

SCOPE OF WORK AND STRATEGIES ON DISABILITY INCLUSIVE CLIMATE CHANGE ADAPTATION

STUDIED BY

Faculty of Graduate Studies (FGS)
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A-18/6, Genda, Savar, Dhaka 1340

Foreword

Community Driven Disability Inclusive Disaster Risk Management and Climate Change Adaptation (CDDiDRM & CCA) is a three (3) year project being implemented by the Centre for Disability in Development (CDD) in collaboration with CBM in some areas of the Dhaka North City Corporation, Gaibandha, Savar Municipality, and Bagerhat. Implementation of the CDDiDRM & CCA project began in January 2020 and lasts through December 2022. The project's goal is to improve the most vulnerable community's capacity for resilience through effective Disability Inclusive Disaster Risk Management (DiDRM) and Disability Inclusive Climate Change Adaptation (DiCCA) in Bangladesh's rural and urban areas. In accordance with national and international commitments, the project's overall change involves institutionalizing disability inclusive disaster risk management and disability inclusive climate change adaptation in urban and rural areas. In the current phase, this project aims to conduct a study in association with the Faculty of Graduate Studies (FGS), Daffodil International University (DIU) to look into the enhanced resilience capacity of the community that is most at risk through sustainable Disability inclusive Disaster Risk Management (DiDRM) & Disability inclusive Climate Change Adaptation (DiCCA) in study project areas of coastal Bangladesh. Through the CDDiDRM & CCA project in Sharankhola, this study also aims to define additional operational strategies and the scope of work for disability inclusive climate change adaptation in the Sundarbans' adjacent coastal areas. The outcomes of this empirical study are expected to be useful for CDD and CBM decision-makers as well as development partners as a brief but comprehensive overview.



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Acknowledgement

Firstly, we would like to express gratefulness to the Almighty for His divine grace, which enabled us to successfully complete this study titled **“SCOPE OF WORK AND STRATEGIES ON DISABILITY INCLUSIVE CLIMATE CHANGE ADAPTATION”**.

Secondly, we express our sincere gratitude to the Honorable Pro-Vice-Chancellor, DIU, Prof. Dr. S.M. Mahbub Ul Haque Majumder and Member of BoT, DIU, Prof. Dr. Mohamed Emran Hossain for their kind support, valuable suggestions, encouragement and most importantly, their precious time and guidance in preparing the enriched report this study.

Thirdly, we would also like to show gratitude to our study participants, especially persons with disability, parents / caregivers of persons with disabilities, UDMC, WDMC and Municipal Disaster Management Committee, DRR & CCA practicing organizations, local governmental agencies, community people, students and other stakeholders for their cooperation throughout this study.

Finally, we also like to offer our sincere gratitude to CDD and CBM management officials, experts, and other supporting staffs who helped the study team while collecting data from the study location and preparation of the final report.

Last but not the least, we would like to thank all the study team members for dedicating many sleepless nights to successfully complete this report.

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Abbreviation

BCCSAP	Bangladesh Climate Change Strategy and Action Plan
CBM	Christian Blind Mission
CCA	Climate Change Adaptation
CDD	Centre for Disability in Development
DiCCA	Disability inclusive Climate Change Adaptation
DiDRM	Disability inclusive Disaster Risk Management
DIU	Daffodil International University
DPOs	Disabled People's Organizations
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
FGD	Focus Group Discussion
FGS	Faculty of Graduate Studies
KII	Key Informant Interview
NGO	Non-Governmental Organisation
SDGs	Sustainable Development Goals
SHG	Self Help Group

Executive Summary

Bangladesh is frequently cited as one of the most vulnerable countries to climate change because of its disadvantageous geographic location; flat and low-lying topography; high population density; high levels of poverty; reliance of many livelihoods on climate sensitive sectors, particularly agriculture and fisheries; and inefficient institutional aspects. Many of the anticipated adverse effects of climate change, such as sea level rise, higher temperatures, enhanced monsoon precipitation, and an increase in cyclone intensity, will aggravate the existing stresses that already impeded development in Bangladesh. These impacts could be extremely detrimental to the economy, the environment, national development, and the people of Bangladesh.

The impacts from climate change disproportionately affect the wellbeing of vulnerable and marginalized communities such as the poor, women, elderly and indigenous peoples. Despite efforts to include marginalized communities, national programs and policies did not specifically consider another highly vulnerable group of society – persons with disabilities. Therefore, there is an urgent need to address the challenges of climate and environmental change for the Bangladesh's persons with disabilities from an intersectionality lens in order to effectively foster sustainable inclusive and just futures.

Considering the burning context above, this study was undertaken to identify the gaps of inclusion of persons with disabilities in adaptation measures to climate change and find out further scope of work and operational strategies in the Sundarban adjacent coastal areas on Disability Inclusive climate change adaptation through CDDiDRM & CCA project in Sharankhola, Bagerhat. Based on this, this study provides a comprehensive way forward for Disability inclusive Climate Change Adaptation (DiCCA). In order to achieve the objectives, the study applied a mixed-method approach combining both quantitative and qualitative data collection methods and analytical tools. Data had been collected from field such as Organization Survey, Focus Group Discussions (FGD), Key Informant Interviews (KII) and Expert consultations. The secondary sources include extensive review of relevant national and international literature, development project reports, peer-reviewed journals, policy plans, and frameworks and so on.

The study showed that climate change is amplifying the risks and exclusion systematically that persons with disabilities already experience in their daily lives. Additionally, climate change is introducing new risks and creating new barriers. This is of particular concern in terms of the barriers persons with disabilities already face in securing livelihoods and ensuring household food security.

On the basis of our findings, persons with disabilities present a call to action to all agencies and organizations working on climate-related policy and programming in the Bangladesh. Crucially, disability-inclusive climate action needs to better address existing and emerging risks and respond to the differential impacts of climate change on persons with disabilities. Disability inclusive climate action can only be achieved by ensuring the meaningful participation of persons with disabilities in climate preparedness, adaptation, and mitigation.

On the one hand, this study found that there is a great need for knowledge, capacity building, skills and expertise among policy makers, people with disabilities and their organizations around climate change and its impacts, and how these fit with the aims of the disability development, particularly in terms of the wider social transformation development agenda. There is also a great need of persons with disabilities to participate in existing and ongoing climate justice movements and to be part of the ongoing conversation and actions. For many people with disabilities, systemic exclusion across all sectors of society has led to a focus on immediate priorities, rather than those which are seen as deferrable. But there is a dearth of research around these issues to understand the specific impacts on people with disabilities, or to understand how the perspectives of differing group can be bridged.

This study explored that the disconnect between the climate and disability rights and development in the realm of climate change adaptation calls for more systematic engagement from the national level all the way down to the grassroots. This study thinks that the need to integrate intersectional voices and considerations is critical, but it needs to be driven by people with disabilities themselves. Finally, there is a need to create a better, more resilient, and adaptive system to respond to climate impacts that do not (even unintentionally) exclude people with disabilities from the systems. At the same time, there is an overall lack of literature that really seeks to explore the specific impacts of climate change on people with disabilities, or the policies and interventions that support mitigation and adaptation and adjust for these impacts on people with disabilities, while acknowledging that they are not a homogeneous population.

CHAPTER 01

INTRODUCTION

Global environmental change and anthropogenic climate change are causing unprecedented biodiversity loss, jeopardizing the provision of nature's contributions to people (NCP), that are all the contributions, both positive and negative, of living nature (diversity of organisms, ecosystems and their associated ecological and evolutionary processes) to people's quality of life' (Abir, T.M., Xu, X., 2019). The assessments of the Intergovernmental Panel on Climate Change (IPCC) and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) demonstrate that the impacts of climate change, biodiversity loss and environmental degradation are unevenly distributed across different social groups (Agrawala, S et. Al., 2019).

In fact, the impacts from these changes disproportionately affect the wellbeing of vulnerable and marginalized communities, such as the poor, women, elderly and indigenous Peoples. Despite efforts to include marginalized communities, both intergovernmental bodies and national programs, and policies did not specifically consider another highly vulnerable sub-group of society – persons with disabilities (Ahsan, R., 2014). It is important to note that often population with disabilities are also a part of other marginalized groups, such as poor people, indigenous people and People of Color (BIPOC) or women, interbinary, trans-binary or non-binary people. Therefore, there is an urgent need to address the challenges of climate and environmental change for the world's persons with disabilities from an intersectionality lens in order to effectively foster sustainable inclusive and just futures (Alam, E. et al., 2018). More specifically, it is necessary to understand the interconnections between the context- specific impacts of climate and environmental change for population with disabilities (intersecting with other marginalized social groups) and environmental and climate justice. Transforming our

societies towards sustainability requires the consideration of environmental and climatic justice and all marginalized groups, including population with disabilities (Bahauddin, K.M., 2015).

Progress in addressing the interconnections between the context-specific impacts of climate and environmental change on population with disabilities within the environmental and climatic justice framework is still meagre. The paradigm of environmental justice comprises three dimensions: distributional, recognition and procedural. Distributional justice refers to how impacts, costs, benefits and non- benefits of climate and environmental change are allocated among actors. Recognition justice refers to the acknowledgement of whose voices and knowledge are heard, respected and listened to. Procedural justice refers to how decisions are made and by whom (Leong, G., 2020).

The 2030 Agenda for Sustainable Development is the world's globally agreed plan for peace and prosperity for all on a healthy planet. Despite the strong commitment expressed by the international community for inclusive and sustainable development, persons with disabilities continue to face significant challenges to their full participation in society. These include negative attitudes, stigma, discrimination and lack of accessibility in physical and virtual environments (United Nations, 2018). Nevertheless however, the UN Convention on the Rights of Persons with Disabilities (UNCRPD) was signed and ratified by Bangladesh in 2008 (United Nations, 2018). In line with UNCRPD, Bangladesh Government adopted Rights and Protection of Persons with Disability Act 2013. The aim of the act was to create equal opportunities for persons with disabilities and their full participation in families, communities, and countries (Government of Bangladesh, 2015). Besides, the total population in Bangladesh is 166.3 million (BBS, 2015) and more than 9.1% of the total population has been suffering from various types of disabilities (BBS, 2015).

Bangladesh is one of the most climate vulnerable countries in the world and will become even more so as a result of climate change and it has been ranked as one of the world's most disaster-prone countries, with 97.1 % of its land area and 97.7% of its population at risk from multiple hazards (UNICEF, 2019). Floods, tropical cyclones, storm

surges and droughts are likely to become more frequent and severe in the coming years (MoEF, 2019). The coastal zone of Bangladesh hosts over 35 million of people who are exposed to cyclones, storm surges, rough seas, salinity intrusion and permanent inundation due to sea level rising. In Bangladesh, coastal area has been divided into three distinct regions, namely, western, central, and eastern coastal zones (Islam, 2018). The coastal zone of Bangladesh constitutes of 19 districts with an area of 47,201 sq. km which is about one third of the total area of the country. Sixty-two percent of the land of the coastal zone has an elevation of up to three meters and 86 percent up to five meters. During natural disasters, persons with disabilities suffer not only from the same impact of the disaster as the general people, but also are less able to cope with the deterioration of the environment as a result of socioeconomic conditions, empowerment and access to resources (UN, 208). In the southern coastal region, nearly 32% dwellers are not concerned about natural disaster and climate change issues and 64.1% partially concerned about an existing cyclone warning system (YPSA 2015). In reality, approximately 60%, 79% and 52% inhabitants respectively expressed that pre-cyclone disaster preparedness activities, during cyclone disaster activities and post cyclone disaster activities are not suitable for persons with disabilities. They claimed that 97% persons with disabilities do not know about the participation of persons with disabilities in disaster management committees. Besides, 65.5% , persons with disabilities are directly involved with the natural disaster management and climate change related activities, but 90% , persons with disabilities are not involved in disaster management oriented laws and policies in the southern coastal belt of Bangladesh (YPSA 2015). Although, many studies reviewed the existing laws, policies, strategies, plans of Bangladesh Government related to climate change and disaster management addressed disability issues as per article 11 of UNCRDP in Bangladesh. The review prescribed that nearly fifteen (15) types of laws, policies, strategies, plans has existed and those were operated through different ministerial and autonomous bodies. Moreover, these types of laws, policies, strategies, plans strictly emphasize on the participation of , persons with disabilities in climate change and disaster management issues. The reviewed studies recommended that proper participation of , persons with

disabilities at every planning process could ensure the safe livelihood of them in coastal areas of Bangladesh (Minar et.al., 2019). To advance the 'Rights & Protection of Persons with Disabilities Act 2013' and accelerate the inclusion of Persons with Disabilities on disaster and risk reduction issues.

To address these burning issues, Centre for Disability in Development (CDD) in partnership with CBM is implementing three (3) years project titled “Community Driven Disability inclusive Disaster Risk Management and Climate Change Adaptation” (CDDiDRM & CCA) project in selected areas of Dhaka North City Corporation, Gaibandha, Savar Municipality and Bagerhat. The CDDiDRM & CCA project has been implementing from January 2020 and continuing until till December 2022. This project reaches directly 12,000 people including persons with disabilities and indirectly reaches more than 68,475 individuals. The objective of the project is to enhance resilience capacity of the most at-risk community through sustainable Disability inclusive Disaster Risk Management (DiDRM) & Disability inclusive Climate Change Adaptation (DiCCA) in rural and urban areas of Bangladesh. The overall change that the project brings about is institutionalization of disability inclusive disaster risk management and disability inclusive climate change adaptation in both urban and rural areas in line with the national and international commitments.

1.1. Justification of the Study

Bangladesh has been at the forefront of national and international climate change discourses, given its extreme vulnerability to the impacts of climate change. One of the world's largest deltaic systems with a 710 km long coastal stretch, it exposes approximately 40 million people to frequent cyclones, tidal surges, flood, and sea-level rise. Researches show the overall frequency; intensity and variance of these disasters have increased significantly over the past decade (Kabir, R. et al., 2016). According to several researches, Bangladesh is a pioneer in adapting to climate change impacts with the country's people having remarkable ability to cope with natural disasters. However, regardless of their abilities, these disaster events affect marginalized groups such as people living in poverty and persons with disabilities disproportionately. These groups

bear the most severe brunt of climate change along with battling multidimensional inequalities. Yet, there is minimal inclusion of persons with disabilities in national planning, disaster risk management planning and climate change adaptation measures (Siddik, M. A et al., 2019).

Considering these, Centre for Disability in Development (CDD) in partnership with CBM is implementing three (3) years project titled “Community Driven Disability inclusive Disaster Risk Management and Climate Change Adaptation” (CDDiDRM & CCA) project in selected areas of Dhaka North City Corporation, Gaibandha, Savar Municipality and Bagerhat. The CDDiDRM & CCA project has been implementing from January 2020 and continuing until till December 2022. This project reaches directly 12,000 people including persons with disabilities and indirectly reaches more than 68,475 individuals. The objective of the project is to enhance resilience capacity of the most at-risk community through sustainable Disability inclusive Disaster Risk Management (DiDRM) & Disability inclusive Climate Change Adaptation (DiCCA) in rural and urban areas of Bangladesh. The overall change that the project brings about is institutionalization of disability inclusive disaster risk management and disability inclusive climate change adaptation in both urban and rural areas in line with the national and international commitments.

In this phase, this project aims for conducting a study to investigate the enhanced resilience capacity of the most at risk community through sustainable Disability inclusive Disaster Risk Management (DiDRM) & Disability inclusive Climate Change Adaptation (DiCCA) in study project areas of coastal Bangladesh. In addition, this study is to identify further scope of work and operational strategies in the Sundarban adjacent coastal areas on Disability Inclusive climate change adaptation through CDDiDRM & CCA project in Sharankhola. Based on this, this study provides a comprehensive strategy, courses of action, recommendation and implementation guideline for Disability inclusive Climate Change Adaptation (DiCCA). Scope and opportunities will be identified, analyzed, presented and tested to identify various opportunities and formulate appropriate implementation strategies for effective DiCCA in future course of action.

1.2. Study Objective

Natural disasters are a part of everyday life for the people of Bangladesh. Floods, river bank erosions, cyclones, tornadoes, drought are regularly striking Bangladesh. Influence of climate change is increasing the frequency, ferocity and geographical coverage of natural disasters in the country. The poor people are hit and endure most in disaster situations. Among the poor, the persons with disabilities are the most vulnerable and suffer the most. Poverty and disability increase the vulnerability of persons with disabilities in a disaster. Most agencies usually respond to the disasters with emergency relief and rehabilitation support (Disability Alliance on SDGs, 2019). Emergency response and relief do not necessarily prepare and build the capacity of communities and persons with disabilities to face future disasters. Remaining unprepared they continue to lose their assets, stay poor & vulnerable and hence plunge deeper into poverty with every new disaster (Uddin, M. N et al., 2019). It is like an inescapable cycle. On the contrary, if the vulnerabilities of the people to climatic risks could be reduced and their capacities built then the potential threats of damage could be minimized and assets saved allowing them to quickly recover and progress towards development. In Bangladesh, Government and NGO sectors are emphasizing on disaster preparedness, risk reduction and climate change adaptation. However, the concerns of persons with disabilities are not always considered. If this issue is left unattended it will only increase the vulnerabilities of persons with disabilities. It is hence imperative that the issue of disability is mainstreamed into the actions of all mainstream disaster management actors at state and non-state level (Disability Alliance on SDGs, 2019).

In the light of the thoughts above, this present study attempts to identify the climate change-related vulnerabilities and the impacts of climate change on the coastal community people including persons with disabilities in Sundarban adjacent coastal areas. This study also identifies the gaps of inclusion of persons with disabilities in adaptation measures to climate change. Importantly, this study finds out further scope of work and operational strategies in the Sundarban adjacent coastal areas on Disability Inclusive climate change adaptation through CDDiDRM & CCA project in Sharankhola.

Based on this, study provides a comprehensive strategy, courses of action, recommendation, and implementation guideline for Disability inclusive Climate Change Adaptation (DiCCA). Scope and opportunities will be identified, analyzed, presented and tested to identify various opportunities and formulate appropriate implementation strategies for effective DiCCA in future course of action.

1.3. Scope of Study

This study is being conducted in the national and local level i.e. Sharankhola Upazilla under Bagerhat district in line with parameters of expected result 3 of the project. Study provides clear understanding on impacts of climate change vulnerabilities of all including persons with disabilities and scope of inclusion of person with disability in climate change adaptation. A proper scope of work, strategy and action for Disability inclusive Climate Change Adaptation (DiCCA) are suggested from this study. This may create opportunity of the project for disability inclusion in Climate Change Adaptation in future. Based on this, further intervention on DiCCA at both national and local level will be created. Besides this, study suggests the areas of capacity development of CDD and other CCA practicing organizations including Government department for disability inclusion.

1.4. Study Questions

To meet the objectives of this study, following research questions had been addressed –

- 1 How much disability inclusion is suited to the priorities, policies and programmes of Bangladesh e.g., National Adaptation Plan (NAP), Bangladesh Climate Change Trust Fund, MOEFCC working strategy?
- 2 What are the scopes of disability inclusion in climate change adaptation?
- 3 What will be disability inclusive CCA strategies for the project?
- 4 How persons with disabilities are affected by climate change?
- 5 What is the understanding of persons with disabilities and their organizations on climate change adaptation measures?

- 6** What is the present practice of disability inclusion in climate change adaptation?
- 7** What are the future scope of work identified for disability inclusiveness in existing policies and programs of Climate Change Adaptation?
- 8** How the target populations of Southkhali Union (communities including persons with disabilities, elderly peoples and children) will be well prepared for contributing DiCCA?
- 9** What national level policy change could be proposed through advocacy and gap analysis?
- 10** How livelihood activities of persons with disabilities are affected due to the impact of climate change?
- 11** What are the climates resilient livelihood options for persons with disabilities?
- 12** How persons with disabilities, their groups (SHGs)/DPOs will be capable to continue their climate resilient livelihood activities on their own?
- 13** How voices will be heard of communities including persons with disabilities in Government initiatives of CCA?
- 14** What initiatives could be taken by Ministry of Forest, Environment and Climate Change (MoEFCC) to consider inclusion issues?
- 15** What are the strategies to continue and expansion beyond 2022 for disability inclusive Climate Change Adaptation?

CHAPTER 02

METHODOLOGY

An initial consultation meeting was held with CDD choose whatever methods i.e. study tools, sample size, study area, study participants and so on are necessary to fulfill the assignment. The Faculty of Graduate Studies (FGS), Daffodil International University required to prioritize its tasks in order to address all the issues. It is also expected that recommendations/suggestions/information should be strongly based on the reality of the context and circumstances - realistic and pragmatic. Overall, it did emphasis giving more attention to analyzing, assessing and recommending the study for CDD and CBM based on pragmatic analysis of the different categories of context and stakeholders.

The approach for the study was to be very specific in achieving the outputs and outcome, as expected and specified by the CDD. The FGS teams with their long experience local and national level understands the seriousness and specificity of the output closest to the objectives of the study. The FGS assured that the outputs will be specific to relevance, efficiency, effectiveness, impact and sustainability instead of lumpy discussions and storytelling around the central focus. Our approach to the study was therefore to strictly follow the objectives of study and responsibilities of the team following the SMART (Specific, Measurable, Attainable, Realistic and Timely) indicators. Our strategies for applying the approaches include several specific steps and activities for accomplishing here.

2.1. Study Design and Settings

Quantitative and qualitative inputs both have their pros and cons. Therefore ideally generate both a quantitative ranking of capacity and qualitative information to support this ranking. During the 'mobilize & design phase', the assessment team decided what will

be feasible, based on how accessible and reliable different inputs are and how they will be used. Our team suggested adopting Participatory Assessment for the present study. Among various participatory approaches' the most pertinent one for the present study is "Stakeholders Analysis" and "Participatory Assessment" will be the most appropriate technique. In order to achieve this goal, this study adopted a concurrent mixed-methods research design conducted between 3rd December and 31st December, 2022 at Southkhali union of Sharankhola sub-district under Bagerhat district (see Figure 1). The area is a high disaster-prone zone with more than 70% of its population living below the poverty line. Main occupations of the population (both persons with/without disability) are agriculture, day laborer, fishing and honey collection from the Sundarbans forest.

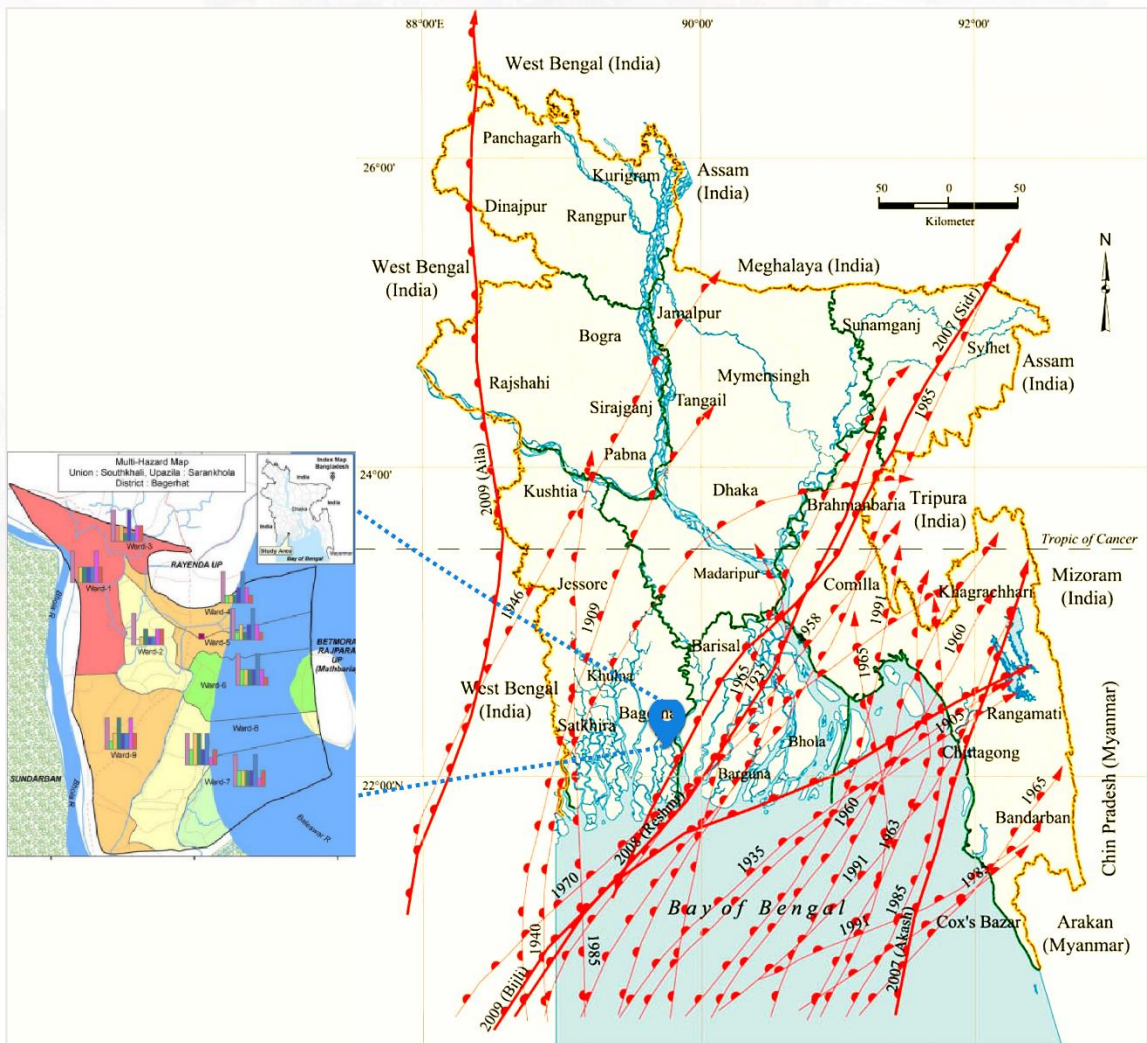


Figure 1. Study Area

2.2. Target Population and Sampling

The key target population of this study is persons with disabilities from all 9 wards of Southkhali, Sharankhola, Bagerhat. However, as per the need of the study, the participants of the study were persons with disability/Self Help group members, Parents / Caregivers of persons with disabilities, UDMC, WDMC and Municipal Disaster Management Committee, DRR & CCA practicing organizations, local governmental agencies, community people, students and other relevant stakeholders. Following convenient purposive sampling technique, primary data source included a face- to-face individual interview (N=15), Focus Group Discussions (Participants = 53 (5 FGDs)), Key Informant Interviews (N=7), Organization survey (N=5).

2.3. Data Collection Instruments & Sources

Both primary and secondary data were collected to fulfil the study goal. The primary data collection instruments (DCIs) used in this study were Individual Interview, Focus Group Discussions (FGD), Key Informant Interviews (KII), and Organization survey designed by both quantitative and qualitative research experts. Following the recommendation of the study (Ahmmed et al. , 2022, Haynes et al. , 1995), content validity was ensured by the judgment method where a panel of domain experts used a 5-point rating scale to evaluate DCIs on dimensions such as relevance, representativeness, specificity, and clarity. To quantify the expert agreement, Cohen's coefficient kappa (k) was used as suggested in the study (Boaten et al. , 2018). The average kappa (k) value of the DCIs were .83 (significance < 0.05**) showing a substantial level of agreement (Ahmmed et al.,2022). Besides, to ensure the reliability and trustworthiness of the DCIs, triangulation was ensured for getting more in-depth and unbiased set of findings.

On the other hand, secondary data and information were collected from peer-reviewed journals, case study reports, national and international policies and frameworks relevant to DiCCA. Overall study process and management procedure are presented in Figure 2 and Figure 3, respectively.

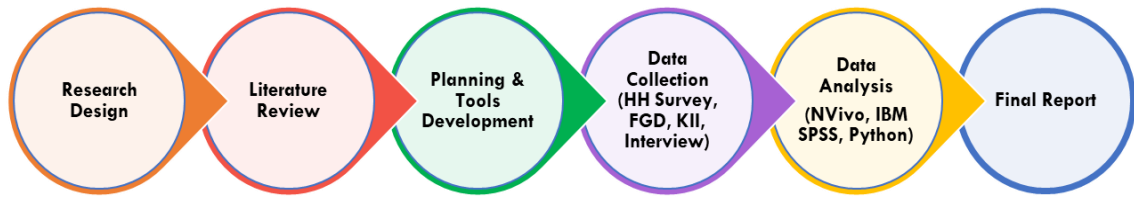


Figure 2. Step by step Study Process

2.4. Data collectors' Training

A total of 9 data collectors- DC (students from different departments of DIU) and 4 supervising officers/moderators were trained prior to collect data. Two of our experts, performed a day-long training on 1st and 2nd December, 2022 prior the data collection to equip DCs to collect the real insights. Training included lectures on understanding the contents of the FGDs, KIIs, survey, interviewing techniques and mock interviews between the trainees to gain practice in asking questions. Finally, based on the performances, 3 groups were formed where each group was consisted of one moderator and three students.

2.5. Quality Control Mechanism

The team lead of the FGS visited the field to monitor the data collection in order to ensure that standard quality control procedures were followed. The team Leader and other specialists were in constant touch with the field team and test administrators. All members of the team undertook monitoring of field study activities at selected places to oversee the study activities to ensure quality. All the specialists undertook field visits in selected areas at random to verify and confirm the study findings with the actual situation. However, a dedicated quality control and project management expert were engaged to ensure the overall output quality of the project including reporting. In addition, quality of data collection of the investigators was monitored over mobile communication to the team as well as the supervisors. To ease the data collection activities, the FGS, DIU arranged necessary letter and identity card. To ensure a quality study the following steps will be followed:

- **Use of Interviewers and Supervisors Manual**

A manual describing the explanation of each question of each of the questionnaires was prepared and distributed to the interviewers. This manual was also include the sample selection explanations. Use of Interviewers and Supervisors Assignment Sheet
Interviewers and supervisors were given an assignment sheet describing his/her specific duties.

- **Field Monitoring & Supervision**

The assigned supervisors were responsible for assuring quality of interview. The supervisor could choose to re-interview any specific respondent if there is any doubt about the quality of responses. Moreover, the consultants and other management staff did random visits to field for monitoring the field activities.

- **Other measures of quality control**

In addition to the field supervision, random visits by management, some quality control mechanism were taken in data cleaning stage. The data for interviews were cross-checked to identify any possible miss matches.

2.6. Information And Data Analysis

Preliminary analysis were carried out the in the field throughout the comparative study process: all data, survey, information and interview(KII) notes, and FGD outcomes were constantly reviewed and validated, where possible with the CDD team.

Key features of the analytic process were used:

- A grounded and inductive data collection process that it is driven by original findings and observations. It will develop deductively from the aims, purposes and specific study objectives set out at the TOR.
- The process is systematic in allowing methodical treatment of all similar units of analysis.
- The analytic process was participatory, transparent, raw data will be available to CDD team.

TRIANGULATION was the main stepping-stones to be used by the consultants to ensure the validity and reliability of the data collection and analysis the study. We used the following forms of Triangulation in the assessment study:

- 1** Methodological Triangulation: Comparing the results used in different methods/tools for analysis (analysis and criteria variables) as well as methods/tools used for field data collection (e.g. secondary data, KII, FGD, survey, telephone interviews, surveys, Observation, Document review, meeting/consultation with the project team, briefing with CDD and CBM team.).
- 2** Data /Source Triangulation: Comparing information directly gathered from different stakeholder sources including staff of the program.
- 3** Environmental/Geographic Triangulation: Comparing the programs in (Project Area) diversified program locations. This highlights whether information were limited to a specific context.

Analyzing the strengths, weaknesses, opportunities and constrains of field and secondary data collection were raised many interesting issues and challenges, which were duly solved in consultation with CDD team. Using a multiple indicative framework and qualitative methods allows verification of data gathered and increases the validity of the assessment through TRIANGULATION.

2.7. Compliance With Policies and Ensuring Quality

Standard procedure to comply with and maintain Code of Conduct, Gender and Child Safeguarding and Data Security Policies was censured by the study team. DIU's Code of Conduct on Child Protection, Safeguarding Policy, Child and Vulnerable Adult Code of Conduct of CDD and CBM Picture Consent for Children and Adult were followed. The FGS, DIU also maintained their Data Security Policy. The data collection team was led by the FGS, who guided and trained the enumerators. The FGS also monitored and managed the entire process of the data collection. The expert guidance and suggestions from Disability Expert of the study team were taken into account for every step of the study process, including fieldwork, developing data collection tools and report writing.



Figure 3. Overall Study Management

2.8. Ethical Considerations

Most authors who discuss research design address the importance of ethical considerations (Locke et al., 1982; Marshall & Rossman, 1989; Merriam, 1988; Spradley, 1980). First and foremost, the researcher has an obligation to respect the rights, needs, values, and desires of the informant(s). This is of particular concern in this study where the informant's position and institutions are highly visible. The following safeguards were employed to protect the informant's rights; the research objectives were articulated verbally and in writing so that they were clearly understood by the informants (including a short description of how data are used), oral or written permissions to proceed with the study were taken from the informants where necessary. The informants were informed of all data collection devices and activities, verbatim transcriptions, and written interpretations, and reports made available to the

informants as per instruction of CDD. The informant's rights, interests and wishes considered first when choices were made regarding reporting the data, and the final decision regarding informant anonymity rested with the informant.

2.9. Gender Consideration In the Study

This study sincerely considered gender aspects of the local community and their culture and, prepare report in this way. Data collected were disaggregated according to gender. The methodology followed that the voices of both men and women were heard equally and considered. For each of the enquiry of study exploration, it was useful for our study to consider the participation of women and men and how factors were influenced these changes. Our study applied a participatory community-led approach that is founded on two main principles: 1) Ensuring full and meaningful participation and influencing of all processes by gender balance consideration; and 2) Vulnerable community people particularly persons with disability are experts in their contexts and know how best to address issues. This drove the need to leverage expertise through collaborative, reflective and mutual learning processes to ensure the study project did not embody a top down or one-size-fits-all approach. This approach is grounded in addressing social norm and culture of their communities by exercising their creativity, innovation and enthusiasm. From the beginning to end, all activities of this study project were implemented by the active participation and consideration of the community people.

2.10. Child and Vulnerable Adult Safeguarding Issues

The study considered child and vulnerable adult safeguarding aspects and report on this accordingly. Followed the child and vulnerable adult safeguarding in the project location as per instruction of the CDD and existing mechanisms which were practicing to ensure a child safe working environment as per instruction of the CDD.

2.11. Study Limitations

In spite of all of our cordial efforts, there were several limitations of this study. Rapport building with the community people and persons with disabilities for better in-depth data collection was one of the major limitations. Due to time constraints due to the project phase out, it was not always possible for the study team to establish rapport with the respondents. The team had tried to address this issue by means of data triangulation using multiple methods and data sources. Whenever and wherever data collection team members had any doubts on any particular issue or information given by the respondent/s, they marked it and discussed with the other team members to verify from other sources. In some cases, when a person gave any information that the team members considered valuable, it was later cross checked with the other family members or neighbors. Time constraint also impacted the narrative based qualitative study report, as it required long term observation and assessment.

The second major limitation was related to the data collection process. The data collectors were received a very short training for conducting this field study, their lack of technical knowledge on climate change and disability to administer this relatively big questionnaire left a severe chance of biased data collection. To avoid this biasness, such false/biased assumption was minutely addressed during the training of data collection. It was also slightly difficult for the interviewers to reach the respondents at remote places or often to take interviews of older people with disabilities.

Working on a good deal of data was a challenge for the researchers. It was really very difficult to collect, synchronize and analyze the data. As for the qualitative research, data gathering and analysis was a simultaneous process, co-ordination among the whole research team consisting of ten members was a big challenge, especially due to the huge time limitation.

Getting a written consent was a very difficult issue in this research as the villagers were not ready to give one. In most cases they also did not allow us to use voice recorders for recording the conversation. The interviewers had to take the help

of a note taker. To avoid direct quotations and local terms, the dialogs were rewritten with minimal editing in order to represent the participants' spoken words. Biasness originating out of the researcher's own subjective position during data collection was often unavoidable regarding some critical social issues which might have affected the subjects' responses. Moreover, it was often challenging for the researchers to question about some private aspects of people's lives.



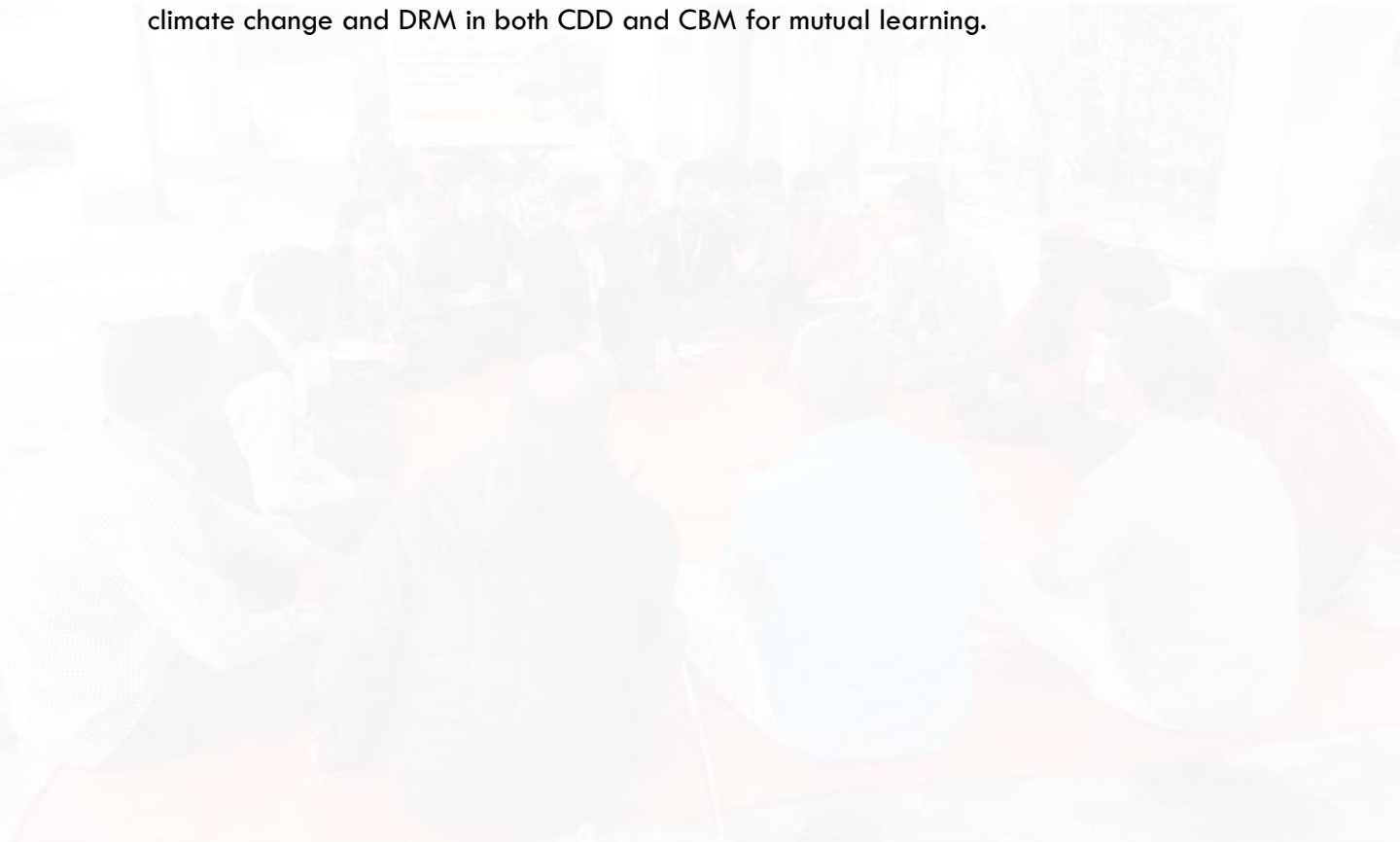
CHAPTER 3

POTENTIAL OUTCOMES OF THE STUDY

The findings and recommendation of the study are important for CDD and CBM in designing disability inclusive CCA program in future. The study process took a participatory approach by involvement of project stakeholders, especially the targeted persons with disabilities & Organization of Persons with Disabilities. This study attempted to understand the impacts of climate change-induced hazards and disaster in the project areas, focusing on persons with disabilities. The study also explored the gaps in inclusion of persons with disabilities in adaptation measures and the scope and opportunities for inclusion of persons with disabilities in adaptation measures to Climate Change. The FGS, DIU expected that the report would be useful for decision-makers of CDD and CBM and development partners as a quick overview of how to include persons with disabilities in adaptation measures and build climate resilience among the communities through a holistic approach. This study will help concern policy makers and stakeholder to understand the scope of work and operational strategies in the Sundarbans adjacent coastal areas on Disability Inclusive climate change adaptation through CDDiDRM & CCA project in Sharankhola. It will also give us direction for designing future interventions, evaluation design, and identifies critical areas for future work towards comprehensive strategy, courses of action, recommendation and implementation guideline for Disability inclusive Climate Change Adaptation (DiCCA). It will be much helpful to take and implement necessary policies regarding enabling the environment for disability and development in Bangladesh.

Contributions of this research would practical, theoretical and methodological in nature. Substantively, it found during extensive literature reviews that there is currently limited [empirical] research that concentrates on the scope and operational strategies on

Disability Inclusive Climate Change Adaptation in Bangladesh. The lack of research on this in Bangladesh at a national level highlights the significant literature gap this research aims to fill. The findings from this study might be guidance instrument for the CDD and CBM in Bangladesh and the Faculty of Graduate Studies (FGS) of the Daffodil International University, Bangladesh. This proposed research would produce empirical knowledge based options/approaches and policy implications regarding disability, climate change and DRM in both CDD and CBM for mutual learning.



CHAPTER 4

LITERATURE REVIEW

An important theme identified by the literature review is the clear link between the impacts of climate change, disasters and disability (Smith et al, 2017). However, there is a lack of evidence of how to enhance the resilience of people with disabilities in CCA and DRR programmes. The data available demonstrate heightened vulnerability for at-risk people, including the more severe impact of climate change on people with disabilities – and reduced capacity for resilience – than the wider population.

Understanding climate resilience and intersectionality also emerged as an important theme. Evidence on the relationship between climate resilience and other people considered to be at risk including women, children, older persons and indigenous people demonstrated that an individual's resilience is shaped by existing inequalities, individual and social characteristics, and how these factors intersect. Available evidence also suggests that what constitutes disability-inclusive practice is also true for other people who are considered at risk. The review noted that there is a prevailing trend to apply a broad and rather static understanding of 'vulnerable' people, rather than considering how a range of factors may intersect to highlight specific aspects of vulnerability. To this end, it highlighted a number of gaps in what we know in relation to climate resilience, disability and other at-risk groups (Rapp, R. 2012).

Although the review found a shortage of concrete examples of enhancing resilience of people with disabilities to climate risks, it did identify examples of organizations targeting or initiating specific interventions. There are though few examples of interventions that mainstream inclusion. Based on the available evidence, the review identified twelve themes that could form an inclusive approach and should be incorporated into CCA and DRR initiatives

to help develop evidence-based recommendations and guidelines on building the resilience of people with disabilities (Smith et al, 2017; p:35-42)

Only a few studies in the mainstream scientific literature analyze climate change impacts with regard to populations with disabilities. These studies are predominantly located in North America, Europe and Asia, with a low number of studies in regions in which climate change impacts are projected to be highest (e.g. Mediterranean, Latin America, Africa, Small Island States) (Stough, L.M. and Kang, D. 2015).

The reviewed literature relating to distributional justice shows that people with disabilities are disproportionately affected by climate change at three different stages: a) before the disaster (e.g. access to urgent information, early warning systems); b) during the disaster (e.g. evacuation, transport and shelters); and c) after the disaster (e.g. housing, food, water, medical care, education) (Rahman, M. S., & Mallick, M. S. 2007). For example, Hurricane Katrina impacted 155 000 people with a range of disabilities (e. g. people who were blind or deaf; people who used wheelchairs, canes, walkers or crutches; people with service animals; and people with mental health needs) in all of the three stages. Before the disaster, people with disabilities, particularly those with sensory disabilities, were unaware of the magnitude of the storm and evacuation or shelter opportunities. There was a lack of fully accessible emergency information (e.g. no sign language interpreter on the news or loss of power or cell phone signals) as well as access to evacuation transport. This situation is not isolated to the Hurricane Katrina event: evacuation and access to transportation are among the major problems for people with disabilities during disasters ((Mitra, S., et al., 2017)). In some cases, people with disabilities have limited access to shelters due to losing their mobility equipment or being rejected because of lacking adequate equipment (e.g. suitable beds or accessible bathrooms) (Kett, M., Twigg, J. 2017). When in shelters, women with disabilities have a higher probability of experiencing sexual violence. After Hurricane Katrina, 12% of children that had disabilities were left homeless (Islam, M. S. 2015). Generally, the reconstruction of 'the previous life' is often challenging for people with disabilities in terms of accessible housing, food shortage, water supply, health care, education, employment and economic welfare.

After climate change-related extreme events, people with disabilities are also faced with increased vulnerability towards vector or water-borne diseases (e.g. Malaria, Ebola virus EVD4, Zika, MERS, SARS or COVID-19) and mental health problems such as post-traumatic stress disorder. These other conditions may exacerbate underlying conditions and lead to higher morbidity and mortality rates (WHO/World Bank . 2019). Heatwaves are another extreme climatic event that people with disabilities are also particularly susceptible to. Heatwaves are extreme climatic events and one of the leading causes of weather-related deaths worldwide. Yet, their impact depends on many factors, such as the type of disability. For example, while exposure to heat might not exacerbate the condition of someone with hearing impairment (sensory disability), it might worsen the symptoms of someone with multiple sclerosis (physical disability) (Center for International Environmental Law, 2019). Hence, from the perspective of distributional justice, we need to better understand how climate change impacts different types of disabilities (e.g. mental, intellectual, sensory, physical). In addition, the extent of the impact of heatwaves also depends on the specific context. For example, while urban heat islands can further amplify the ‘heatwave effect’; people with disabilities in rural areas are likely to be significantly affected due to lower levels of education, economic status and physical isolation (Department for International Development, 2000). Therefore, long-term studies to understand the direct and indirect impacts of extreme climatic events on the livelihoods and wellbeing of people with disabilities in different geographical contexts is urgently needed.

Regarding distributional justice, people with disabilities also face stigma and discrimination. Climate change is escalating these inequalities, placing disabled populations in even more socially and economically disadvantaged positions (e.g. loss of housing and employment, forced migration). Many studies have indicated that the most vulnerable people are those disabled that belong to other marginalized groups, such as indigenous Peoples, women, children or the elderly (Fenney Salkeld D. 2016). For example, children with disabilities are more susceptible to water-borne diseases due to underlying conditions, weaker immune systems and the lack of disability-specific services

(e.g. access to medication, health services, assistive devices, food and clean water). Most current research focuses on recognition justice, investigating, for example, the impacts of extreme events on people with disabilities, particularly those with physical disabilities. Yet, most studies dealing with climate change and people with disabilities acknowledge the necessity for applying an intersectionality lens to study the relationships between the complex vulnerabilities of people with disabilities in order to uncover 'hidden discriminations'. For example, residential care and education facilities for young children in the Maldives are often not adequately equipped to provide care to children with disabilities, leading to further marginalization and generating unique situations of vulnerability (Nossal Institute Partnership for Disability Inclusive Development, 2017).

Although many study does not refer particularly to climate change, it shows what could happen 'after the disaster' when children are displaced to new care facilities and schools that are not properly equipped to cater for the unique needs of children with disabilities. Intersections of disability with other vulnerabilities (e.g. gender, age, ethnicity or race) might lead to overlooking 'hidden discriminations' and fuel ableism.

As climate change impacts on people with disabilities are associated with high mortality rates of this group and long-term impacts on their wellbeing, it is important to act quickly to incorporate disability issues into procedural justice. Previous research highlights the need for different sets of knowledge in order to be able to: a) include disabled advocates and researchers into decision-making; b) increase education opportunities for disabled populations; c) empower and informing disabled populations about their rights; and d) explore the effects of climate change on people with disabilities. For example, Shah et al. demonstrated that education is the best tool for successful mitigation, adaptation and risk reduction for people with disabilities (Banks, L. M., et al., 2017).

CHAPTER 05

FINDINGS AND DISCUSSION

The sample comprised 80 participants, where 43 (66.25%) were persons with disabilities (male = 24, female = 19), 10 (12.5%) were caregivers of persons with disabilities (male = 2, female = 8), 15 (18.75%) were community people (male = 9, female = 6), 9 (11.25%) were local relevant stakeholders/organizations, and 3 (3.75%) were policymakers. The age of the persons with disabilities ranged from 14 to 65 years where the mean age was 38.86 years (SD= 13.53). On the other hand, among them, there were 21 with physical impairments, 5 with autism, 6 with visual impairments, 2 with psychosocial problems, 2 with speech impairment, 1 with hearing impairment, and 6 with multiple impairments. The majority (87%) of persons with disabilities were from low-income families and most of them (94%) relied entirely or partly on their family members for their daily livelihood. The main occupations of the community are fishing, seasonal agriculture, day labor, and honey collection from the Sundarbans forest. While the majority (82.40%) of persons with disabilities are Muslims, there is a small section (18.60%) who belong to Hinduism.

5.1. Persons with disabilities and Climate Change: Experience, Understanding, and Impacts

Bangladesh is no longer living in denial of the fact of climate change and is considered one of the most at-risk countries around the world. Over the past decade, Bangladesh has been hit hard frequently by the negative effects of climate change, such as cyclones, floods, tidal surges, tornadoes, river erosion, rising temperatures, excessive rainfall, and drought. However, the coastal areas of Bangladesh are more sensitive to the effects of climate change due to its geographical location. On the other hand, these natural catastrophes disproportionately affect individuals who reside in coastal areas, and the

persons with disabilities have an even greater disadvantage due to their limited mobility. In response to their experience of climate change, the vast majority of them (90%) said that climate change is not a new phenomenon for them, and that they have to deal with its effects every year. Everyone has some bitter experience with this in their life. In this regard, during focus group discussion, a 65 years-old men (person with disability) expressed his view as follows:

“We have nothing to lose, every year the new storm comes, every year we start from scratch, this cycle may continue until we die. Think of me, I lost my two children and wife in Cyclone Sidr. Likewise, everyone who is here has lost someone of his/her family”

It seems, as they continue to face these challenges year after year, these people have come to accept the consequences of climate change as usual. Our findings show that the majority (86.04%) of persons with disabilities have an understanding of the climate change-driven negative impacts, despite knowing the conventional or technical concept of climate change. They only understand climate change as "something" that negatively affects their lives and livelihoods. In this regard, 57 years-old men (person with disability) stated –

“I have a problem with my one eye, but, I am living a hard life by farming, however, this year, due to severe drought most of my land crops are destroyed forcing me to focus on other professions. I have never seen such a drought in my life. These problems have been recurring for a few years”

Another 43 years-old woman (caregiver) stated –

“My son has psychological problem. His father has also left us due to this reason. I have to work hard to run my family by farming. But for some years, farming is not going well. Now it is more difficult to grow crops than before”

Added to this, some of the participants also emphasized on rising temperatures, excessive rainfall, excessive salinity, and drought which eventually effects on their livelihood patterns. For instance, a 37 years-old men (community people) stated his thoughts as like:

“In the past, I would grow different vegetables throughout the year, taking advantage of each season's unique climate. However, now it only seems like there are two seasons per year, and I've had to give up vegetable farming in favor of finding alternate sources of income”

These findings are also compatible with prior studies (Alam, 2018, Ahmed, 2021, Kabir, 2016) that showed coastal people are fighting tooth and nail to regain their standard of living. Both person with disability and vulnerable communities' rely heavily on fishing and farming for subsistence. However, climate change-driven disasters (e.g. sea level rise, tropical cyclones, saltwater intrusion into coastal ecosystems, coastal flooding, etc.) caused a drastic drop in agricultural output on these lands, causing financial hardship, livelihood diversity, migration, and health issues for the local communities.

5.2. Persons with disabilities in the context of Climate Change Adaptation

We questioned participants (persons with disabilities) on their ability to adapt to climate change. Majority of them (59%) replied they are struggling to adapt but there is no other way. When we probed further into their adaptation strategies, they mentioned a number of different approaches, including adjusting their farming methods and ways of life, expanding their social networks, seeking assistance from governmental as well as NGOs, working with local NGOs and other community organizations, participating in training and awareness sessions, and so on. Even though persons with disabilities are trying to adapt with CCA, their rights have not been adequately considered in climate action, even at the multinational level. In this regard, a 41 years-old men (person with disability) stated his thoughts as like:

“Even though our best efforts, we are often unable to adapt owing to factors beyond our control, such as a nonexistent or inaccessible public road and transport system, widespread social denigration of people with disabilities, a lack of available employment, etc.”

5.3. Organizations and their Programs – What their Place and Scope on Disability and Climate Change Issues

A short organization survey was carried out to provide support for the findings of the literature and to provide an accurate representation of the scope of the work that has been accomplished up to this point so far. The findings from the literature review, in addition to those from earlier surveys developed by the IDS at the University of Sussex, served as the basis for the survey instrument. The purpose of this survey was to evaluate the current state of disability-inclusive climate change and resilience programming; the emphasis, if any, that organizations are placing on disability issues; and the mechanisms that are in place for including persons with disabilities. A total 5 organizations based in Sharankhola were surveyed implementing projects focused on disability, DRR or humanitarian response. Most of the respondents were in senior management, managerial roles or had been with the organizations for 5 years at-least.

Respondents were asked if their organizations had departments or focal points designated for disability or climate change. Most of the local organizations (60%) at Sharankhola revealed that they don't have department/focal points focused disability issues (see Figure 4). The majority of respondents (60%) stated that their organization has a focal point/department working on climate change and environmental issues (see Figure 5). Nevertheless, the study merely demonstrates the existence of various focal points; it does not indicate the degree to which they collaborate with one another.

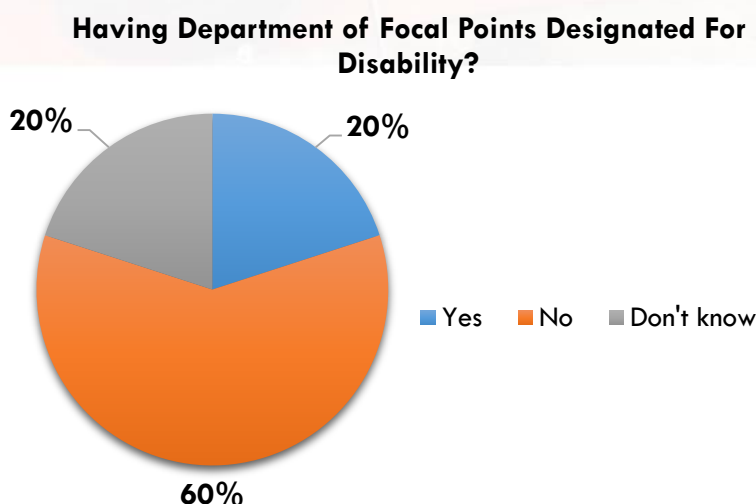


Figure 4. Departments or focal points designated for disability

Having Focal Points Designated For Climate Change?

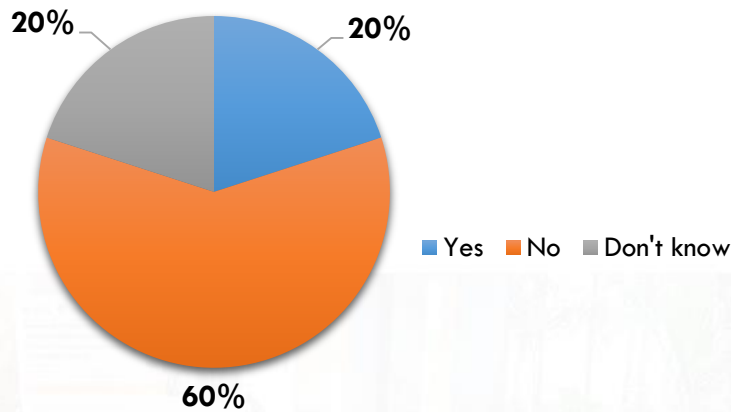


Figure 5. Departments or focal points designated for climate change

Most of respondents (80%) reported that people with disabilities were not significantly included in their climate change focused projects and programs. Of these, only 20% of respondent’s organizations always endeavor to include the persons with disabilities but it merely depends on the scope, situation and nature of the projects and activities (see Figure 6).

Status Of Inclusion Of Persons with Disabilities In Climate Focused Works

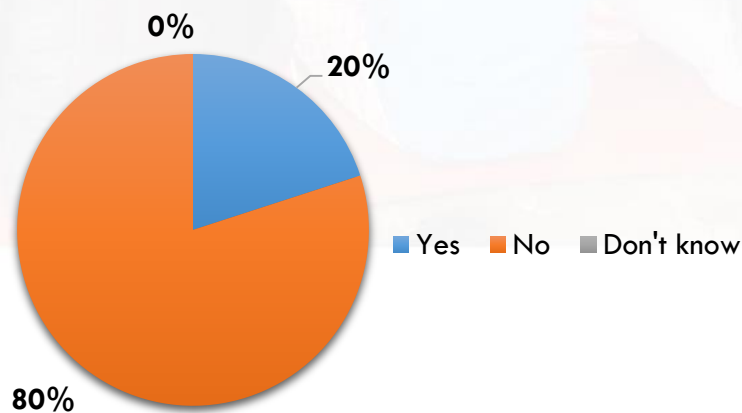


Figure 6. Inclusion of persons with disabilities in climate focused works

In this connection, we tried to explore their ranking of vulnerable populations to understand their importance on disability. One question asked the respondents to pick from a list the people they thought were the most vulnerable in communities affected by climate change.

It noted that women were by far the most likely to be selected as the ‘number one’ vulnerable population among all respondents. Children were the second most likely ‘vulnerable’ population to be selected. As per their statement, they ranked this based on their experience, socio-economic and cultural matters, the scope of the works and future prospects of projects (see Figure 7).

Most vulnerable population

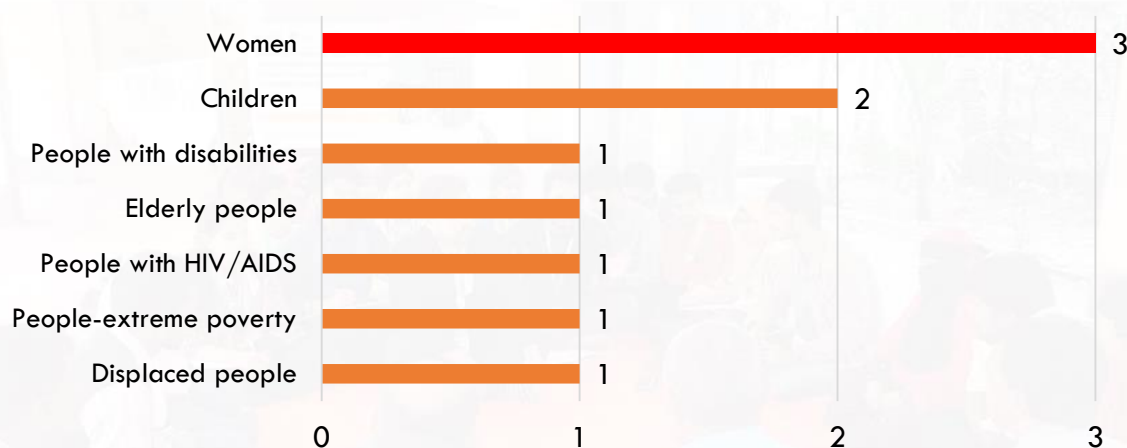


Figure 7. Most vulnerable population

In linking of these, most of participants stated –

“We always talk about society but before that there is a need for mainstream our own organizations first to have fully inclusive approaches to climate change. Actually, we have to strengthen our knowledge, capacity and leadership to become climate change advocates and encourage other partners and stakeholders to also become involved in disability and climate change advocacy. The full inclusion of persons with disabilities and of the organizations representing persons with disabilities in the design, implementation and evaluations of programmatic and advocacy strategies is critical so that disability-inclusive approaches do not become relegated to the margins in programmes responding to climate change”.

Added to this, some of the participants also gave emphasis on the awareness of persons with disabilities

on the climate change issues so that they will have clear understanding what they need and to advocate themselves.

“Finding persons with disabilities working on climate change, our organization working on climate change is a major challenge. It’s a scientific area but finding persons with disabilities that are active and knowledgeable on climate change is difficult so we also have to work on this so that we can make person with disability an agent of change for advocating themselves independently both climate change and disability issues which will drive a sustainable future for them”

In terms of how organizations are dealing with climate change at the institutional level, all of the informants pointed out that organizations and their leaders have different levels of awareness about climate change and different ideas about how to deal with it.

“I believe our organization still requires more knowledge and expertise. Some of the staff attended training but I believe there is still a need to understand how to implement it into our practices at field. We must continue to work on taking responsibility and becoming more aware”

We inquired about national policies, priorities, and the inclusion of the disability. Concerningly, almost all respondents were aware of the country's disability policies, but they were unaware of whether or not they are effective and how they include people with disabilities in their programs. The respondents were then asked to evaluate the priority of disability in the national climate change policies. Most the respondents reported that country's climate change policies, priorities and inclusion of persons with disabilities are from limited extent to moderate level. Only few respondents believed that it has significant position of the priority of disability in the national climate change, programs and working strategies (see Figure 8).

Disability Is A Priority Area In The Climate Change Policy

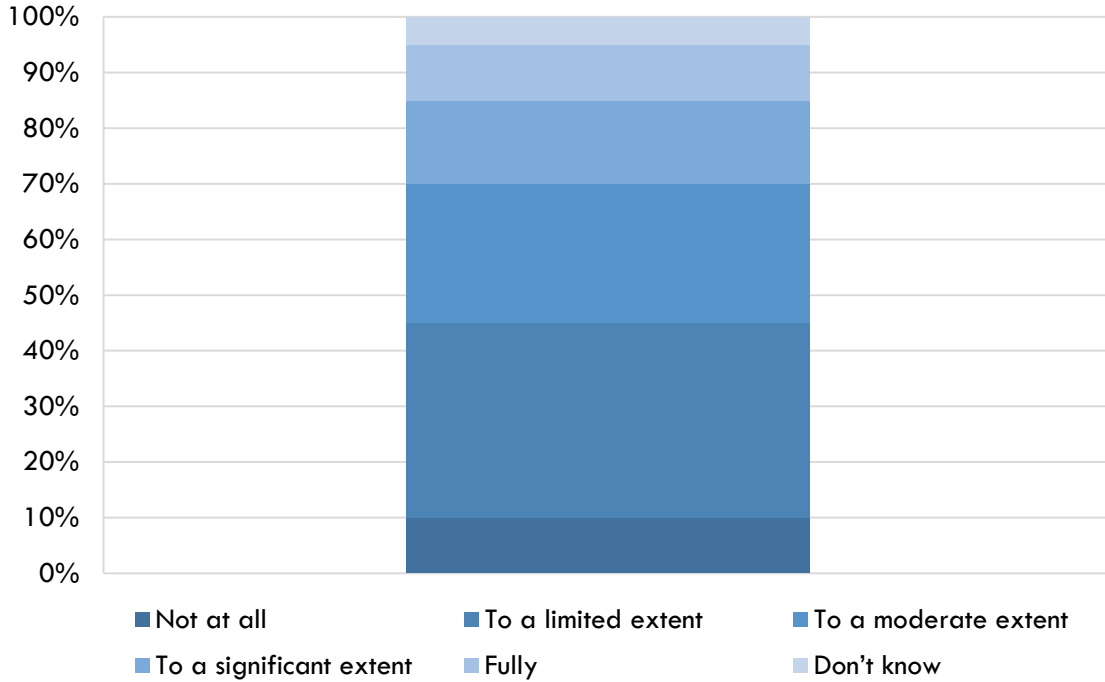


Figure 8. Disability Is A Priority Area In The Climate Change Policy

Then respondents were questioned regarding whether national climate change or SDGs policies included disability-specific targets. Worryingly, a significant number of respondents didn't have idea about disability targets are included in climate/ SDGs policies of Bangladesh (see Figure 9).

Disability-specific Targets In The National Climate Change/SDGs Policies

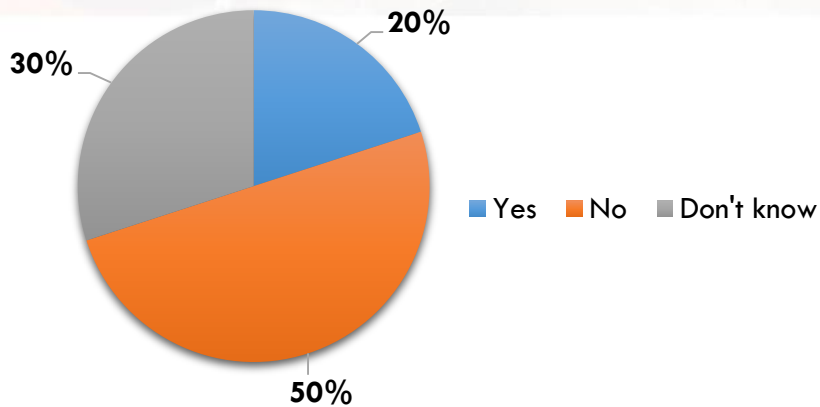


Figure 9. Disability-specific Targets In The National Climate Change/SDGs Policies

The next question that was put to the respondents was on the degree to which they believed that people with disabilities were represented in the process of formulating and implementing policies pertaining to climate resilience and justice. Almost half of the respondent specified that people with disabilities were not represented at all (20%) or only to a limited extent (40%). A third of respondents (15%) did not know the level of representation of people with disabilities in policy-making and implementation (see Figure 10).

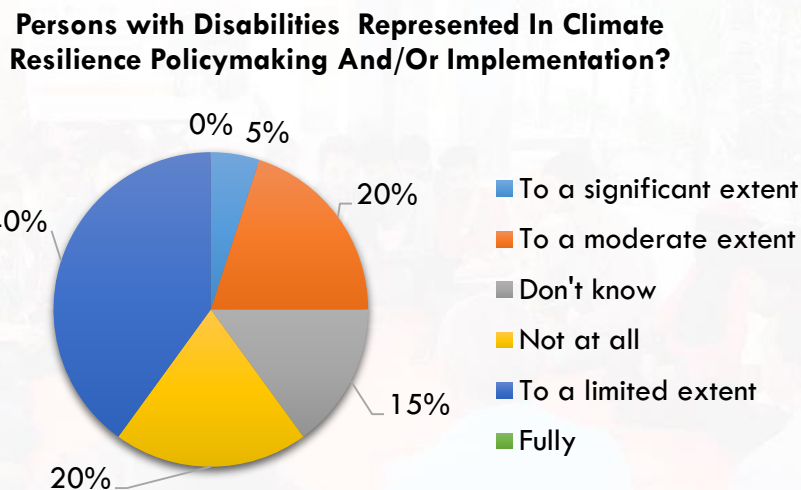


Figure 10. Representation of persons with disabilities in climate resilience policymaking and/or implementation

The most important challenge for governments at the national level is to make sure that all of their programs and policies are implemented and coordinated in a way that is effective and efficient at both the local and national levels ensuring a robust approach to disability- inclusive approaches by governments across all of these policies. The very first step is to make sure that people with disabilities are included and visible in climate change plans and policies. All informants reported how invisibility from policies does not mean exclusion, but it also does not mean inclusion!

“People with disabilities are not included in our climate change plans, programs, and policies, but people with disabilities are also not left out. So, whatever policies Bangladesh has about climate change, they do take people with disabilities into account. In plans for climate change, there are no specific actions for the inclusion of people with disabilities”.

It is important to note that almost all key informants noted that policy makers should have to understand the context, situation and locality while formulating policies and plans. Most of the population with disabilities dwells at rural areas so they have different needs, difference in facilities and other socio-economic and cultural matters.

“The knowledge, capacity and expertise must be enhanced for the policy makers. Policy makers should have to understand the context of locality i.e. urban and rural. Most of the persons with disabilities reside in rural areas so policy makers should propose appropriate plans which will be compatible with rural context. We want to see the change and it must be started from local level. We should change our approach and it should be ‘development from the bottom.’”

Finally, we inquired about the kind of assistance that would be most beneficial in terms of mainstreaming disability in the work they carry out about climate change. Access to the best practice was highlighted (32%), along with cross-learning visits (20%) to more effective contacts with local and national focal points. Increased knowledge-sharing among respondents (15%) was also raised as key for improving mainstreaming across their organizations (see Figure 11).

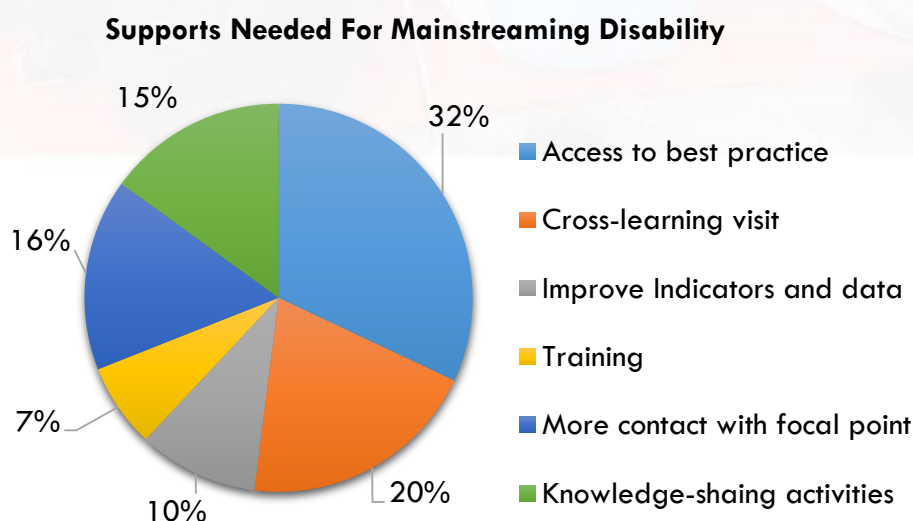


Figure 11. Supports Needed For Mainstreaming Disability

In this way of mainstreaming disability, most of informants echoed the following –

“We acknowledge the importance of climate change and its impact on the lives of people with disabilities. But in reality we don’t have capacity and expertise to develop and formulate appropriate and innovative tools, approaches and methods to design advocacy programs and activities. Accordingly, we must have supports to strengthen our capacity, knowledge and expertise to push the policy processes in term of inclusion of disability and its right in climate change plans, programs and policies”.

5.4. Is Cinderella missing the Slippers? – Exploring the Real Right Deal of Persons with Disabilities

As per the Government defined categories of disability, among the people of Bangladesh 2.80% have at least one disability, this is 3.29% among male and 2.34% among female population and 2.92% in rural area and 2.45% in urban area. The disability community is diverse, including those with physical, sensory, cognitive, and psychological conditions, as well as chronic health conditions (Daily Industry, 2022).

The Intergovernmental Panel on Climate Change (2022) identifies that across sectors and regions the most vulnerable people and systems are observed to be disproportionately affected. In July 2020, the United Nations Human Rights Council adopted a historic resolution (A/HRC/RES/41/21) on climate change and the rights of persons with disabilities. This resolution calls on governments to adopt a disability-inclusive approach to addressing climate change (United Nations Human Rights Council, 2019). This was the first time the council directly addressed the rights of persons with disabilities in relation to climate change (OHCHR, 2022).

While women, Indigenous peoples, and youths have successfully become part of discussions around climate action, persons with disabilities have largely been absent. As a related consequence, disability has not been highlighted in climate change policy. However, the IPCC states the following with clear relevance to persons with disabilities: ‘Persons who are socially, economically, culturally, politically, institutionally, or otherwise

marginalized are especially vulnerable to climate change and also to some adaptation and mitigation responses'. According to Wolbring (2009), climate change will cause increasing hardship and likely deteriorate the quality of life and wellbeing for persons with disabilities and other marginalized groups. The ability to adapt to the available livelihood opportunities, and maintain resilience, is all expected to decline (UN Department of Economic and Social Affairs, 2019).

In the light of the thoughts discussed above, we conducted 5 FGDs with persons with disabilities to explore and understand their resilience, positions in the policies, programs and practices and where the resilience of people with disabilities to climate risk had been enhanced by these interventions.

People who have disabilities confront a number of obstacles, one of the most significant of which is the widespread poverty in Sharankhola in Bagerhat. The participants stressed that the most big hurdle they face is earning sufficient incomes, while natural calamities only occur on occasion. It is tough to maintain one's livelihood when hazards are there. Participants noted that people with disabilities have less opportunities to find employment as a result of discriminatory attitudes, which has the impact of making people with disabilities even more vulnerable. All participants reported –

"We are unemployed, heavily reliant on family members, heavily dependent on social safety schemes from the government. Both governmental and NGOs are advocating for the rights of persons with disabilities. We are suffering; we are dawning to lacking of having basic necessities. Stomach first! They should work on poverty first and then look at what access they have to recover us from the impacts of disaster and then climate change".

It is important to note that in order for people with disabilities and their families to participate in the community's climate adaptation strategies and to have access to social safety programs; the knowledge and skills are vital to feel ready and prepared for disruptions brought on by climate change. The majority of participants voiced concerns about lacking confidence in their ability to feel ready and prepared to deal with climate change disruptions and contribute to the climate change policies, plans and programs.

Only a few number of participants identified themselves as knowledgeable and capable, while the rest either did not respond or were unable to provide an answer. We learned in the field from the study participants that the most successful and sustainable ways to addressing the risks posed by climate change, natural disasters, and poverty are interconnected; hence, efforts to address and build resilience to these risks should be integrated and, most importantly, inclusive. The rights of persons with disabilities must be incorporated into mainstream CCA, DRR, and poverty alleviation initiatives for climate change adaptation plans and policies to be realized. Effective participation, engagement, and empowerment of people with disabilities and other at-risk individuals will determine their ultimate success. To ensure the systematic inclusion of people with disabilities in programmes and policies, and to enable people with disabilities to play an active and leading role in climate change adaptation, disaster risk reduction, and poverty alleviation, we need inclusive, integrated approaches to address climate change, disasters, and poverty.

Though, many of the persons with disabilities get unconditional and non-contributory monthly cash transfer support provided by Government of Bangladesh for addressing the issues of poverty and disabilities, this amount is extremely small compared to the need. On the other hand, the vast majority of participants mentioned that ineligible candidates, rather than eligible candidates, often receive government subsidies for partisan reasons. Those who are able to assist local leaders at meetings, marches, and political conventions have an advantage over those who cannot (especially persons with disabilities). In this regard, all most all participants stated –

“In most cases the public representatives give more priority to their own relatives and political activist thereby depriving us of fair dues. The VGD (Vulnerable Group Development Social Safety Net Program) is broadly for the extreme poor but we cannot access to this smoothly. People with political links always get preference and priority. We must have to have skills of lobbying to attain our rights”

Persons with disabilities are more likely to live in poverty than persons without disabilities due to barriers in society such as discrimination, limited access to education and

employment and lack of inclusion in livelihood and other social programmes. National data on income poverty disaggregated by disability remain scarce, but available data show that the proportion of persons with disabilities living under the national or international poverty line is higher (GPDD and World Bank, 2009). To deal with the poverty and disabilities, different measures are taken by government and NGOs such as cash money, groceries and reliefs at the local study area. Interestingly, some of the persons with disabilities voiced –

“We are often provided some rice, groceries and different relief materials, they are of course doing well for us but believe us it takes our self respect to take these all the time. Don’t want to get hands on, it makes us depended to some extents. We don’t want to look for this when it will come, we don’t want to be burden of the society. We want something long-run from them by making us self-reliant and leading our lives in more dignified ways”.

This statement fascinated the study team to give a deep dive in the discussion. Most of the persons with disabilities participants stated –

“We got a lot of training on farming such as livestock rearing, homestead vegetable gardening and so on. We see these are not going to work for the long-run and many of our peers couldn’t sustain it. We want need basis trainings for our livelihoods which will match with our talents and special capabilities. These organizations making us worriers but leave us without equipment”!

Added to this, some female persons with disabilities participants raised their voice –

“Men with disabilities can also perform different jobs and can be productive but this is not always suitable for women with disabilities. So gender specific livelihoods are mandatory. Organizations should be case-sensitive while designing projects”.

Inclusion of persons with disabilities is very important and often heard in the local study area. All the participants echoed same voices following –

“Please don’t make us a subject for any development interventions. You people want to empower us, then call us in the table. Inclusion should come up with building our capacities in our ways! We are resilient by born by encountering immense hurdles till today, now make us empowered by giving appropriate tools and resources so that we would be able to sustain in our lives and contribute to our families, society and the country”

5.5. Not meaning Exclusion BUT does it signify Inclusion? – Finding it in the Viewpoints of Policy Makers

A very significant number of persons with disabilities are impacted by climate change, but they are not included in key conversations and actions on climate. The latest report from the Intergovernmental Panel on Climate Change highlights that approximately 3.3 to 3.6 billion people, which amounts to over half the world’s population, live in contexts that are highly vulnerable to climate change. Persons with disabilities are among these affected populations, but they are not visible in national climate adaptation plans and policies. Despite international recognition of the greater vulnerability of persons with disabilities to climate change, disability issues have received little attention from policy makers in this field (Stough, L. M et al., 2019). As Bangladesh move forward with measures to combat climate change and adapt to its impacts, it is critical to understand how these efforts can be designed and implemented in ways that can respect, protect, and fulfill the human rights of disabled persons.

To comprehend this in better ways, we conducted a rapid content analysis with a short review of 4 selected acts/policies which are mostly related to climate change.

- Bangladesh Climate Change Strategy and Action Plan 2009
- National Adaptation Programme of Action (NAPA), 2005
- Climate Change and Gender Action Plan, 2013
- Standing Order on Disasters, 2010

We found that there are some areas of acts/policies mentioned above where disability issues put it mildly but there are no clear actions/directions found that specifically target

people with disabilities. Because of this, the needs and requirements of disabled communities to adapt to climate change are often overlooked. When reviewing policies, one of the other issues that came to light was the tendency to include issues of disability and people with disabilities under the category of 'vulnerable people,' which is often dominated by issues pertaining to gender, women and children. This is an issue that needs to be addressed. For instance, in Bangladesh Climate Change Strategy and Action Plan 2009 states in following ways (see BOX: A)

BOX: A

This programme aims to establish link between gender consideration for their appropriate in cooperation in all adaptation, mitigation strategies, and component programme T6P2 (mainstreaming climate change in national, sectoral and spatial development programmes). However, to pay special attention to gender issues as well as the consideration of disadvantage communities this component has been proposed

Women have a special role in management of natural disaster as risk and vulnerability will increase in future climate change scenarios. At disaster management practices should pay attention to gender consideration.

It is recognized that women in rural communities pay a major role in food grain production including conservation of traditional varieties of seed and other post harvesting operations etc.

It is also recognized the women have major role in natural resource management, especially in management of biodiversity and forestry. Thus REDD has significant for gender consideration.

Consequently, many initiatives are developed with distinctive features taking gender into account yet fail to account for people with disabilities.

Some insight into this was gleaned from while talked to the government officials working in the climate change and environment sector; they highlighted the fact that sectors are still working in compartmentalized ways when it comes to climate change and disability, and that capacity and awareness about disability issues is still missing in many departments. Instead of including disability into their own work plans, they usually refer

the issues of disability to the Ministry of Social Welfare. This void means that no strategies have been developed for implementation, monitoring, or reparation or reappropriation. It is important to note that the policies have a propensity to refer to people with disabilities as part of a more general category of 'vulnerable population', rather than particularly addressing their need. Even though people with disabilities are spotted in policies, there is limited evidence of approaches to implement plans for effective inclusion (systemic access), monitoring, or recourse if policies are not implemented. This is one of the major impediments. Without measures, it will be difficult to determine if policy objectives are being met meaningfully and realistically. To shed the light, one of the key informants revealed that –

“In our annual planning and setting strategies of works, sometimes disability issues come to our agenda and to address this and take measures; usually we transfer this to Social Welfare Department or other concerned units. Actually, we don't have that much of knowledge, capacity and expertise to work in these issues and of course it is not our mission/ agenda of our works”

In addition to capacity and awareness, a key informant emphasized the difficulty of translating climate policy into action, in particular the need for education and training.

“It may look wonderful on pen and paper, but when it comes to implementation, the majority of policies require effective strategies in order to be effectively implemented. This is the point at which the issue arises. When it comes to putting their capabilities into practice, they will require money, training, and expertise, among other things. In this regard, I believe there are a lot of loopholes in the country. Sadly, a substantial amount of help is required for that kind of training. Nothing significant is happening on the local level. In my opinion, the government really does need to exert greater effort. I feel pressing only policies don't help”

Access to information and resources is a very important activity for persons with disabilities to empower themselves and live independently and fully participate in the society.

However, we find it difficult for those people, particularly people with disabilities to obtain information and resources in accessible and understandable ways. In order to ensure that they will have access to information, what sort of policies or supports are necessary for those people? We asked this question to a key informant, he said –

“We make an effort to provide resources, but I have the feeling that one of the major issues is that there is no discussion on how much of those resources they can actually access. In most cases, the providing of the facilities is the sole point of emphasis; the manner in which people with disabilities utilize these facilities is frequently neglected. Regarding this topic, there should be deeper conversation”

At local level, we explore a significant number of committees formed to ensure participation of persons with disabilities but how effective these are, we asked a local government officials. He pointed out -

“We have a disaster management committee whose members attend meetings once they are alerted of an impending disaster, but the committee does not operate effectively. There are no meetings intended to mitigate risks, losses, and damages from future calamities. The group has only held a handful of meetings to date. The usual is one meeting every three to four months. We just invite those with disabilities to the table to meet the procedure's requirements. They are always silent during meetings; they must speak up”

Research and quality data is vital for identifying the challenges and solutions that can improve the lives of people with disabilities. If people with disabilities are excluded from data, then governments can't make policies which address their needs. Added to this, one of the key informant reported -

“Donor agencies have to start finding organizations working on climate change who have know-how with disability issues, but also need to build the knowledge and capacity of DPOs [disabled people’s organizations] to work on climate change aligned with disability issues. They should work with academia first to understand the local context, challenges and social dynamics of persons with disabilities facing, potential way forward at sound and scientific directions. This is a must job for donors. Then it comes to the development projects. Still, we don’t have good and concrete findings what would be the most suitable livelihoods of persons with disabilities at different localities. Investment in research and is very important - we need more studies and action researches that raise up ground level issues to inform priorities and activities”.

CHAPTER 6

KEY PRIORITIES AND RECOMMENDATIONS

Towards way forward for an inclusive sustainable future:

6.1. Government and other Humanitarian actors

- Ensure the meaningful, informed, and effective participation of persons with disabilities through their representative organizations in climate policy-making and decision-making processes.
- Ensure that the rights of persons with disabilities are respected, protected, and fulfilled in the design, development, implementation, monitoring, and evaluation of all climate mitigation and adaptation policies.
- It is crucial to gather data about the real number of persons with disabilities living in the area, and not relying solely on birth registers to determine their distribution strategies.
- Include persons with disabilities in the monitoring and evaluation of strategies and policies to address the interactions of climate change, environmental degradation, and poverty.
- Ensure that concrete measures are taken to implement Bangladesh's existing adaptation and mitigation policies that mention persons with disabilities, but which are currently not enforced accordingly. Set up mechanisms for systemic consultation and inclusion in decision-making processes regarding adaptation efforts and emergency response.
- Policies must be effectively implemented and coordinated at national and local levels to ensure coherency regarding disability inclusive approaches.

- Ensure that the concept of pre-conditions to inclusion of persons with disabilities is embedded in climate mitigation and adaptation policies and programs. Pre-conditions to inclusion have six themes: accessibility, assistive devices, support services, social protection, community-based rehabilitation, and non-discrimination.
- Provide tailor-made climate change adaptation strategies for persons with disability.
- Strengthen national information systems, data collection and use participatory – and disability inclusive – vulnerability and capacity assessments to collate information on people with disabilities to identify existing risks.
- Several laws, policies, plans, program implementation guidelines of several ministries & departments need to be revisited, amended, updated and reformed to duly address inclusion from a human rights and climate justice perspective.
- Bring together different government departments to have a coordinated and holistic focus, involving persons with disabilities centrally in this process.
- Meaningful integration of persons with disabilities in climate-related education, training, public awareness, public participation, and international cooperation in the context of the review of the Doha work programme and Action for Climate Empowerment (decision to be adopted at UNFCCC COP-26 in Glasgow).

6.2. Organizations working on disability, environmental and climate issues

- DPOs should engage more in climate change advocacy and policy development activities. There is a need for more clarity on good practices and effective leadership of inclusive climate change actions.
- Communication of existing good practices needs to be enhanced and shared among DPOs and mainstream organizations.

- Consider differences in implementation levels between urban and rural areas exist.
- Social movements on climate action need to be inclusive and include the perspectives of persons with disabilities and their representative organizations.
- Develop a transformative rights-based view and framework that explicitly connects climate justice to the rights of persons with disabilities.
- Ensure a coordinated, sustainable and disability inclusive approach to the development challenges posed by poverty, environmental hazards and the impacts of climate change.
- Livelihoods must be understood as a multi-faceted issue. It needs to be addressed as an issue interconnected with different social and economic variables that should be gender sensitive, need and talent based of the persons with disabilities.
- Apply the philosophy of independent living, based on the social model of disability and model of entrepreneurship, developed by persons with disabilities as the principle underpinning future disability policy and practice.
- Persons with disabilities need to be included in discussions about transitions to greener economies; their involvement will assure more inclusive economies. Getting involved in the decision-making process can transform markets, making them more representative of persons with disabilities and their needs.
- More research on climate-disability issues is needed.
- Develop climate-related preparedness, adaptation, and mitigation strategies that not only address the current barriers and risks faced by persons with disabilities but also anticipate the emerging and future risks of climate change
- Experts at many levels need to engage in advocacy and networking. Climate change experts, disability and women experts, NGOs, state and national officials, and ground-level officials will all have to work together to incorporate women and persons with disability into climate change plan.

- Create learning and growing opportunities for persons with disabilities, including youth with disabilities to join the climate movement and play an active role
- Establish connections with climate actors and advocates for inclusivity and accessibility of climate action at different levels.
- Apply the following climate and environmental justice framework in decision-making and policymaking on climate and environmental change policies to ensure sustainable futures: a) Conduct research to gather the data on environmental change impact for disabled populations; b) Connect with disabled communities, advocates and researchers; c) Create equitable risk assessments for different timelines: Pre- climatic events, During climatic events; Post-climatic events
- Establish an Inclusive Futures Scheme, to build skills, voice and confidence of young disabled people on issues related to sustainable development, environmental degradation and climate change, which encourages the development of their problem solving, entrepreneurial and vocational skills in this area. This capacity building programme would put young persons with disabilities at the forefront of being agents of change on climate action in the society

6.3. Donors

- Provide funding and technical support for research and to strengthen the capacity of people with disabilities in the region to form organizations with a human rights and advocacy perspective, to meaningfully participate and influence policies and strategies for climate risk management.
- Donors should support climate groups to be truly transformational in their disability inclusive efforts
- Donors should target OPDs in their climate funding. Mobilize resources and target dedicated climate financing to enhance inclusion and participation of persons with disabilities in climate action, prioritizing projects lead by organizations of persons with disabilities

CHAPTER 07

PHOTOS FROM THE FILED





References

- Abir, T.M., Xu, X., 2019. Assessing the Factors Influencing Migration Decision of Climate Refugees in Coastal Areas of Bangladesh. *American Journal of Climate Change* 8, 190–204.
<https://doi.org/10.4236/ajcc.2019.82011>
- Agrawala, S., Ota, T., Ahmed, A.U., Smith, J., A., van Alast, M., 2019. Development and Climate Change in Bangladesh: focus on coastal flooding and the Sundarbans. *Organisation for Economic Co-operation and Development-OECD* 1–70.
- Ahsan, R., Kellett, J., Karuppanan, S., 2014. Climate Induced Migration: Lessons from Bangladesh. *The International Journal of Climate Change: Impacts and Responses* 5, 1–15.
<https://doi.org/10.18848/1835-7156/CGP/v05i02/37204>
- Ahmed, S., & Eklund, E. (2021). Climate change impacts in coastal Bangladesh: Migration, gender and environmental injustice. *Asian Affairs*, 52(1), 155–174.
<https://doi.org/10.1080/03068374.2021.1880213>
- Ahmed, S., Saha, J. and Tamal, M.A. (2022) "Effectiveness of need-based teacher's training program to enhance online teaching quality," *Education Research International*, 2022, pp. 1–13. Available at: <https://doi.org/10.1155/2022/4118267>.
- Al-Rousan, T. M., L. M. Rubenstein, and R. B. Wallace, 2014: Preparedness for natural disasters among older US adults: A nationwide survey. *Amer. J. Public Health*, 104, 506–511, doi:10.2105/AJPH.2013.30155
- Alam, E., Momtaz, S., Uddin, H. B., & Baby, N. S. 2018. Climate Change Impacts on the Coastal Zones of Bangladesh: Perspectives on Tropical Cyclones, Sea Level Rise and Social Vulnerability. In *Bangladesh I: Climate Change Impacts, Mitigation, and Adaptation in Developing Countries* (pp. 145-166). Springer Climate.
- Banks, L. M., H. Kuper and S. Polack. 2017. Poverty and disability in low- and middle-income countries: A systematic review. *PLoS ONE* 12(12): e0189996.
- Bangladesh Bureau of Statistics. (2015). *Statistical Year Book of Bangladesh 2015*. Bangladesh Bureau of Statistics, Ministry of Planning, Government of the People's Republic of Bangladesh, Dhaka, Bangladesh.
- Bangladesh Climate Change Strategy and Action Plan, 2009 (2009). Dhaka: Ministry of Environment and Forests, Govt. of the People's Republic of Bangladesh.
- Bahauddin, K.M., Iftakhar, N., Uddin, M.H., 2015. Climate-Induced Migration in Bangladesh : Assessing the Current Situation, Gap of Government Responses and Way forward with Policy Implications 1–6. <https://doi.org/10.1086/302219>
- Boateng, G.O. et al. (2018) "Best practices for developing and validating scales for health, social, and Behavioral Research: A Primer," *Frontiers in Public Health*, 6. Available at: <https://doi.org/10.3389/fpubh.2018.00149>.
- Center for International Environmental Law. 2019. *The Rights of Persons with Disabilities in the Context of the UN Framework Convention on Climate Change*. CIEL: Washington DC.
- Department for International Development . 2000. *Disability, Poverty and Development*. DFID: London.
- Dailyindustry (2022) 2.8PC of total population have disabilities: BBS, The Daily Industry. The Daily Industry. Available at: <https://dailyindustry.news/2-8pc-of-total-population-have-disabilities-bbs/> (Accessed: January 4, 2023).
- Fenney Salkeld D. 2016. Sustainable lifestyles for all? Disability equality, sustainability and the limitations of current UK policy. *Disabil Soc.* doi:10.1080/09687599.2016.1182011

- GPDD and World Bank, 2009: The impact of climate change on people with disabilities. Rep. of the e-discussion hosted by the Global Partnership for Disability & Development (GPDD) and the World Bank (Human Development Network—Social Protection/Disability & Development Team), pp.44
- Government of Bangladesh. 2015. Rights & Protection of Persons with Disabilities Act 2013. Ministry of Social Welfare, Government of the People's Republic of Bangladesh, Dhaka, Bangladesh.
- Haynes, S.N., Richard, D.C. and Kubany, E.S. (1995) "Content validity in psychological assessment: A functional approach to concepts and methods.," *Psychological Assessment*, 7(3), pp. 238–247. Available at: <https://doi.org/10.1037/1040-3590.7.3.238>.
- Islam, S. M. 2018. Sea Level Change In Bangladesh: The Last Ten Thousand Years. Dhaka: Asiatic Society of Bangladesh. pp. 7-8, 13.
- Islam, M. S. 2015. Deficiency of disability issue in disaster risk reduction strategy: implications on human security and social cohesion. In *Land and Disaster Management Strategies in Asia* (pp. 111- 119). Springer, New Delhi.
- Kabir, R., Khan, H.T.A., Ball, E., Caldwell, K., 2016. Climate Change Impact: The Experience of the Coastal Areas of Bangladesh Affected by Cyclones Sidr and Aila. *Journal of Environmental and Public Health* 2016. <https://doi.org/10.1155/2016/9654753>
- Kett, M., Twigg, J. 2017. Disability and disasters: towards an inclusive approach. *World Disasters Report 2007: Focus on Discrimination*. Geneva: IFRC, pp. 87-109
- Leong, G., 2020. The Impacts of Climate Change on Persons with Disabilities: An Interdisciplinary Approach to Disability, Climate Change and Policy Studies. *Pacific Rim International Conference on Disability and Diversity Conference Proceedings*. Center on Disability Studies, University of Hawai'i at Mānoa. 0– 17.
- Minar, M.H., Hossain, M.B., Shamsuddin, M.D., 2019. Climate Change and Coastal Zone of Bangladesh: Vulnerability, Resilience and Adaptability. *Middle-East Journal of Scientific Research* 12, 114–120. <https://doi.org/10.5829/idosi.mejsr.2013.13.1.64121>
- Mitra, S., Palmer, M., Kim, H., Mont, D., Groce, N. 2017. Extra costs of living with a disability: A review and agenda for research. *Disability and Health Journal* 10(4):475-484
- MoEF. 2019. Bangladesh Climate Change Strategy and Action Plan 2009. Ministry of Environment and Forests, Government of the People's Republic of Bangladesh, Dhaka, Bangladesh.
- Nossal Institute Partnership for Disability Inclusive Development, 2017, *Disability Inclusion in Disaster Risk Reduction: Experiences of People with Disabilities in Vanuatu during and after Tropical Cyclone Pam and Recommendations for Humanitarian Agencies*. 2017.
- OHCHR , The impacts of climate change on the effective enjoyment of human rights (no date). Available at: <https://www.ohchr.org/en/climate-change/impacts-climate-change-effective-enjoyment-human-rights> (Accessed: January 4, 2023).
- Siddik, M. A., Moniruzzaman, M. and Akhtar, M. P. 2019. 'Disaster Impact and Recovery Initiatives of Water Supply and Sanitation System A Case on Cyclone Sidr', *Journal of Science and Technology*, 4(1), pp. 143–155. UNICEF. 2019. Bangladesh Country Programme Document 2012-2016. New York: United Nations. Retrieved 21 December 2022, from https://www.unicef.org/about/execboard/files/Bangladesh_fin_al_approved_2012-2016_20_Oct_2011_.pdf
- Smith, F., Simard, M., Twigg, J., Cole, E., and Kett, M. 2017. Disability and Climate Resilience: A literature review. Leonard Cheshire Research Centre: London. URL: https://www.ucl.ac.uk/iehc/research/epidemiology-public-health/research/leonard-cheshire-research/research/publications/documents/2017/Disability_and_Climate_Resilience_Lit_review.pdf

- Stough, L. .M. and Kang, D. 2015. The Sendai Framework for Disaster Risk Reduction and Persons with Disabilities, *Int J Disaster Risk Sci* (2015) 6: 140. doi:10.1007/s13753-015-0051-8
- Stough, L. M., A. N. Sharp, C. Decker, and N. Wilker, 2019: Disaster case management and individuals with disabilities. *Rehabil. Psychol.*, 55, 211–220, doi:10.1037/a0020079.
- Rapp, R. 2012. 'Anthropology and the study of disability worlds'. In MC Inhorn and Wentzell EA (eds) *Medical Anthropology at the Intersections: Histories, Activisms, and Futures*. London: Duke University Press
- Rahman, M. S., & Mallick, M. S. 2007. Community, disability and response to disaster mitigation in Bangladesh. Public Sphere Project.
URL:http://www.publicsphereproject.org/events/diac08/proceedings/16.Disaster_Mitigation.Rahman_and_Mallick.pdf
- The Disability Alliance on SDGs, Bangladesh. 2019. Sustainable Development Goals and Disability: A Baseline in Bangladesh. Dhaka: The Disability Alliance on SDGs, Bangladesh.
- Uddin, M. N., Islam, A. S., Bala, S. K., Islam, G. T., Adhikary, S., Saha, D., . . . Akter, R. 2019. Mapping of climate vulnerability of the coastal region of Bangladesh using principal component analysis. *Applied Geography*, 47-57.
- United Nations (UN). 2018. Enable – disability, natural disasters and emergency situations. New York: United Nations. Retrieved 27 December 2022, from <http://www.un.org/disabilities/default.asp?id=1546>
- UN Department of Economic and Social Affairs. (2019). *Disability and Development Report: Realizing the Sustainable Development Goals By, for and with Persons with Disabilities: 2018*. UN.
- YPSA. 2015. Accessibility and contemporary situation of persons with disabilities in eastern coastal belt of Bangladesh in relation to climate change and disaster management, Knowledge Management for Development Department, YPSA (Young Power in Social Action), Chittagong, Bangladesh.
- WHO/World Bank . 2019. *World Report on Disability*. Geneva: World Bank



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