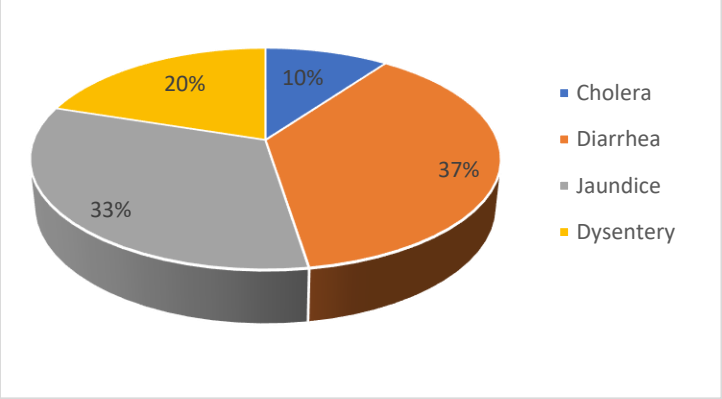

Figure 9: Diseases by contaminated water

Figure-9, depicts diseases that occurred by contaminated water.37% of respondents said they often suffered from diarrhea and 33% by jaundice. Rest 20% and 10% suffered from Dysentery and Cholera respectively.

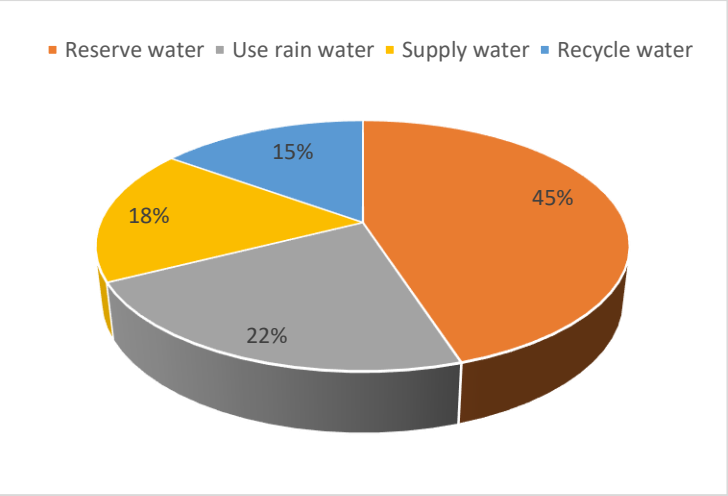

Figure 10: Respondent's opinion to solve the problems

Figure-10, illustrates the respondent's opinions to solve their problems. Of the respondents, 45% seem reserving water is important and 22% opine using rainwater might solve the problem.18% and 15% of the respondents said supply water and Recycling water needed to fulfill their demand.

DISCUSSION

It is found from the study that more than fifty percent of people of the study area collect water from the waterfall and others from the different sources of water bodies where water availability mainly depends on precipitations. According to the opinion of the local people, drought in the winter season and the absence of infrastructural facilities are the main cause of water scarcity. Moreover, it is evident from the study that particularly women and girls are facing challenges as they are more susceptible to water collecting for their family members as well as doing their activities.

Of many challenges physical stress, time wasted, and accidents in hilly tracts are more notable issues. Besides this, more importantly, residents of the hilly area are affected by several types of water-borne diseases like as: dysentery, diarrhea, and jaundice are more common. However, individuals of the hilly area seem that if it is possible to reserve the available water in the rainy season and recycle it then some sorts of problems can be solved.

CONCLUSION

A large number of ethnic communities live in the Chittagong hill tracks area with their own traditions and culture. Most of the people of this area depend on agriculture and natural resources for their survival. In the winter season, drought is common which makes them more vulnerable in terms of maintaining a minimum standard of living. According to UNICEF, nearly two-thirds of the global population faces acute water scarcity for a minimum of a month every year. As women and children particularly, girls are responsible for collecting water, it affects their schooling and physical health. It is common for the people of this area to collect water far away from their house. So, it takes much time as well as hampers the hygiene practices. The demand for safe water increasing day by day as the global population has been increased during the last century. So, Government, non-government, International development partners, and civil society should take necessary measures to solve the problems as early as possible and ensure a smooth life for the people of hill tracts area.

REFERENCE

Abedin, M.A., Collins, A.E., Habiba, U. et al. Climate Change, Water Scarcity, and Health Adaptation in South-western Coastal Bangladesh. Int J Disaster Risk Sci 10, 28–42 (2019). https://doi.org/10.1007/s13753-018-0211-8

Ali, K.M.B and Molla, M.H, Traffic congestion in Chittagong Metropolitan city, Bangladesh: A case study in Citizens' Perception, Chittagong University Journal of Social Science, vol.27, 2009, P.P 143-158.

BBS, Population and Housing Census 2011 Preliminary Results July 2011, Ministry of Planning, Government of the People's Republic of Bangladesh, 2011.

DFID (Department for International Development), EC (European Commission), UNDP (United Nations Development Programme), and WB (World Bank). 2002. Linking poverty reduction and environmental management: Policy challenges and opportunities. Washington, DC: World Bank.

https://thewaterproject.org/water-crisis/water-in-crisis-bangladesh

https://www.unicef.org/bangladesh/sites/unicef.org.bangladesh/files/2019-09/CHT-report-LR-August20-website.pdf

https://www.wateraid.org/bd/sites/g/files/jkxoof236/files/final-report-on-assessing-the-natural-springs-of-chittagong-hill-tracts-cht.pdf

IOSR Journal of Humanities and Social Science (IOSR-JHSS) Volume 19, Issue 4, Ver. VII (Apr. 2014), PP 36-44 e-ISSN: 2279-0837, p-ISSN: 2279-0845.www.iosrjournals.org www.iosrjournals.org

Khuda, Z.R.M.M, Environmental Degradation Challenges of the 21st Century, Environmental Survey and Research Unit, Dhaka Bangladesh, 2001.

Nazem, N.S., Urban growth and urbanization in Bangladesh: interpretation of Census 2001, CUS desk report, CUS Bulletin on Urbanization and Development, vol. 45, 2003, pp.9-12.

Rahman, A., Bandarban District and Bandarban Sadar Upazila, in SirajulIsalm (ed.), Banglapedia, National Encyclopedia of Bangladesh, Asiatic Society of Bangladesh, Dhaka, vol.1, 2003, p.p. 409-411.

Rahman, M. M, Dewan, A. M. and Islam, M. S., Degradation of Urban Environment: A Case Study of Citizen's Perception in Chittagong City. The Oriental Geographer, Vol. 45, Number 1, (January, 2001), 2001, PP.35-52, Dhaka.

SDWF (Safe Drinking Water Foundation). 2018. Water and human health. https://www.safewater.org/fact-sheets-1/2017/1/23/water-and-human-health. Accessed 11 Nov 2018.

UNDP, Promotion of Development and Confidence Building in Chittagong Hill Tracts, prepared by Chittagong Hill Tracts Development Facility (CHTDF), UNDPB, IDB Bhaban (7th Floor), E/8-A Rokeya Sharani Sher-e-Bangla Nagar, Dhaka – 1207, www.CHTDF_AnnualReport2010.com (visited on 22 November, 2012), 2010.

UNICEF. https://www.who.int/mediacentre/news/releases/2017/launch-version-report-jmp-water-sanitation-hygiene.pdf. Accessed 17 Dec 2018.

WHO (World Health Organization) and UNICEF (United Nations Children's Fund). 2017. Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines.

--0--