

**A Critical Exploration of Existing Laws, Policies and Practices Pertaining to
Gender Vulnerability, Gender Mainstreaming and Disaster Management: A
Case Study of Bangladesh**

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A thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy

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Macquarie University

November 2019

Table of Contents

Table of Contents.....	ii
List of Tables.....	v
List of Figures	vi
Abstract	vii
Thesis Declaration	viii
Dedication.....	ix
Acknowledgements	x
List of Presentations	xiii
List of Abbreviations	xiv
Chapter 1: Introduction.....	1
1.1 Statement of the Problem: Gender Vulnerability and Natural Disaster Management	1
1.2 Scope of the Research.....	4
1.3 Rationale of the Research	5
1.4 Research Question	7
1.5 Terminology	8
1.5.1 Disaster	8
1.5.2 Disaster Management	8
1.5.3 Disaster Risk Governance	9
1.5.4 Disaster Risk Management.....	9
1.5.5 Gender	9
1.5.6 Gender Mainstreaming	9
1.5.7 Mitigation	10
1.5.8 Natural Hazard.....	10
1.5.9 Preparedness	10
1.5.10 Reconstruction.....	10
1.5.11 Recovery	10
1.5.12 Rehabilitation	11
1.5.13 Susceptibility	11
1.5.14 Resilience	11
1.5.15 Risk.....	11
1.5.16 Vulnerability.....	11
1.6 Literature Review	12
1.6.1 Studies Relating to the Nature of Women’s Vulnerabilities in Global Natural Hazards ..	14
1.6.2 Studies Relating to Women’s Vulnerability in Disasters in Bangladesh	15
1.6.3 Studies Relating to Women’s Vulnerability in Cyclones in Bangladesh.....	18
1.6.4 Studies Relating to Disaster Law and Policies Focusing on Women.....	20
1.6.5 Guidelines and Best Practice in the Relevant Field.....	22
1.7 Research Methods.....	24
1.7.1 Theoretical Framework	25
1.7.2 Empirical Method.....	25

1.7.3 Doctrinal Research	39
1.8 Structure of This Thesis.....	40
1.9 Conclusion	43
Chapter 2: Theoretical Framework.....	44
2.1 Introduction	44
2.2 Women and Vulnerability in Feminist Theory.....	45
2.2.1 Feminist Legal Theory, Equality and the Sameness–Difference Debate	47
2.2.2 The Vulnerable Subject and Disaster Vulnerability	49
2.2.3 Nussbaum’s Capability Approach	50
2.3 Understanding Women and Vulnerability During Disasters.....	54
2.4 Locating Women and Vulnerability in Disaster Management	58
2.5 Conclusion	60
Chapter 3: Dimensions and Causes of Women’s Vulnerability in Cyclones: Participants’ Concerns	62
3.1 Introduction	62
3.2 Overview of Data: Categorisation of Vulnerability and General Trends	62
3.3 Findings on Dimensions of Women’s Vulnerability: Consequences and Causes.....	67
3.3.1 Biological Dimension of Women’s Vulnerability.....	67
3.3.2 Economic Dimensions of Women’s Vulnerability.....	75
3.3.3 Socio-cultural Dimensions of Women’s Vulnerability	85
3.3.4 Political Dimension of Women’s Vulnerability	92
3.3.5 Organisational Dimension of Women’s Vulnerability.....	100
3.4 Summary of Empirical Findings.....	110
3.5 Conclusion	114
Chapter 4: Women’s Vulnerability and Disaster Laws, Orders, Policies and Programs in Bangladesh	116
4.1 Introduction	116
4.2 Development of the Disaster Management System: Concepts, Theories and Inclusion of Women.....	117
4.3 Legal and Policy Framework for Disaster Management: Considering Women’s Vulnerability	121
4.3.1 Disaster Management Act 2012	121
4.3.2 Standing Orders on Disaster 2010.....	122
4.3.3 National Disaster Management Policy 2015	130
4.4 Organisational Mechanism for Disaster Risk Management: Status of Gender Mainstreaming in Bangladesh.....	132
4.4.1 The Ministry of Disaster Management and Relief	133
4.4.2 The Ministry of Women and Children Affairs	137
4.4.3 Disaster Management Committees: Underrepresentation and Low Participation of Women	139
4.4.4 Cyclone Preparedness Program (CPP): Involving Women in Disaster Management.....	143
4.5 Conclusion	150
Chapter 5: International Initiatives and Women’s Vulnerability in Disasters	152
5.1 Introduction	152
5.2 Global Progress on Gender Mainstreaming in Disaster Risk Management: Concepts and Theories.....	153

5.3 International Legal Frameworks that Shape the Concepts of Women's Vulnerability in DRM	155
5.3.1 Universal Declaration of Human Rights	156
5.3.2 International Covenant on Civil and Political Rights 1966	156
5.3.3 International Covenant on Economic, Social and Cultural Rights 1966	157
5.3.4 Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW)	157
5.3.5 Sendai Framework for Disaster Risk Reduction 2015–2030	160
5.4 Conclusion	166
Chapter 6: Best Practice, Findings and Recommendations	168
6.1 Introduction	168
6.2 The Role of the State in Addressing Women's Vulnerability	169
6.2.1 Collate Further Information on Women's Vulnerabilities	170
6.2.2 Reorganise Regulatory Framework Considering Women's Vulnerabilities	170
6.2.3 Working with Other Organisations to Develop Best Practices	171
6.2.4 Form Partnerships with Businesses to Develop Women's Resilience	171
6.2.5 Emphasise the Importance of Implementation, Monitoring and Evaluation to Develop Operational Mechanisms.....	172
6.2.6 Coordinate the Responses of Government Departments at All Levels	172
6.3 Strategies for Addressing Women's Vulnerability.....	173
6.3.1 Strategies for Reducing Biological Dimensions of Women's Vulnerability	173
6.3.2 Strategies for Reducing Economic Dimensions of Women's Vulnerability	177
6.3.3 Strategies for Reducing Socio-cultural Dimensions of Vulnerability	184
6.3.4 Strategies for Reducing Political Dimensions of Women's Vulnerability.....	188
6.3.5 Strategies for Reducing the Organisational Dimension of Women's Vulnerability	191
6.5 Summary of Recommendations.....	198
Chapter 7: Conclusion	202
References.....	206
Appendices	226
Appendix 1.1: Major Cyclones in Bangladesh and Their Impact	226
Appendix 1.2: Disaster-related Acts, Policies, Plans, Rules and Guidelines	228
Appendix 1.3: Vulnerability Viewed from Various Disciplines	229
Appendix 1.4: Domain and Dimension of Gender and Exclusion in Bangladesh	230
Appendix 1.5: List of Major Categories of Participants	231
Appendix 1.6: Participant's Information.....	233
Appendix 1.7: Prompts for Interviews	238
Appendix 1.8: Map of Kalapara	241
Appendix 1.9: Map of Banshkhali.....	241
Appendix 2.1: Twelve Assumptions of Disaster Vulnerability Theory	243
Appendix 3.1: Codes for Participants.....	246
Appendix 3.2: Photographs from Kalapara	247
Appendix 4.1: Disaster Management Act, 2012.....	251
Appendix 4.2: National Women Development Policy 2011.....	281
Appendix 4.3: DMCs.....	313
Appendix 4.4: A List of Various Ministries, Divisions, Departments and Government Owned Corporation Related to Disaster Management.....	314

List of Tables

Table 2.1: Expanding and Applying the Capability Approach in the Context of Disaster Vulnerability of Women in Bangladesh	52
Table 3.1: Number of Participants Focusing on Various Dimensions of Vulnerability.....	64
Table 3.2: Various Sub-groups Focusing on Various Dimensions of Vulnerabilities	65
Table 3.3: Number of Participants Focused on Various Types and Causes of the Biological Dimension of Vulnerability	69
Table 3.4: Number of Participants Focused on Various Types and Causes of the Economic Dimension of Vulnerability	76
Table 3.5: Number of Participants Focused on Various Types and Causes of the Socio-cultural Dimension of Vulnerability	86
Table 3.6: Number of Participants Focused on Various Types and Causes of the Political Dimension of Vulnerability	94
Table 3.7: Number of Participants Focused on Various Types and Causes of the Organisational Dimension of Vulnerability	102
Table 3.8: Various Dimensions of Vulnerability and Most Frequently Identified Contributing Factors	111
Table 4.1: Number of Women Included in Various DMCs	141

List of Figures and Map

Figure 1.1: An overview of research method	25
Map 1.2: Tracks of cyclones over last 50 years and location of selected Upazila	27
Figure 1.3: Levels of administrative units	29
Figure 1.4: Sources of sampling	32
Figure 3.1: Five dimensions of vulnerability categorised based on empirical data	63
Figure 4.1: Notable disasters and impacts on disaster management	120
Figure 4.2: Humanitarian and social safety net programs run by MoDMR	135
Figure 4.4: Number of female volunteers in each CPP unit	147
Figure 6.1: National Disaster Management Council for women	197

Abstract

It has been recognized that the existing laws, policies and program of disaster risk reduction have failed to address adequately the differential impact of natural disasters on women. This research has explored the extent to which the vulnerabilities of women are addressed in the existing disaster risk reduction approach in Bangladesh. In doing so, it divides women's experiences in natural disasters into five broad categories and identifies how far these are reflected in the existing disaster-related regulatory framework in Bangladesh and international treaties, which influence the Government's interventions. Five broad categories (biological, economic, socio-cultural, political and organisational) were used to identify the most frequently mentioned causes of vulnerabilities. To develop a more practical approach, the biological dimension of women's vulnerability requires focusing more on increasing the self-consciousness of women, while the economic dimension of women's vulnerability is influenced by lack of access to economic resources, particularly access to the public domain and marketplaces. Ameliorating the political dimension of vulnerability requires focus on capacity building for women as decision makers and leaders at the household, community and national levels. Additionally, the socio-cultural dimension of vulnerability highlighted that the existing disaster management approach should stress changing the attitudes of the community to develop a more women-friendly environment. Finally, the organisational dimension of vulnerability involves developing a more gender-sensitive approach and the successful implementation of the existing gender-sensitive approach to disaster risk reduction. This thesis argues that understanding these dimensions is useful in reducing disaster impacts on women and ensuring gender equality. As these dimensions of vulnerabilities are based on pre-existing variables, which may vary from society to society and culture to culture, it is significant to understand these dimensions to choose better policy options. Moreover, these pre-existing variables are so ingrained and widespread that improving women's situation demands a deeper understanding and a multi-dimensional approach based on the multi-disciplines and multi-stakeholders involved.

Thesis Declaration

I certify that the work in this thesis entitled ‘A Critical Exploration of Existing Laws, Policy and Practice Pertaining to Gender Vulnerability, Gender Mainstreaming and Disaster Management: A Case Study of Bangladesh’ has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree to any other university or institution other than Macquarie University. This project received the ethical and scientific approval from Macquarie University on 22 December 2016 and its protocol number is 5201600747.

I also certify that the thesis is an original piece of research and it has been written by me. Any help and assistance that I have received in my research and the preparation of the thesis itself have been appropriately acknowledge.

Nadira Sultana (44743939)

November 2019

Dedication

This thesis is dedicated to the following 26 volunteers, who sacrificed their lives in cyclones to save others.

Sl. No.	Name of Volunteers	Name of <i>Upazila</i>	Year of Cyclone
1.	Nurul Absar	Chokoria	Gorky in 1991
2.	Yousuf Ali		
3.	Shamsul Alam		
4.	Abdul Mabud	Kutubdia	
5.	Nurul Huda		
6.	Mowlavi Mohammad		
7.	Jalal Ahmed	Ukiya	
8.	Badiul Alam		
9.	Fazal Ahmed	Moheskhali	
10.	Abu Bakkar Siddique	Sandwip	
11.	Abul Kashem		
12.	Khukurani Guha		
13.	Azim Uddin		
14.	Abul Kashem		
15.	Noor Uddin		
16.	Omar Farook	Hatiya	
17.	Nabir Uddin		
18.	Belal Uddin	Monpura	
19.	Rafiqul Islam		
20.	Abdur Rahim		
21.	Jahangir Alam	Galachipa	
22.	Mozahar Hossain		
23.	Surjalal Das	Sitakunda	Cyclone in 1997
24.	Asraf Hossain Khan	Sarankhola	Cyclone Sidr in 2007
25.	Mozammel Hossain	Motbaria	
26.	Taslima Begum	Barguna	

Acknowledgements

In the name of the Most Gracious and the Most Merciful. All praise to Allah, the lord, Almighty, god or the universe, the One who made this thesis possible. During the long period of my PhD candidature, there were institutions and persons who provided support, encouragement, understanding and wise counsel and who deserve recognition and my gratitude. Special appreciation goes to my supervisors, Dr Vijaya Nagarajan and Dr Shawkat Alam. Their constructive comments and recommendations throughout the research and the writing of the thesis enabled its completion.

I also acknowledge Macquarie University for financing me via the iMQRES (scholarships), conference and travel funds. Other than financial support, I received much support from teachers and staff who are gifted with tremendous professional excellence. My sincere thanks go to Dr Matalena Tafo, Dr Denise Meyerson, Professor, Macquarie Law School, Dr Sonya Willis, Lecturer, Macquarie Law School, Dr Fiona Miller, Senior Lecturer, Department of Geography and Planning, Dr Peter Rogers, Senior Lecturer, Department of Sociology, and Dr Jacqueline Mackaway. My heartfelt thanks to Dr Matalena Tafo for her endless support and encouragement, which enabled me to finish my project. They made my journey a special and memorable one.

My sincere thanks to Susan Fripp, and Melinda Stewart, Research Librarian of Macquarie University. Their timely responses helped to keep pace with this project. In addition, thanks to Eleanor McGhee and Debbie Loo from Macquarie Law School for their support in various administrative and relevant issues.

Among other institutions, I owe the ‘Women and gender in global perspectives program’ of the University of Illinois at Urbana-Champaign for allowing me to exchange my research experience with their students. My special thanks go to Dr Colleen Murphy, Professor of Law, Philosophy and Political Science, Dr Paolo Gardoni, Professor in the Department of Civil and Environmental Engineering, and Anita Kaiser, Assistant Director, Women and Gender in Global Perspectives Program, Illinois International Programs, University of Illinois at Urbana-Champaign for their support.

I owe great thanks to Janet McIntyre-Mills, Associate Professor, College of Business, Government and Law, Flinders University of South Australia, who taught me how to do research while I was at Flinders University. I also thank Salah Kutieleh, Associate Professor, and Dr Noore Alam Siddique, for their valuable advice.

Apart from universities, the Gender and Disaster Network placed a significant role. I am grateful to Pablo Suarez, Sinéad and Lucy Easthope from the Gender and Disaster Network for their support for providing references. In addition, for valuable comments on earlier drafts of my chapters, I am extremely grateful to Christine young, a wonderful Australian. I always find her a kind, generous and dedicated worker with a lot of rare qualities. I also want to thank Elite editing for doing the hard work for me.

I am also highly grateful to the Government of Bangladesh for allowing me to take leave, which gave me the chance to finish my study. I believe my study will benefit the country, as it has benefited me. During my data collection, the relevant Government and non-government bodies made significant efforts to support me with relevant information; in particular, the Ministry of Disaster Management and Relief, the Ministry of Women and Children Affairs, the Cyclone Preparedness Programme, International Federation of Red Cross and Red Crescent Society, and Institute of Disaster and Vulnerability Studies at Dhaka University provided their wholehearted support. I consider my participants as my co-researchers. Their practical experience, intelligence and the sheer sense of reality they brought during the interviews were very moving and made me reframe my thoughts and organise ideas about vulnerability. I feel blessed.

Apart from this, Atia Naznin Shuvra and Jobair Alam were always a source of inspiration. I also highly appreciate the support from Najnin Begum and her husband Abudllah al Faraque. My colleague Abdul Mannan and his family extended their helping hand whenever I needed it. I am also deeply thankful to Sayka Jahan and her family, especially for supporting me during my illness. I appreciate them for many reasons. Moreover, I was blessed to have my aunt and uncle in Sydney, who were there to help me whenever I needed.

I also thank my friends from Divine World Missionaries, especially Eden, Daliah, Phung, Toosin, brother Martin and Brother Viet for their care for many sick days. I also thank Hau for this support to cope with adversities during the last part of my journey. I cannot forget my Doctor Van de Water who supported me during my chronic illness and other hard times I have been through in the last three years. She is a dedicated and hard-working woman who always extends her support to its fullest extent.

I also received enormous support from my colleagues from Bangladesh and others working in disaster management from various organisations. Participants in my case study also deserve acknowledgement for their support, particularly during my visits to the case study area; they provided abundant support,

beneficial information and valuable contacts, which were much appreciated. Among them, Farida Yeasmin, Maksuda Siddika, Rahima Akhter and Lothfur Rahman were amazing. I also want to thank some of my teachers from Dhaka University – Dr Abu Elias Sarker, Dr Habib M Zafrullah and Dr Mobasser Momen – who were there when I needed them.

Finally, I am grateful to my husband, mother in law and my family from Bangladesh. A special thanks to my husband, M Sajjad Hossain Bhuiyan, who helped me in every possible way and supported me at every step I took. He is always my best friend and my best colleague. My sister, Saida Sultana, a gifted student and a motivator, forced me to apply for this scholarship at the last minute; without her, I would not be here. Both are warm and extraordinary persons. Moreover, my mother Salma Sultana, is a wise and self-educated woman. Her endless support and persistence contributed most to building me up in this stage. I also want to remember my father's advice and my elder sister's and brother's encouragement throughout my candidature. I am also thankful to my nephews, Farhan and Labib, who kept me smiling during those sleepless nights. I always feel blessed to have a family like this.

List of Presentations

1. Presentation for government officials from Bangladesh

Title: Vulnerability theory in the context of Bangladesh

Session: Gender Development and Participation for Sustainability'

Date: 27 May 2016

Time: 09:00–12:00

Venue: Group: 75 Talavera Road, Level 3, Continuum Room, Macquarie University

2. Conference presentation at the University of Central Florida

Title: Cyclone disaster vulnerability and women experience in coastal Bangladesh

Conference: 2018 International Women's Issues Conference (IWIC)

Organiser: Women and Gender Studies Program, University of Central Florida

Date: 17 February 2018

Time: 1:45 pm–2:45 pm

Venue: Key West Ballroom AB, Student Union; University of Central Florida

3. Presentation at the University of Illinois at Urbana-Champaign

Title: Women's experience and cyclone disasters in Bangladesh: Dimensions of vulnerability

Sponsored by: Women and Gender in Global Perspectives Program and CEE Societal Risk Management Program

Date: 19 February 2018

Time: 12 pm

Venue: 1311 Yeh Student Center, 205 N. Mathews, Urbana, University of Illinois at Urbana-Champaign

4. Presentation at the conference at Gender, Work and Organization Conference 2018 (13 June–16 June 2018)

Title: Economic dimension of vulnerability: Women's experience in coastal cyclones in Bangladesh

Conference: 10th Biennial International Interdisciplinary Conference

Date: 14 June 2018

Time: 1:30 pm

Venue: Heritage 1, Hyatt Regency Sydney, 161 Sussex Street

List of Abbreviations

ADPC	Asian Disaster Preparedness Centre
BBC	British Broadcasting Corporation
BDRCS	Bangladesh Red Crescent Society
BHE	Bureau of Health Education
BRDB	Bangladesh Rural Development Board
ccGAP	Climate Change and Gender Action Plan
CDMP	Comprehensive Disaster Management Programme
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
CPP	Cyclone Preparedness Programme
CPPPC	Cyclone Preparedness Programme (CPP) Policy Committee
CwC	Communication with community
DDM	Department of Disaster Management
DEPP	Disaster Emergency Preparedness Program (UK based)
DWA	Department of Women Affairs
DYD	Department of Youth Development
GoB	Government of Bangladesh
IASC	Inter-Agency Standing Committee
IFRC	International Federation of Red Cross and Red Crescent Societies
IGO	Inter-Governmental Organisation
ICCPR	International Covenant on Civil and Political Rights

ICESCR	International Covenant on Economic, Social and Cultural Rights
INGO	International Non-Governmental Organisation
LGD	Local Government Division
MLJPA	Ministry of Law, Justice and Parliamentary Affairs
MoDMR	Ministry of Disaster Management and Relief
MoE	Ministry of Education
MoHFW	Ministry of Health and Family Welfare
MoL	Ministry of Land
MoLGRDC	Ministry of Local Government, Rural Development and Cooperatives
MoPME	Ministry of Primary and Mass Education
MoSW	Ministry of Social Welfare
MoWCA	Ministry of Women and Childers Affairs
NCTB	National Curriculum and Text Book Board
NDMC	National Disaster Management Council
NILG	National Institute of Local Government
SOD	Standing Orders on disaster
TR	Test Relief
UN Women	United Nations Entity for Gender Equality Entity and the Empowerment of Women
UN	United Nations
UNDP	United Nations Development Fund
UNFPA	United Nations Population Fund
UDHR	Universal Declaration of Human Rights

UNICEF	United Nations International Children's Emergency Fund
UNESCO	United Nations Educational, Educational, Scientific and Cultural Organization
UNISDR	United Nations Office for Disaster Risk Reduction
VGD	Vulnerable Group Development
VGf	Vulnerable Group Fund
WHO	World Health Organization

Chapter 1: Introduction

1.1 Statement of the Problem: Gender Vulnerability and Natural Disaster Management

The purpose of this study is to identify the types of vulnerabilities women experience in natural disasters, focusing on cyclones, with the objective of assessing the extent to which the existing disaster law, orders, policies and programs address those vulnerabilities in Bangladesh. Despite significant progress in disaster management, women's issues remain less visible in the discipline of disaster risk management generally and the existing disaster law, orders, policies and programs more specifically. This research identifies initiatives taken on the part of government and international agencies; however, these mark no significant progress, with a lack of adequate information on women's vulnerability, pre-existing discrimination, inequalities, lack of gender-sensitive policy and approaches contributing to this problem.

According to the Global Gender Gap Report 2018 (World Economic Forum, 2018), Bangladesh is the top-ranked country in South Asian, and has reduced the overall gender gap by over 72%. The report includes four basic areas of inequality between men and women in different countries, and indicates that Bangladesh has made tremendous progress in political participation despite a widening gap in terms of labour force participation. This thesis assumes that existing inequality and discrimination against women have contributed to the disaster vulnerability of women.

A growing body of literature (Arefin, 2012; Austin and McKinney, 2016; Bradshaw, 2013, 2014; De Silva and Jayathilaka, 2014; Dhungel and Ojha, 2012; Enarson, 2000, 2012; Enarson and Fordham, 2001; Enarson et al., 2006; Ferris et al., 2013; Neumayer and Plümper, 2007) reveals that women are disproportionate victims of natural disasters all over the world. Bangladesh is not an exception, with women more likely to become direct victims of natural hazards, such as droughts, salinity, cyclones, and flooding in Bangladesh (Alam and Collins, 2010: 943–946; Ikeda, 2009: 66; Rashid and Shafie, 2013). During natural hazards, often, more women die than men. World Bank (2013) data demonstrated that for the huge Bhola Cyclone in 1970, women victims outnumbered men 14 to 1; for the same category Cyclone Sidr some 37 years later, the ratio of female-to-male deaths dropped to 5 to 1. Although there has been significant progress in reducing the number of casualties in Bangladesh, there are various other ways women suffer, which need to be identified and considered during formulation and implementation of law, policy and programs.

Recent studies (Arefin, 2012; Austin and McKinney, 2016; Bradshaw, 2013, 2014; De Silva and Jayathilaka, 2014; Dhungel and Ojha, 2012; Enarson, 2000, 2012; Enarson and Fordham, 2001; Enarson et al., 2006; Ferris et al., 2013) revealed that there are significant numbers of ways women suffer differently and more intensely than men, and that this is linked to women's vulnerable position. Studies have identified that women's vulnerability in natural hazards results from physical, economic, social, cultural and biological issues (Bradshaw and Fordham, 2013; Enarson, 2012: 43; Ferris et al., 2013; Ginige et al., 2014; Juran and Trivedi, 2015; Neumayer and Plümper, 2007; Yumarni et al., 2014). Pre-existing vulnerabilities increase the vulnerability women face during disasters in many ways, which has both immediate and long-lasting impacts (Ariyabandu and Wickramasinghe, 2003). Moreover, Studies (Bradshaw, 2013; Bradshaw and Fordham, 2013) identify that the impact of women's vulnerability in disasters lasts for several years; in certain circumstances, the rest of her life.

Although national governments and international organisations are committed to the principle of gender equality, this research reveals that many issues remain uninterrogated and require attention before any attempt can be made to adequately review existing laws, policy and programs and propose reform aimed at achieving gender equality in disaster risk management.

Natural hazards are not a new phenomenon in the history of human civilisation. Nevertheless, it was only after 1990 that scholars such as Begum (1993), Ikeda (1995), Enarson (1999 and 2000), Neumayer and Plümper (2007) and Austin and McKinney (2016) started examining the manner in which natural hazards affect men and women. Women are adversely affected at a greater rate than men, and are more likely suffer ill health, or even die, as a result of natural hazards (Ferris et al., 2013; Ikeda, 1995; Neumayer and Plümper, 2007: 328; UNISDR, 2017b). Natural hazards affect women's lives and livelihoods; at times, accelerating their slide into poverty and causing unexpected hardship in maintaining daily duties and further marginalisation. Thus, natural hazards present a very specific threat to their security. These increase existing inequalities, reinforce the gap between women and men, recreate their vulnerability to natural hazards and reduce their capability to cope with any adverse change.

Further, the intensity and severity of natural hazards has increased in recent years. People, everywhere, are experiencing climate change and environmental degradation (Coppola, 2015). According to the Global Climate Risk Index 2019, 'Between 1998 and 2017, more than 526,000 people died worldwide and losses of US\$3.47 trillion (in Purchasing Power Parities¹) were incurred as a direct result of more

¹ Purchasing power parities are the rates of currency conversion that try to equalise the purchasing power of different currencies, by eliminating the differences in price levels between countries. This theory determines the adjustments

than 11,500 extreme weather events' (Eckstein et al., 2018: 5). The loss and damage resulting from disasters are increasing dramatically. According to the Global Climate Risk Index 2015, less-developed countries are generally more affected than industrialised countries. Based on data collected from 1994 to 2013, this index identified that 10 countries – Honduras, Myanmar, Haiti, Nicaragua, Philippines, Bangladesh, Vietnam, Dominican Republic, Guatemala and Pakistan – are the most vulnerable to climate change (Kreft et al., 2014: 4–6). Considering the loss of lives, Bangladesh is the most vulnerable to climate change in the world (Ministry of Environment and Forest, 2013: ix). Almost 2 million people were killed in disasters between 1970 and 2011, representing 75% of all disaster fatalities globally (Ministry of Environment and Forest, 2013: 49). Moreover, economic and other losses from natural hazards are also very high for Bangladesh (see Appendix 1.1). As women constitute half of the country's population, the subsequent impact of disaster on women is huge, influencing recovery and development.

To address these various issues associated with vulnerabilities, development practitioners and policy makers must consider women's experiences before, during and after natural disasters. This research demonstrates that the inclusion of women's perspectives in laws, orders, policies and programs in disaster management are still in an embryonic stage. The Government of Bangladesh (GoB) enacted the *Disaster Management Act* in 2012 to ensure activities for disaster management are coordinated, object oriented and strong and to formulate rules to build infrastructure for effective disaster management to fight all types of disaster. However, only one section, namely section 27(1) deals with protecting women along with the ultra-poor, older persons, children and handicapped persons (*Disaster Management Act 2012* section 27.1). No specific support or any other aspect of women's vulnerability is included in this act. The Standing Orders on Disaster (SOD) 2010 is considered the most significant document on disaster management in Bangladesh, but it only encourages the inclusion of women disproportionately in terms of representation in various decision-making bodies. The Disaster Management Policy 2015 and other relevant policies have also failed to adequately address women's vulnerability (see Chapter 4 for detailed information).

required in the exchange rates of two currencies to make them at par with the purchasing power of each other. In other words, the expenditure on a similar commodity must be same in both currencies when accounting for the exchange rate. It is used worldwide to compare income levels in different countries so that *irrelevant exchange rate variations* do not distort comparisons. For more detail, see https://www.oecd-ilibrary.org/finance-and-investment/purchasing-power-parities-ppp/indicator/english_1290ee5a-en and <https://economictimes.indiatimes.com/definition/purchasing-power-parity>.

1.2 Scope of the Research

The scope of the research is to identify the vulnerability faced by women in natural hazards, with special focus on cyclones in the coastal district of Bangladesh, and examine to what extent the current law, orders, policies and programs in Bangladesh respond to women's vulnerability. In addition, this research examines major international declarations and frameworks relating to disasters to examine how far they have addressed women's vulnerability and its impact on Bangladesh's regulatory framework. Additionally, it adds specific recommendations to accommodate women's needs, taking on board global best practices on disaster risk reduction. The scope of the research is to identify the vulnerability faced specifically by women in disasters, with a special focus on cyclones in the coastal districts of Bangladesh.

The differential impact of disaster by gender is well recognised by scholars from various disciplines and development practitioners; however, there are many areas of gender vulnerabilities that have not been identified and need to be adequately emphasised in policy formulation and implementation. This thesis explores the different ways women face vulnerability to cyclones in the coastal districts in Bangladesh. It confines its discussion to understanding the manifestation of the process of vulnerability in disaster from biological, socio-cultural, political, economic and organisational interaction, rather than the environmental, infrastructural and historical process. In doing so, it categorises vulnerability based on five dimensions, rather than a sequential nature of vulnerability such as pre-, during and post-disaster vulnerability, on the basis that these five dimensions have direct relevance for law and policy formulation and implementation. Moreover, this thesis views vulnerability and disaster as a process rather than as a single incident.

In evaluating how the Government has responded to women's vulnerability, this thesis examines the existing disaster-related laws, policies and programs. Since the frequency of disaster is higher than in many other parts of the world, the GoB has developed a significant number of disaster-related laws, orders, policies and programs (see Appendix 1.2). This research analyses the most significant disaster-related laws, orders and policies that play an influential role in shaping the disaster management approach in Bangladesh. As mentioned above, the GoB has enacted the *Disaster Management Act 2012*, the only disaster-related law, which is analysed in this thesis. The Standing Orders on Disaster (SOD) 2010 is the basis of all disaster management activities in Bangladesh, while the Disaster Management Policy 2015, formulated to support the *Disaster Management Act 2012*, plays a significant role in the development and implementation of disaster-related activities in the country. Further, the Cyclone Preparedness Programme (CPP), a unique program first run by the Bangladesh

Red Crescent Society (BDRCS) and later shifted to the GoB, is also included in this thesis (see chapter 4 section 4.4.4).

This thesis also examines the major international framework and declarations relating to gender and disaster management. The international regulatory framework plays a significant role in shaping disaster management approaches and gender mainstreaming in Bangladesh. The three international conferences that have been important in this shaping are Yokohama, Hyogo and Sendai; these are included in this study. Moreover, the major international declarations such as the Universal Declaration of Human Rights (UDHR), the International Covenant on Economic, Social and Cultural Rights (ICESCR) 1966 and the International Covenant on Civil and Political Rights (ICCPR) 1966 are included, as they provide the basis of the non-discriminatory approach for women. The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) is a milestone for ensuring the principle of equality for women. This thesis also adds key recommendations to accommodate women's needs, considering best practices in disaster risk reduction in the world. Related reports from international organisations such as United Nations (UN), UNISDR (United Nations Office for Disaster Risk Reduction),² UN Women, and International Federation of Red Cross and Red Crescent Societies (IFRC) have been reviewed to identify best practices suitable for coastal women in Bangladesh.

1.3 Rationale of the Research

This research contributes to existing knowledge and assist governments, policy makers and other development practitioners to formulate more gender-sensitive laws, policies and programs for disaster risk management. It helps to minimise the knowledge gaps between existing knowledge and women's experiences of natural disasters, reduce economic loss and damage in Bangladesh, strengthen existing and future recovery processes and decrease the social impacts of cyclones.

Natural disasters affect women differently, which requires gender-sensitive disaster management strategies and approaches to address the needs of women. It has been only three decades since the differential impact of disaster drew the attention of scholars and development practitioners. As discussed in Chapters 4 and 5, though government and other agencies are considering women's perspectives, the limited interventions have failed to achieve desirable outcomes. The government needs to develop more appropriate disaster risk management strategies to address women's needs and support women to enhance their capacity to contribute to the risk reduction approach. Moreover, as a

² UNISDR is now known as United Nations Office for Disaster Risk Reduction (UNDRR).

developing country, Bangladesh has limited resources to allocate for this purpose, which constrains efforts to overcome disaster vulnerability. This thesis considers approaches and best practice for women, pulling together existing resources and knowledge to reduce risk.

Using both primary and secondary resources, this research contributes to minimising the gap between existing knowledge and women's experiences of natural disasters in two ways. First, it identifies the different ways women face vulnerabilities and suggests strategies to reduce this vulnerability. More specifically, it allows diverse voices with experience of cyclones as policy makers, management practitioners or cyclone victims to be involved, both in exploring the nature of vulnerabilities and identifying strategies that the participants consider most significant to strengthen the resilience of women. Those narratives provide the opportunity to learn about women's special needs, which are seldom thought through or catered for. Second, this research categorises vulnerabilities experienced by women in cyclones to cluster intervention strategies to make existing disaster risk management more gender sensitive.

As this research focuses on women's vulnerability in cyclones to reduce the loss and damage experienced by coastal women, this contributes directly to economic benefits for society. Around half the population and labour force of Bangladesh, and the world, is women. Women in Bangladesh are involved in many economic activities, such as formal and informal income earning, agriculture, home shed gardening, and fish and food processing. In addition, the 13 coastal districts and 724 km of coastline in Bangladesh are considered vulnerable to cyclones on a twice-yearly basis.³ Previous cyclones have caused huge losses. According to *Hurricanes: Science and Society* (2010–2015), Bhola Cyclone destroyed approximately 85% of the homes in this area and damaged property worth US\$490 million (in 2009 dollars) on 11 November 1970, making it the world's deadliest tropical cyclone of all time. A recent cyclone, Sidr, which struck on 15 November 2007, caused total damage and losses of 115.6 billion *Taka* (US\$1.7 billion) (Government of Bangladesh, 2008). Addressing women's vulnerability can significantly reduce the economic loss and damage caused by cyclones every year.

Additionally, it will help to reduce social consequences of migration, violence and trafficking after disasters. Reducing women's vulnerability will help to improve women's overall conditions and ensure gender equality, which is the fifth element of the sustainable development goals (SDGs).⁴

³ There are 13 districts considered more cyclone prone in Bangladesh: Barguna, Bhola, Patuakhali, Pirojpur, Chittagong, Cox's Bazar, Feni, Laksmipur, Noakhali, Bagerhat, Khulna, Satkhira and Barishal. Cyclones hit coastal districts twice a year – during the pre-monsoon (April–May) and post-monsoon (October–November). See <http://www.cpp.gov.bd/> for more detail.

⁴ The SDGs, also known as the Global Goals, are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. These 17 goals, built on the successes of the Millennium Development Goals,

Further, evidence shows that the frequency of natural disaster has increased dramatically in recent years (Munich RE, 2015). The increasing frequency and intensity of extreme climate events is affecting agriculture, water resources and livelihoods (Ministry of Environment and Forest, 2013: ix–x; Arefin, 2012: 53–54). Thomalla et al. (2005) argued that the prospect of climate change and sea-level rises increase the need to prepare for cyclones in Bangladesh. As this research identifies and implements a more efficient and effective disaster risk reduction approach to cyclones through considering women’s experience of natural disasters, it contributes to future risk reduction approaches and effective recovery.

Bangladesh is one of the most disaster-prone countries in the world, with extremely limited resources. Without addressing natural disasters, the development of Bangladesh is not possible. Planning is therefore directed towards gender and disaster management as a major consideration in development. Bangladesh is striving to establish a detailed and considered disaster risk management system, from the national down to the community level, to mitigate the effects of disasters. Identifying the vulnerability of women in natural disasters and contributing to the gap in existing knowledge can improve this effort and make Bangladesh a safer country in the 21st century.

1.4 Research Question

The research focuses on the extent to which Bangladesh takes women’s experiences into account in the creation, administration and implementation of disaster management policies. The research question is as follows:

To what extent are the vulnerabilities of women addressed in the existing disaster management laws, orders, policies and programs relating to cyclones in Bangladesh?

This is addressed by asking the following questions:

(a) What are the vulnerabilities women face during disasters (especially cyclones)?

are no poverty, zero hunger, good health and wellbeing, quality education, gender equality, hygiene and sanitation, affordable and clean energy, decent work and economic growth, industry, innovation and infrastructure, reducing inequality, sustainable cities and communities, responsible consumption and production, climate action, life below water, life on land, peace, justice and strong institutions, and partnerships for the goals. They were adopted by all UN member states in 2015, to provide a shared blueprint for peace and prosperity for people and the planet, now and into the future. The 17 SDGs are an urgent call to action for all countries – developed and developing – in a global partnership. They recognise that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality and spur economic growth – all while tackling climate change and working to preserve our oceans and forests. For more detail, see <https://sustainabledevelopment.un.org/sdgs>

- (b) To what extent do the current disaster laws, orders, policies and CPP address these vulnerabilities?
- (c) How can women's vulnerabilities be better incorporated into policies and practices in Bangladesh?

The objectives of the project are to:

1. identify a better understanding of vulnerability in natural disasters by developing a categorisation of women's experiences.
2. identify the gaps in Government interventions to ensure a more gender-sensitive approach to disaster risk management.
3. suggest a more holistic approach to disaster management incorporating women's vulnerability.

1.5 Terminology

This section provides definitions of key concepts used throughout this thesis. Several terms are used interchangeably throughout the thesis and have specific meanings as they apply to the discussion carried out. For example, the term gender or gender perspective is used in this thesis to refer to women and women's perspectives. In doing so, it is acknowledged that the term gender is interpreted in a limited manner to focus only on women, and not given the wider meaning that can be attributed; namely, referring to other genders including men. However, this limited definition is used here as it is relevant to the discussion and widely accepted in many reports and regulations, particularly as it relates to Bangladesh.

1.5.1 Disaster

UNISDR (2017c:3) defines disaster as 'a serious disruption of the functioning of a community or a society at any scale because of hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts'.

1.5.2 Disaster Management

UNISDR (2016:14) defines 'the organization, planning and application of measures preparing for, responding to and recovering from disasters' as disaster management. The GOB has adopted the definition of disaster management from SOD 2010. It refers disaster management as 'arrangements

for managing the potential adverse risks and includes defining the risk environment, managing the risk environment and responding to the threat environment'. However, this thesis emphasizes on the definition provided by UNISDR.

1.5.3 Disaster Risk Governance

UNDP (2013) defines disaster risk governance (DRG) as the way in which public authorities, civil servants, media, private sector, and civil society at community, national and regional levels cooperate in order to manage and reduce disaster and climate related risks. This means ensuring that sufficient levels of capacity and resources are made available to prevent, prepare for, manage and recover from disasters. It also entails mechanisms, institutions and processes for citizens to articulate their interests, exercise their legal rights and obligations, and mediate their differences. UNDP intends to place much greater emphasis on governance (Galperin and Wilkinson, 2015: 8).

1.5.4 Disaster Risk Management

UNISDR (2017c:6) defines disaster risk management as 'the application of disaster risk reduction policies and strategies to prevent new disaster risk, reduce existing disaster risk and manage residual risk, contributing to the strengthening of resilience and reduction of disaster losses'. This thesis emphasises disaster risk management to identify gaps in Government interventions to ensure gender equality.

1.5.5 Gender

UN Women (2017:1) provides a well-accepted definition of gender as 'the roles, behaviors, activities, and attributes that a given society at a given time considers appropriate for men and women'. In using the term gender, this thesis focuses on aspects of women's roles, behaviours, activities and attributes assigned by society. The term 'gender' is used here as a substitute for 'women'; it is a fundamentally inclusive term and goes beyond the typical binary category.

1.5.6 Gender Mainstreaming

UN Women (2017:7) defines gender mainstreaming as 'the process of assessing the implications for women and men of any planned action, including legislation, policies or programs, in all areas and at all levels. It is a way to make women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programs in all

political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality.’

1.5.7 Mitigation

Ministry of Food and Disaster Management (2010: 5) defines mitigation as ‘the process of implementing measures that eliminate or significantly reduce the risks associated with potential hazards’. This thesis focuses on mitigation of disaster risk for women.

1.5.8 Natural Hazard

UNISDR (2009: 20) refers to a natural hazard as a ‘natural process or phenomenon that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage’. The term hazard and disaster are used interchangeably, but hazard may or may not cause an impact on human society. Disasters include loss and damage.

1.5.9 Preparedness

According to Ministry of Food and Disaster Management (2010: 5) defines preparedness as measures ‘designed to ensure that communities have the knowledge and understanding of their risk environment to enable them to better cope with potential hazard impacts’.

1.5.10 Reconstruction

Ministry of Food and Disaster Management (2010: 5) explains reconstruction as the ‘process of restoring affected infrastructure to its pre-event condition’. This definition needs to be amended as restoring affected infrastructure to its pre-event condition makes it equally vulnerable to future disasters. This thesis argues for better restoration of infrastructure, which can resist disaster and ensure resilience.

1.5.11 Recovery

According to SOD 2010, recovery implies ‘measures that are designed to develop the systems required to support affected communities in the reconstruction of their physical infrastructure and restoration of their emotional, economic and physical well-being’ (Ministry of Food and Disaster Management, 2010: 3).

1.5.12 Rehabilitation

UNISDR (2017c: 13) refers to rehabilitation as ‘the restoration of basic services and facilities for the functioning of a community or a society affected by a disaster’.

1.5.13 Susceptibility

Susceptibility means exposure or proximity to external events (Rashid, 2013: 27; Rashid and Shafie, 2013: 27). Birkmann et al. (2013: 200) refers to susceptibility as the predisposition of elements at risk (social and ecological) to suffer harm. Zakour (2010: 18) argues that many authors use the term risk interchangeably with susceptibility.

1.5.14 Resilience

UNISDR (2017c: 13) refers to resilience as ‘the ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management’.

1.5.15 Risk

Alexander (2000) refers to risk as the probable level of loss expected from a predictable magnitude of hazard. The relationship between disaster, vulnerability and risk can be considered via the following pseudo-equation (Wisner et al., 2004: 49), as used by UNISDR:

$$R (\text{Risk}) = H (\text{Hazard}) \times V (\text{Vulnerability})$$

A more comprehensive formula has been proposed by Yodmani (2000: 27) as follows:

$$\text{Disaster Risk} = \frac{\text{Hazard} \times \text{Vulnerability}}{\text{Capacity}}$$

Here, capacity means the degree to which a community can intervene and manage a hazard to decrease the future negative impact.

1.5.16 Vulnerability

The term vulnerability is the key major concept of this thesis. It is derived from the Latin word ‘vulnerabilis’, which means ‘to wound’ (Coppola, 2007 cited in Jha, 2010: 5); however, it now has a

different inference. There is no universal definition for vulnerability, and various scholars from different backgrounds have given their own definitions, thus showing the lack of a common shared language (Birkmann et al., 2013: 194). This thesis uses this term in connection with natural disasters. David (2005) provided a summary of perspectives on vulnerability from 15 disciplines and orientations (see Appendix 1.3); nevertheless, that of UNISDR is most relevant to this research because of the all-encompassing nature of its definition and their rigour and wide experience working in natural disasters. UNISDR (2009: 30) defines vulnerability as ‘the characteristics and circumstances of a community, system or asset that make it susceptible to the demanding effects of a hazard’.

1.6 Literature Review

Recognition of gender issues in natural disasters has attracted discussion among scholars, researchers and development practitioners over the last three decades (Enarson, 2012: 23; Ferris et al., 2013). Scholars have recognised gender vulnerability since 1990, and there is a growing literature, with most focused on women’s differential experience in disasters⁵ and its underpinning causes.⁶ In addition, the importance of reflecting these issues in policy and institutional practices is also recognised by some research⁷ and reports from international organisations.⁸ However, very few identify how far women’s vulnerability has been reflected in existing and newly formed disaster law, policy and programs. This part of this chapter explores trends, similarities and differences and gaps in existing literature.

The previous sections provide evidence that scholars from various disciplines and international organisations have reached a consensus that women are disproportionate victims of natural disasters. A number of notable scholars working on disaster management, such as Wisner et al. (2004), David (2005), Belkhir and Charlemaine (2007) and Ferris et al. (2013), have acknowledged that women are more vulnerable and require special attention. Some feminist scholars are also exploring the gendered nature of natural hazards, conducting research on the overall nature of vulnerability experienced by women in various kinds of natural disasters (Bradshaw, 2014; Bradshaw and Fordham, 2013; David and Enarson, 2012; Enarson, 2012; Fordham, 2011; Racioppi and Rajagopalan, 2016; Reyes and Lu,

⁵ Many studies have been conducted on the differential impact of disasters on women. Some of the most relevant include Rashid and Shafie (2013), Yumarni et al. (2014), Enarson (2000), Ikeda (1995), Juran (2012), Sultana (2010) and Begum (1993).

⁶ Many studies have been conducted to identify the causes of vulnerability of women in natural hazards. Some of these include David and Enarson (2012), Austin and McKinney (2016), Neumayer and Plümper (2007), Izquierdo (2015), Racioppi and Rajagopalan (2016), Alam and Rahman (2014) and Azad et al. (2013).

⁷ See Bradshaw and Fordham (2013), Pradhan (2005), Ikeda (2009), Ginige et al. (2014) and Hemachandra et al. (2018).

⁸ See UN (2008, 2016), Fowler (2016), UNFPA (2016) and IFRC (2010, 2014).

2016). Some studies have been conducted on specific types of vulnerability of women, such as Enarson (1999), Fisher (2010), True (2013), Sloan et al. (2015) and IFRC (2015), who research violence against women in disasters. Some researchers (Ikeda, 1995; Neumayer and Plümper, 2007; Tandlich et al., 2013) have emphasised the feminisation of mortality during disasters. A few studies (Nahar et al., 2014; Parida, 2015) have explored mental health consequences of disasters.

Although some studies on women and natural disasters concentrate on specific issues such as female mortality and violence against women, many other research topics are ignored; for example, health-related complications for women after cyclones, the impact of cyclones on pregnant and older women, financial consequences women experience after disasters, longer-term impacts on women, the consequences of losing family members in disasters and how existing laws, policies and programs reflect women's needs. In addition, some studies (Arefin, 2012; Ashraf and Azad, 2015; Bradshaw and Fordham, 2013; Ikeda, 2009; Juran and Trivedi, 2015; Nahar et al., 2014; Neumayer and Plümper, 2007; Reyes and Lu, 2016; Yumarni et al., 2014) highlight the causes of these differentiated impacts of vulnerability on man and woman. Focusing on causes or contributing factors is a major strategy for disaster risk reduction; however, the interdependence of those causes, which needs to be addressed for effective disaster risk management, has been ignored. Further, some studies (Alam and Rahman, 2014; Begum, 1995; Fakhruddin and Rahman, 2015; Sultana, 2010) explore the coping mechanism used by women before, during and after disasters. However, how government and development practitioners should facilitate and organise these coping mechanisms to reduce the overall disaster risk have not been addressed yet. Tierney (2012: 245) summarised this trend in the field of disaster literature as a critical disjuncture, referring to it as 'discontinuities in research, the systematic neglect of some research topics and a preference for others, and an apparent collective resistance to the introduction of new idea'.

Though research on disaster and gender differs widely in the locus and focus of study, there is a common consensus that a gender-sensitive approach to disaster management is more effective, for governments, NGOs and international organisations. Moreover, there is also agreement that women's vulnerabilities in disasters result from pre-existing discrimination and inequality in the social system (Ariyabandu and Wickramasinghe, 2003; Bradshaw, 2013; Bradshaw and Fordham, 2013; Enarson and Fordham, 2001; Juran and Trivedi, 2015; Sultana, 2010; Yumarni et al., 2014). Further, some studies (Belkhir and Charlemaine, 2007; Sultana, 2010) have identified that a privileged woman is less vulnerable to disaster than a deprived woman, and vice versa.

Tierney (2012: 245) identified that data from communities affected by natural hazards are usually obtained through surveys and analysed quantitatively in disaster research.⁹ She added that most early studies paid scant attention to the actual experiences of disaster survivors as they passed—or failed to pass—through various stages of the disaster cycle. The field requires emphasising qualitative research using other methods, such as interviews, focus groups and observations, to provide in-depth insights into these problems. Tierney (2012: 246) also added that most disaster research is ‘largely impervious to influences from the broader field of sociology and from general scholarship in other social science fields’; most is based on scientific research trying to measure the risk of disasters. Thus, other disciplines such as law and public policy are required, to contribute to and influence disaster research to add to the holistic view of disaster research.

This thesis reviews the most relevant work conducted between 1990 to 2018, dividing the discussion into five major parts. The first section begins by briefly discussing the research conducted on the nature of women’s vulnerability in natural hazards around the world. The second section reviews the studies conducted on women’s disaster vulnerability in Bangladesh. The third section analyses cyclone vulnerability of coastal women in Bangladesh to identify the various types of vulnerability women face during cyclones. The fourth part discusses to what extent the existing literature reviews the current laws, policies and programs from a gender perspective. Finally, the fifth part includes the various gender-sensitive disaster management guidelines developed by various organisations.

1.6.1 Studies Relating to the Nature of Women’s Vulnerabilities in Global Natural Hazards

Many studies have identified various types of vulnerabilities women experience, which can be separated into before, during and after disasters (Alam and Rahman, 2014; Arefin, 2012; Ashraf and Azad, 2015; Begum, 1995; Bradshaw and Fordham, 2013; Fakhruddin and Rahman, 2015; Juran and Trivedi, 2015; Neumayer and Plümper, 2007; Reyes and Lu, 2016; Sultana, 2010; Willinger and Knight, 2012; Yumarni et al., 2014). As disaster vulnerability has been viewed as the exacerbation of existing pre-conditions, some causes and consequences of vulnerability appear to be overlapping. A significant number of types of vulnerability have been identified in various studies conducted in various parts of the world. In line with cultural orientation, they differ from country to country and culture to culture.

⁹ It is important to note that this research focuses on qualitative data, using interviews, focus groups and observations to identify the nature and causes of vulnerability of women in cyclones. See Section 1.7.2 for detailed information.

Some studies have categorised vulnerabilities into various dimensions (Enarson and Fordham, 2001; Mukuna, 2015; World Health Organization [WHO], 2002; Yumarni et al., 2014). Enarson and Fordham (2001) identified five basic processes that initiate and increase women's vulnerability after disaster: biological, economic, social, political and environmental. WHO (2002) categorised disaster impacts into three types by gender: social and economic consequences, domestic and sexual violence, and psychological impacts. WHO (2002) argued that social and economic consequences have the greatest impact. Mukuna (2015) also conducted a comprehensive study on the gender-differentiated impact of flooding at in the Budalangi flood plains in Kenya, which explored physical, socio-cultural and economic aspects of vulnerability. Further, Yumarni et al. (2014) researched post-earthquake reconstruction in Indonesia, with gender vulnerability analysed as a multi-dimensional concept that included physical, economic, social, political and cultural dimensions.

The nature of vulnerability and its underlying causes differ from developed to developing countries. Reviewing the literature from developing countries (Alam and Collins, 2010; Ariyabandu and Wickramasinghe, 2003; Ginige et al., 2014; Dhungel and Ojha 2012; Ikeda, 1995; Juran, 2012; Juran and Trivedi, 2015; Reyes and Lu, 2016) reveals social and cultural issues such as traditional dress code, long hair, restrictions on going out, limited opportunities to speak out and restricted freedom to ask for assistance from agencies as significant variables for women's vulnerability.

Research on gender and disasters resulting in reports and studies is higher among developed than developing countries. Enarson and Meyreles's (2004) assessment of the English and Spanish literature on gender and disaster revealed that most of the work on gender and disaster was carried out from developed countries. They identified that South Asian literature has seen significant scholarship in this area, but that these are mostly on India and Sri Lanka. Some studies have emerged on developing countries very recently, but few were done on Bangladesh, despite the high number of people affected by disasters.

1.6.2 Studies Relating to Women's Vulnerability in Disasters in Bangladesh

In the case of Bangladesh, studies relating to various kinds of disasters and women or gender are relatively few, conducted after devastating disasters within the last 30 years. A review of existing literature shows that after Cyclone Gorky in 1991 and the floods of 1987 and 1988, researchers have gradually become interested in work on women and disasters. Specifically, after Cyclone Sidr in 2007 and the Hyogo conference on disaster in 2005, scholars have been more willing to conduct research on gender and disaster in Bangladesh. Most of this literature focuses on the nature of vulnerability

women experience in disasters and the underlying causes of this. As disaster and gender is a new emerging field in Bangladesh, it is too early to make generalisations about the nature and trend of the literature.

Most of the disaster-related studies concentrate on floods and disasters in the coastal districts of Bangladesh. Based on primary data, researchers (Alam and Rahman, 2014; Begum, 1995; Fakhruddin and Rahman, 2015; Ikeda, 2009) have identified a number of vulnerabilities women face during various disasters. Begum (1995), a pioneer in disaster and gender research in Bangladesh,¹⁰ explored how flood affected women and how women played an active role by protecting their households, finding that women suffered from food insecurity, lack of clothing, heavy domestic responsibility, difficulties in obtaining drinking water and unhealthy, unhygienic and insecure conditions in shelter houses. She emphasised the serious concerns regarding living places, with mothers of adolescent girls particularly worried about security. She also focused on women's gender-assigned tasks, especially procuring food and cooking, providing drinking water, storing fuel and childcare, which meant they had to bear more of the physical burden of coping with floods than men. Similar types of vulnerabilities were analysed by Ikeda (2009), who conducted a study on the devastating flood of 2004. Comparing these two studies, it appears reasonable to conclude that there was no significant progress on women's vulnerability from 1995 to 2009, rather than reducing the number of casualties. This adds support for the need to consider these issues more closely.

Alam and Rahman (2014) and Fakhruddin and Rahman (2015) conducted two separate studies on coastal disaster vulnerability and identified similar types of vulnerability experienced by women. Alam and Rahman (2014) discussed women's loss of livelihood opportunities, deprivation from relief materials, sexual harassment and lack of participation in any response or management activities in the coastal region of Bangladesh. Likewise, Fakhruddin and Rahman (2015) examined a wide range of vulnerabilities for women, including unemployment and seasonal employment, lack of cash and savings, safe drinking water, law and order and political unrest, low wage rates, dowries, housing problems and social insecurity.

Apart from providing an analysis of various types of vulnerability, Azad et al. (2013) and Rashid and Shafie (2013) divided women's vulnerability into several categories. Both of these studies analysed the root causes of vulnerability, arguing that they were reinforcement of existing pre-conditions. Azad

¹⁰ Begum (1995) carried out research on flood-affected women in southern Bangladesh. This study focused on how rural women in Bangladesh face floods and how they respond. Begum argued that women are not merely passive victims of flood, but play an active role in protecting their households.

et al. (2013) used the pressure and release model¹¹ to explain women's vulnerability, identifying four types of vulnerability experienced by women in floods: human vulnerability, social vulnerability, structural vulnerability and agricultural vulnerability.¹² Based on secondary data, Rashid and Shafie (2013) identified 47 vulnerability components that include all types of vulnerability women experience in society. They used the Bristol Social Matrix (B-SEM) under three domains – resources, participation and quality of life (which includes a total of 10 dimensions; see Appendix 1.4) – that make women more sensitive to natural disasters.

In addition to those, two other studies conducted on specific issues are relevant for this discussion. Nahar et al. (2014) conducted a study on the psychological impact on women of disasters in Bangladesh. The authors argued that women are more susceptible to psychological suffering such as post-traumatic stress disorder, depressive symptoms or major depressive disorder, anxiety or generalised anxiety disorder, sleep disruption, substance abuse and aggression, which results from gender-based behavioural restrictions. Juran and Trivedi (2015) explored the reasons for the high mortality rate of women during disasters in Bangladesh. Focusing on socio-cultural aspects of this high mortality rate, they argued that, compared with biological and physiological reasons, gender inequality, social status, power relations, politico-economic and cultural norms such as *purdhah*¹³ and limited decision-making power have contributed more in women's vulnerability.

Sultana's (2010) study is different in many ways from those considered above. She focused on the roles of men and women more extensively than other studies, underlining the gendered and classed¹⁴ coping strategies and adaptation measures that men and women use to survive in hazardous environments. She viewed disasters as a temporary opportunity for changing gender roles, as they help women to violate *purdhah* and men to bring water from distances where women cannot go.¹⁵

¹¹ The 'pressure and release' model is a simple tool for revealing how disaster occurs when natural hazards affect vulnerable populations. For more detail, see Wisner et al. (2004).

¹² Human vulnerability included physical injury, shortage of food, diseases, malnutrition and menstruation problems, whereas social vulnerability included unemployment, harassment, crime (burglary), lack of clothing and problems finding fuel (wood). They identified damaged roads, lack of clean drinking water, culverts, embankments and non-functioning communication systems as structural vulnerabilities. Eviction from dwellings and destruction of houses, damaged sanitation facilities, damaged crops, poultry, cattle herds and homestead gardens were agricultural vulnerabilities.

¹³ According to the Oxford Dictionary, the word *purda* or *purdhah* means 'the practice in certain Muslim and Hindu societies of screening women from men or strangers, especially by means of a curtain'. It is a form of gender-based segregation and seclusion, with significant implications. Some studies have shown that the cultural norms and practices of *purdhah* significantly contribute to the vulnerability of women during natural hazards in Bangladesh. See Chapter 3 for more information.

¹⁴ Class, here, refers to socio-economic class. For related studies, see Belkhir and Charlemaine (2007) and David and Enarson (2012).

¹⁵ Women are responsible for supplying water for the family. Men usually do not get involved with household activities. Women have to go out and collect water from distant places, especially after cyclones. See Chapter 3 for more detail.

1.6.3 Studies Relating to Women's Vulnerability in Cyclones in Bangladesh

This part reviews the literature on the nature and extent of women's vulnerability before, during and after cyclones in Bangladesh. Considering the volume of work on cyclones, research on women's vulnerability in cyclones is limited. Some studies have identified women's vulnerability in cyclones, but have not analysed this vulnerability thoroughly from a gender perspective and have failed to provide appropriate strategies to overcome those vulnerabilities. Moreover, considering the nature of disaster, cyclones have different impacts, such as salinity of soil and water, health-related complications, long-lasting food insecurity and lack of drinking water, which need to be addressed in formulating and implementing strategies for risk management.

Though Bern et al. (1993), Sommer and Mosley (1972), Government of Bangladesh (2008), Alam and Collins (2010) and Paul (2010) did not analyse from gender perspective, they identified that women are disproportionate victims of cyclones in different ways. Sommer and Mosley (1972), Bern et al. (1993) and Government of Bangladesh (2008) conducted studies on the Bhola, Gorky and Sidr cyclones in 1970, 1991 and 2007 respectively, and revealed a high death rate among women. Sommer and Mosley (1972) observed a higher rate of post-disaster migration of women to kindred families for security reasons after Cyclone Bhola in 1970. Bern et al. (1993) provided an epidemiological assessment to determine factors associated with cyclone-related mortality and identify prevention strategies.

The report¹⁶ prepared by the Government of Bangladesh (2008: 39) identified that vulnerability was a significant issue among pregnant and lactating women and women-headed households, and women suffered financial losses. The report revealed that pregnant and lactating women suffered from malnutrition and micronutrient deficiencies, single women (divorced, widowed or separated) who had worked as casual wage workers were paid less than their male counterparts. Most of the small-scale chicken and duck farms owned by women in Borguna and Patuakhali were highly affected.¹⁷ Besides, with the destruction of shrimp and fish farming, women were the first to lose their local jobs. Women whose male relatives had migrated had to earn an income and manage the household with an extra simultaneous burden of care-giving responsibilities. In a few cases, the form of *purdhah* practiced

¹⁶ With assistance from the European Commission and other international donors, an extensive detailed assessment on the damage, loss and needs was done by the Government of Bangladesh. It provided four types on the impact of Cyclone Sidr in 2007: infrastructure, social, productive and environmental. Moreover, this report included what was required for recovery and reconstruction. For more details, see Government of Bangladesh (2008).

¹⁷ Barguna and Patuakhali are cyclone-prone districts located in the southern part of Bangladesh. Patuakhali is one of the two districts selected for data collection; for details, see the methodology section.

precluded women from leaving the home unaccompanied by male relatives. The report also highlighted the poor and unfriendly conditions of shelter houses for women.

Alam and Collins (2010) examined the origins of vulnerability to cyclones on the Bangladesh coast and identified adaptation and coping strategies before, during and after cyclone disasters in light of the local people's past experiences. The study showed various causes of women's vulnerabilities to cyclones and tidal waves but failed to provide suggestions to overcome this situation. In addition to women's unwillingness to leave their homes, a mother's protective instinct, traditional dress 'saree' and long hair, *purdah* and inappropriate shelter facilities, they added lack of participation of women in decision-making and leadership roles as issues resulting in vulnerability of women.

Paul (2010: 490–491) conducted an empirical study on human injuries caused by Cyclone Sidr in Bangladesh, identifying that 'a gender bias is evident with respect to the cause of injuries associated with Cyclone *Sidr*', and noting that more women than men suffered from structural collapse, including the roof of their own residence and other structures, as they took shelter inside homes.

This was followed by another study (Paul et al., 2012) two years later that identified the impact of Cyclone Sidr on short-term nutritional status of women of reproductive age and children under 5 years. Though the Government of Bangladesh (2008) report identified malnutrition among women, Paul et al. (2012) discovered that the nutritional security situation was not much changed in the post-cyclone period compared with the pre-cyclone period, primarily because of rapid and effective distribution of essential food items among cyclone survivors by the GoB and other organisations; thus, interventions by the government and others made a difference in the post-disaster situation. However, they identified that nutritional insecurity was more prevalent in island villages relative to inland and coastline villages.

Begum (1993)¹⁸ and Ikeda (1995) conducted studies on Cyclone Gorky in April 1991, exploring the high mortality rate of women. The investigation by Begum (1993) is considered one of the earliest studies on women's vulnerability in disasters. She showed that women were severely affected by Cyclone Gorky, which also resulted in severe vulnerability of women in the post-disaster situation. Begum emphasised the vulnerability and relief distribution immediate after the disaster. Security fears especially in shelter houses, scarcity of food, warm clothes, medicine and doctors (especially female

¹⁸ Begum was explaining her own experience of Cyclone Gorky, when she distributed relief materials at union Khankhanabad of Bashkhali *Upazila* in Chittagong district, which was one of the most affected areas. This research also chooses to collect data from this place. Begum's research revealed practical experiences of women's lives after such a devastating cyclone, and her own experiences as a woman during relief distribution.

doctors), injuries and dead body management were the greatest vulnerabilities faced by the local community, specifically women. Begum added that some women could not come out for relief as their clothes were washed away in the cyclone. Women relief workers faced high security risks, which also increased obstructiveness from local male leaders and government officials. Moreover, a lack of female volunteers and women-friendly relief materials increased women's vulnerability.

Ikedda (1995) attempted to identify the causes of the high female mortality, focusing on before and during the cyclone. The author identified socio-cultural issues as responsible for women's mortality, including restrictions on women moving freely, gender-based division of labour, traditional dress saree, malnutrition and ill health, access to information and pattern of relief distribution. The researcher noted that although some studies identify the restriction of purdah as significant in the high mortality rate for women, her study revealed that this restriction is treated as flexible during cyclones.

1.6.4 Studies Relating to Disaster Law and Policies Focusing on Women

A review of existing literature found that, to date, no study has been conducted on disaster law and policies¹⁹ from a gender perspective in Bangladesh. Literature relating to existing disaster management law, policies and programs can be divided into two groups: one that provides an overview of the regulatory framework and another that analyses a specific issue in disaster management. Some studies (Khan and Rahman, 2007; Sabur, 2012; Shaw et al., 2013b) have been conducted on the disaster management system in Bangladesh, but with no focus on women. The Disaster Management Act was enacted in 2012 and the Disaster Management Policy was enacted in 2015; however, to date, there have been no reviews. The SOD was revised twice, in 1997 and 2010, yet no analysis of this significant legislation from a gender perspective has been undertaken.

In general, literature focusing on disaster management law, policies and programs in Bangladesh from a gender perspective is at an embryonic stage. Most of the literature (Austin and McKinney, 2016; Ferris et al., 2013; Fordham, 2011; Neumayer and Plümper, 2007; Rashid and Shafie, 2013) identifies the significance of the gender perspective in disaster management law, policies and programs to lessen harm from disasters. Only Arefin (2012) and Shabib and Khan (2014) analysed the existing climate change adaptation policies, such as National Adaptation Programmes of Action (NAPA) 2005 and Bangladesh Climate Change Strategy and Action Plan (BCCSAP) 2009, from a gender perspective.

¹⁹ Detailed information on laws, orders, policies and programs is included in Chapter 4. A list of existing disaster-related acts, policies, plans, rules and guidelines is included in Appendix 1.2.

Arefin's (2012: 292–295) study was the first research conducted on gendered vulnerability to climate change in Bangladesh, focusing on evaluation of policy options. Shabib and Khan (2014) discovered a wide range of dimensions of vulnerability experienced by women resulting from climate change and disaster. Still, their work confined the policy analysis to the jurisdiction of climate change adaptation policies and programs, rather than including disaster-related policies and programs. Nevertheless, they provided opportunities for policymakers and researchers to consider issues of gender in disaster management.

Although no study has been carried out to evaluate disaster law and policies from a gender perspective, three studies attempt to include discussion on the regulatory framework. Nahar et al. (2014), OXFAM and Nirapad (2011) and UN Women (2015) conducted studies on specific gender issues in disaster management. Nahar et al. (2014) made a significant attempt to examine the National Plan for Disaster Management 2010–2015 to identify the extent to which it included mental-health-related vulnerabilities of disaster-affected women in Bangladesh. They suggested the adoption of the mental health and psychosocial support framework developed by the WHO after the 2004 Indian Ocean Tsunami. OXFAM and Nirapad (2011) identified various issues relating to women's leadership in disaster management and highlighted the early warning system to analyse women's accessibility to those opportunities. Still, the limitations of existing laws and policies needed to be emphasised to identify the major obstacles of the system. UN Women (2015) undertook an exclusive study on the role of women members in the Union Disaster Management Committee (UDMC)²⁰ in Bangladesh to understand participation, perceptions and knowledge of differentiated impacts of disasters and disaster risk reduction on women and men. It found that female members of UDMCs, in most cases, were not participating in the activities of the committee as the guidelines prescribed, and failed to contribute in positive ways because of their socio-economic status, their understanding of their own capabilities, gender biases, and cultural and religious barriers in society restricting opportunities.

Bisson (2012) identified the limitations of cyclone mitigation and management policy, with a special focus on early warning systems. Among the various policy documents, she analysed the significance of the SOD and other relevant programs such as Comprehensive Disaster Management Programme (CDMP) and Cyclone preparedness programme (CPP) to early warning systems. Although the study was not done from a gender perspective, women's issues were included; for example, the vulnerability

²⁰ UDMCs are the lower level of disaster management committees working at the union level and keeping very close contact with the community. Considering the increasing impact of climate change on women, the Government of Bangladesh included female members of the Parishad union as members of UDMC. Based on the Standing Orders on Disasters, the committees carry out disaster management activities as preventive actions, mitigation measures and preparedness activities. For more detail, see Chapter 4.

of women and responses to various concerns. She identified a recent positive change in attitudes towards evacuating women and children first after an early warning regarding cyclones. She also identified a positive change in attitudes to ensuring women's safety by moving out men if the cyclone shelter is full to ensure a safe place for women.

Additionally, some scholars have criticised international and national authorities for not addressing women or gender issues in their policy regime. Bradshaw and Fordham (2013) argued that gender mainstreaming was not addressed properly in the international framework, terming it 'disaster rhetoric', resulting in limited disaster risk reduction in practice. They also argued that promoting gender may reinforce the feminisation of obligation and responsibility²¹ and policymakers and others should take into account that women are served by, as well as serving in, the disaster response and risk reduction agendas. Ferris et al. (2013) argued for a gender-sensitive approach to natural disasters, identifying that although international agencies are trying to incorporate gender in disaster management approaches, there are gaps between expectations and practice. Researchers have also found that Hyogo Framework of Action plan had not been implemented successfully—only 20% of countries had implemented the plan by 2009. Additionally, these researchers identified that women's contributions and local civil society and other organisations active to reduce disaster risk are not recognised by policy makers, development practitioners and international organisations. Finally, they argued for more research on gender and disaster and climate risk management.

1.6.5 Guidelines and Best Practice in the Relevant Field

Enarson et al. (2006) stated that a growing number of gender-sensitive policy guides, training manuals and other applications are being developed to help reduce disaster risk; however, the impact of such literature on gender-sensitive disaster risk reduction is unknown. Various international, national and local organisations are working to support women's vulnerability in disaster. Organisations have been developing best practice all over the world for their own use; IFRC, UN, UNISDR, UN International Children's Emergency Fund (UNICEF), UNFPA, UN Women and IASC are notable among these. Moreover, they have accumulated best practices developed by various governments and civil society organisations to reduce risk for women in disasters.

²¹ Feminisation of obligation and responsibility indicates that inclusion of women in development is placing women as deliverers of services and service of the development policy agendas. See for more detail Chant (2003).

IFRC (2015, 2016) identified a low level of awareness on gender needs and gender-based violence risks and patterns among key disaster responders, including government and BDRCS staff. However, IFRC did not consider the extent to which existing law and policy highlighted gender and gender-based violence in disasters.

UNFPA (2016) provided good practice developed to support their humanitarian interventions in case of sex- and reproductive-health-related complications in adolescent girls after disasters – natural and man-made. Safe spaces, mobile medical teams and youth engagement are effective ways to reach displaced, uprooted, crisis-affected girls experiencing vulnerability to gender-based violence, unwanted pregnancy, HIV infection, early and forced marriage and other risks.

UNISDR (2015b) provided a collection of success stories of women participating in disaster risk reduction and their leadership in building disaster resilience across nations and communities, which has not been adequately highlighted. Twelve selected practices from 11 countries, including cyclone examples from Bangladesh, India and Myanmar, were highlighted, to provide practical recommendations to support similar actions in future with the aim of improving gender equality and women's empowerment. However, this failed to achieve its desired objective to draw attention at the Third UN World Conference on Disaster Risk Reduction.

Some research does not directly address women in disasters, but supports an improvement in the overall situation, including disaster risk reduction. UN (2008) identified how livelihood initiatives help poor women build community resilience in Malawi, showcasing a livelihood diversification project through micro- and medium-scale enterprise development for poor women in an area where the main livelihood – agriculture – is regularly affected by drought.

UNICEF (2003) introduced life skill education tools for educating children, especially girls, to increase quality of life in various adverse situations including natural disasters and HIV/AIDS prevention. This has brought positive outcomes in many countries, such as Tajikistan (UNICEF, 2006, 2013), Somalia (UNICEF, 2010), Maldives (UNICEF, 2015) and Thailand (UNICEF, 2008).

In addition, some local, regional and international organisations have taken the initiative to develop practice and policy guidelines for gender-sensitive disaster risk management; for example, *Gender dimensions in disaster management: A guide for South Asia* prepared by Duryog Nivaran²² provides

²² Duryog Nivaran is a network committed to promoting disaster risk reduction policy in South Asia. It conducts research and provides training and advocacy to build a knowledge base for disaster risk reduction. For more information, see http://duryognivaran.org/index.php?option=com_content&view=article&id=25&Itemid=28

guidelines for disaster management practitioners. UNISDR et al. (2009) developed gender-sensitive guidelines²³ to encourage governments to incorporate gender perspectives into disaster risk reduction legislation, policies and programs. These guidelines emphasise disaster risk assessment and early warning systems. Ciampi et al. (2011) developed guidelines for gender mainstreaming in project management to develop a gender-sensitive disaster risk approach. IASC (2011) provided guidelines for promoting women's issues to facilitate a rights-based approach to disaster relief. It takes initiative to highlight the need for human rights protection in humanitarian assistance.

1.7 Research Methods

As discussed above, there is a lack on research on women's vulnerability in disasters; there has been no significant enquiry on how disaster management laws, policies and programs can and should address women's issues. This research is designed to identify the ways women are vulnerable to natural disasters and evaluate how these vulnerabilities are addressed in existing disaster management law, orders, policies and programs in Bangladesh. Banakar and Travers (2005) argued that socio-legal researchers increasingly recognise the need to engage a wide variety of methods in studying law and legal phenomena, and to be informed by an understanding of debates about theory and methods in mainstream social science. Because of the nature of this research, it uses a combined methodology borrowed from social research methods, such as observations, interviews and legal research methods such as doctrinal analysis. In addition, it interlinks this within the theoretical framework. Research methods from these diverse disciplines are used to analyse policy and legal frameworks and interpret data. Because this research is conducted on a current social issue and aims to address a real-world problem, the writer has opted to combine approaches from various sources and use a mixed methodology. As this research gives a voice to its participants through empirical methods (interviews), it includes a detailed analysis of the procedure and process used.

Figure 1.1 demonstrates how the research method is designed using various methods. This research is based on three methods: theoretical framework, empirical method and doctrinal method. The theoretical framework provides the theoretical bases of this research, as explained in Chapter 2. The empirical method uses observations and interviews, which are further divided into two types—one-

²³ These policy guidelines were developed with support from in-depth discussions at two international forums: the Third Global Congress on Women in Politics organised by the Center for Asia-Pacific Women in Politics and held in 2008 in Manila, and the International Conference on Gender and Disaster Risk Reduction, organised by the All China Women's Federation, in collaboration with UNISDR, and held in 2009 in Beijing.

to-one interviews and focus group interviews—and analysed in Chapter 3. The doctrinal method is further divided into primary data (sources of law including disaster-related laws, orders, policies and programs) and secondary data (including existing literature), and analysed in Chapters 4 and 5.

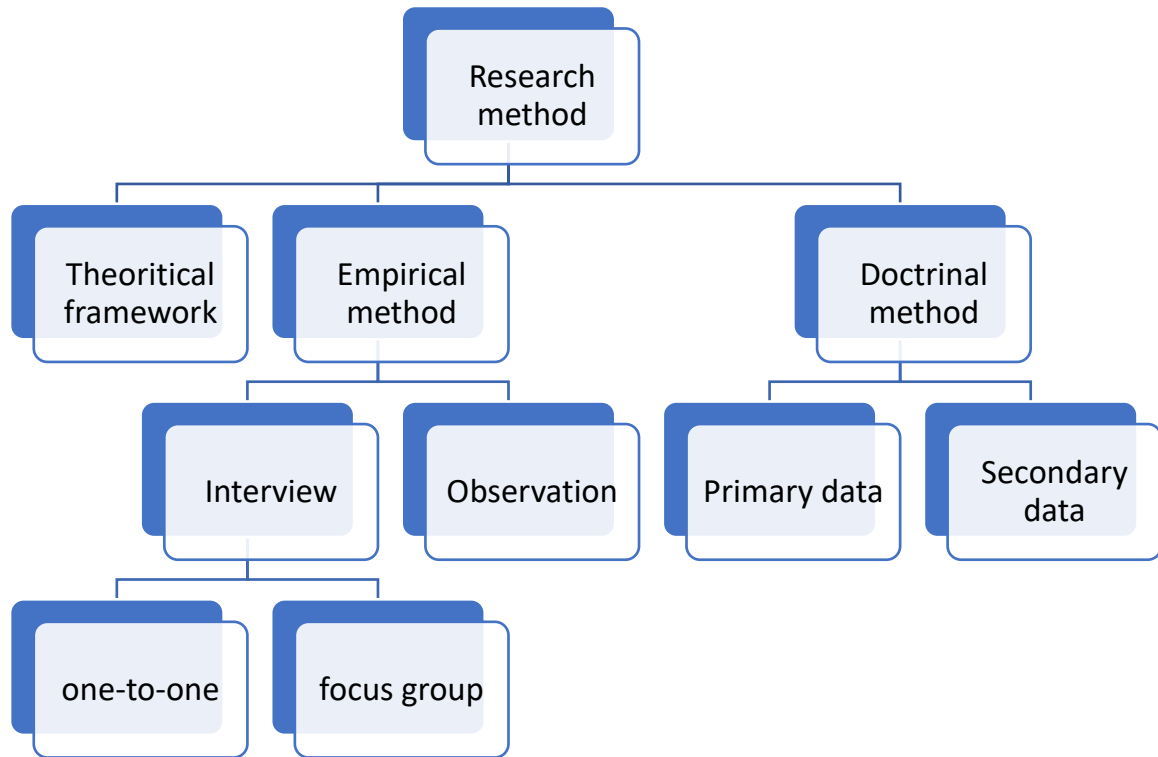


Figure 1.1: An overview of research method

1.7.1 Theoretical Framework

The theoretical framework used in this thesis relies on scholarship from various disciplines that contribute to an understanding of disaster vulnerability, feminism, the capability approach and the theory of vulnerable subjects. As explained in Chapter 2, such a framework informs the discussion of how and why women are more vulnerable than their male counterparts in everyday life and in the disaster context and how these vulnerabilities have to be addressed in the construction of legal and policy frameworks.

1.7.2 Empirical Method

Doctrinal research is supplemented with empirical research (Cownie and Bradney, 2018: 42), which has been a domain of social sciences. The term ‘empirical’, which denotes ‘knowledge based on real

world observations or experiment’, is used here to describe field-based research that uses data collected from natural settings (Flynn et al., 1990:251). Empirical research uses both qualitative and quantitative methods of data collection. Most research on disasters has been conducted using quantitative methods (Tierney, 2012). This thesis uses qualitative methods of data collection, which seek to understand lived experiences in natural settings. The data collection was carried out by the researcher through observation and interviews to explore and understand the meaning individuals or groups ascribe to a social or human problem. The following section explains sources of empirical data, details of data collection and empirical data analysis.

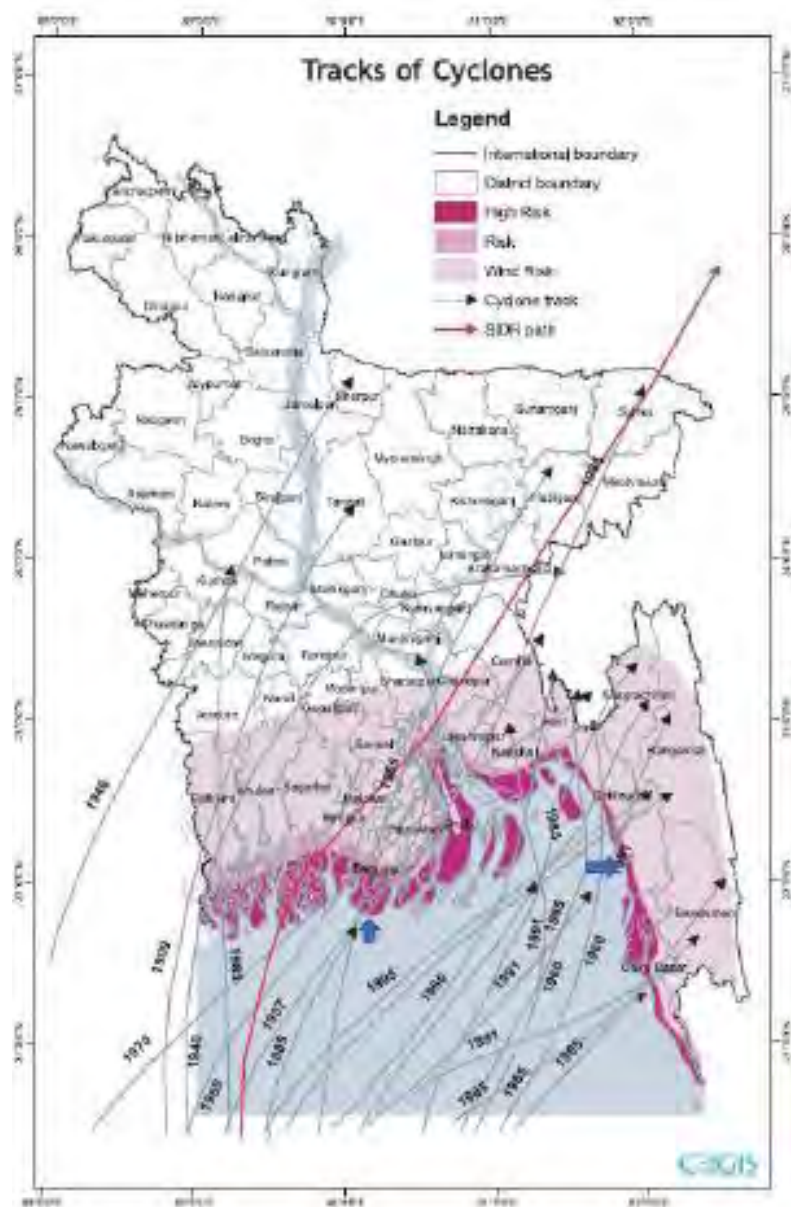
1.7.2.1 Sources of Empirical Data

Sources of empirical data were based on the existing disaster management system of the GoB, which involves various levels of administrative units and stakeholders from both government and non-government organisations. This research included the relevant stakeholders at different levels involved in the process of disaster management, aimed at presenting an accurate picture of women’s vulnerability in cyclones. The empirical research was gathered by specifically selecting locations where disasters occur, selecting the level of administrative unit and selecting organisations and participants, as discussed below

1.7.2.1.1 Selecting Locations: Districts and Upazilas

Considering the intensity of cyclones and impacts on the community, the researcher chose two districts from two different divisions: Patuakhali district from Barishal division and Chittagong district from Chittagong division. Of the 64 districts in Bangladesh, 13 are coastal districts, regarded as the most vulnerable to cyclones. As Chittagong and Patuakhali are located on the Bay of Bengal on low-lying plain country, they are prone to coastal cyclones and experience cyclone-related damage annually. Two *Upazilas* (sub-districts) were selected from these two districts: Kalapara *Upazila* from Patuakhali district and Banshkhali *Upazila* from Chittagong district.

Map 1.2 shows the tracks of cyclones over last 50 years and the location of the Chittagong district in the south-east part of Bangladesh and Patuakhali district in the southern part of Bangladesh in the Barishal district. Kalapara *Upazila* in Patuakhali district is located in the middle of the southern part of the country and stands on the bank of the Bay of Bengal. Banshkhali *Upazila* in Chittagong district, located in the south-east part of the country, also stand on the bank of Bay of Bengal. Two arrows indicate the two *Upazilas* in the two different locations. The vertical arrow indicates Kalapara *Upazila* in Patuakhali district and the horizontal arrow indicates banshkhali *Upazila* in Chittagong district.



Map 1.2: Tracks of cyclones over last 50 years and location of selected Upazila

Source: CEGIS, Dhaka cited in Ministry of Environment and Forest (2009: 11)

Kalapara *Upazila* in Patuakhali district

Kalapara *Upazila*²⁴ was visited to collect data from female community participants, community volunteers and female members of union *Parishad*, who were able to provide recent live experiences of cyclones. Union *Nilgonj* situated at the bank of the Bay of Bengal, and some parts are consistently affected by cyclones. A map showing Kalapara *Upazila* is shown in Appendix 1.8.

Banshkhali *Upazila* in Chittagong district

Banshkhali *Upazila*²⁵ was visited to collect data from female community participants, community volunteers and female members of union *Parishad*, who were able to provide recent live experiences of cyclones. Data were collected from Khankhanabad union *Parishad*, the most affected union during the recent Cyclone Roanu on 21 May 2016.²⁶ A map showing Banshkhali upazila is included in Appendix 1.9.

1.7.2.1.2 Selecting Levels of Administrative Units

The disaster management system of Bangladesh jointly functions with the general administrative apparatus working in the field, which is divided into district, *Upazila* (sub-district) and union. The researcher visited the district headquarters, *Upazila* headquarters and union *parishad* from those selected locations. District government officers working as district relief and rehabilitation officers

²⁴ Kalapara *Upazila* is located in between 21°48' and 22°05' north latitudes and in between 90°05' and 90°20' east longitudes. It has a land area of 483.08 sq km. it is bounded by Amtali upazila on the north, Bay of Bengal on the south, Rabnabad Channel and Galachipa upazila on the east, Amtali upazila on the west. Kalapara *Upazila* is a densely populated *Upazila* where a total population of 237,831 (120,514 men and 117,317 women) live on a small area of 491.89 km². Average literacy is 52% and the number of cyclone shelters is 74. The major source of income is agriculture (57.23%) and most of the population live by catching fish and processing dry fish, which is affected by the recurrent cyclones every year. The number of hat-bazars is 27, poultry farms 225, dairy farms 144, nurseries 18, and brick kilns 8. Kalapara is a tourist attraction and has a higher standard of living than Banshkhali. For more information, see Bangladesh Bureau of Statistics (2013) and Islam (1999).

²⁵ Banshkhali *Upazila* is located in between in between 21°53' and 22°11' north latitudes and in between 91°51' and 92°03' east longitudes. It has a land area of 376.90 sq. km. It is bounded by Anwara *Upazila* and Sangur river on the north, Chakaria upazila on the south, Lohagara and Satkania upazilas and wide hilly regions on the east, Bay of Bengal, Kutubdia channel and Kutubdia upazila on the west. Banshkhali *Upazila* is a sub-district of *Chittagong*, with 376.90 km² of coast-lying land. It has a total population of population of 431,162 (212,011 men and 219,152 women) and average literacy rate of 37.4%. Compared with the total population, the number is cyclone shelters (117) is low. Most of the population depends on agriculture (58.73%) for their living. There are 35 hat-bazars, 21 poultry farms, 13 dairy farms and 27 nurseries. Among the 15 unions, the smallest part of the sub-district, Khankhanabad, was selected, as it had been hit by the most recent cyclone before the fieldwork was conducted. Moreover, because of its geographical location, Khankhanabad is the most cyclone-affected union. Union Khankhanabad is situated at the bank of the Bay of Bengal, and considered the most vulnerable place in that district. The Government of Bangladesh is undertaking a project to build a dam to save it from sea erosion. For more information, see Islam (1999) and Ministry of Planning (2013).

²⁶ Cyclone Roanu is the last cyclone that landfall Bangladesh before my filed visit for data collection. Chittagong district was highly damaged during Roanu. It caused damage to 13 districts and killed 24 people. For more details, see Department of Disaster Management (2016). As Khankhanabad Union was one of the most affected union, it had been chosen to develop a deeper understanding of the experience of cyclone among the community members.

and heads of sub-districts, known as *Upazila Nirbahi* officers, were interviewed to understand the nature of disaster management approaches of Government. These are the two most relevant positions in the field administration working for disaster management and relief. Participants from the local and community levels were selected from their two unions, Nilgonj and Khankhanabad.

Figure 1.3 shows the four levels of administrative units for disaster management in Bangladesh, highlighting the units of the data collection. The relevant ministries, international organisations and others operate at the national level. The Ministry of Disaster Management and Relief (MoDMR), the apex body for disaster management, operates with support from DDM, to regulate and operate disaster management activities of the districts and other local-level administrative units such as *Upazila* and unions. At the district level, the Office of the Deputy Commissioner works to support Government activities relating to disaster management. At the *Upazila* level, the office of the *Upazila Nirbahi* officer (UNO) and at the union level, the union *Parishad* carry out the responsibilities of Government relating to disaster management. Figure 1.3 shows the higher- to lower-level units; relief distribution and other related programs are managed and controlled through these levels.

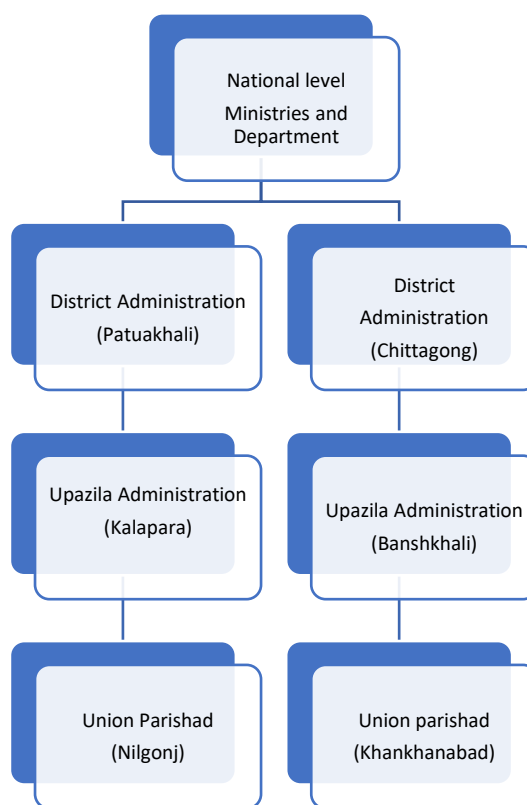


Figure 1.3: Levels of administrative units

1.7.2.1.3 Selecting Organisations: Relevant Stakeholders

Various organisations are involved in the process of administrating and implementing disaster management and women-related laws, policies and programs in Bangladesh. Based on relevance and involvement, nine major categories were sampled: government officers from the national level, government officers from the field level, non-government organisations, international agencies, scholars, CPP staff, CPP volunteers, local political representatives and vulnerable women. A list of categories is included in Appendix 1.5. The first category involves government officers from the national level, further divided into MoDMR and Ministry of Women and Children Affairs (MoWCA). These are the two most relevant ministries for this research. The second category includes government officers from the field administration, which includes the Office of the Deputy Commissioner at the relevant district and UNO at the relevant *Upazila*. The third category consists of NGOs working at the *Upazila* level to support community victims of cyclones. In case of cyclone disaster management, both international agencies and local NGOs play a substantial role. Among various international agencies, IFRC has played the most significant role since the 1960s. In addition, the inclusion of gender in disaster management is emphasised by UN Women, which is now working with the GoB to address vulnerability of women in disasters. They are included as the fourth category. The fifth category includes scholars working on disaster management and gender,²⁷ as they have played a significant role in including gender in disaster management in Bangladesh. The sixth category includes CPP staff from Patuakhali and Chittagong, the seventh includes CPP community volunteers from Nilgonj at Kalapara and Khankhanabad at Banshkhali. CPP is the on-going program of the government to support the community closely during cyclones, and has played a vital role in reducing the number of casualties during cyclones. Female members from union *Parishad* who are also members of UDMCs were included as the eighth category. Finally, women from the community were included in this project to examine how they faced vulnerability pre-, post- and during disaster and their suggestions to overcome these vulnerabilities.

1.7.2.1.4. Selecting Participants: Sampling for Interviews

Sampling was used to gain a better picture of the overall situation. The purpose of a sampling technique is to make relatively few observations but gain an accurate picture of a large population (Babbie, 2008: 238). Based on the nature of the research questions, this researcher followed a stratified

²⁷ Some public and private universities in Bangladesh offer courses on disaster management. Scholars from those universities are working on disaster management and gender, and have made significant contributions to gender and disaster management in Bangladesh. Participants were selected based on their work experience.

sampling method based on the various stakeholders involved in the disaster management process. Greener (2011:21) described stratified sampling as a process of dividing the population based on ‘characteristics that are regarded as being key to the study (be they age, gender, ethnicity, or whatever else), and then each category is randomly sampled within that in order to get participants’. He considered this method of sampling ‘to be a more reliable and informed way of sampling and the research group is being selected in a way that links to the research questions and so is being thought about in a more careful and systematic way than relying upon randomness to rule out bias during the study’ (Greener, 2011: 65–66).

This research also used purposive network sampling after the stratification, where the researcher made ‘initial contact with a small group of people who are relevant to the researcher topic and then uses these to establish contacts with others’ (Bryman, 2008: 184). In purposive sampling, the enquirer intentionally selects participants who have experienced the central phenomenon or key concept being explored in the study (Creswell, 2011). In this research, participants were selected based on the requirements of the research question and categorised participants were initially contacted to identify other participants with relevant experiences.

Figure 1.4 provides an overview of the sampling selection across three levels: national, local and community. It also includes the name of the organisations at three different levels of sources. A detailed discussion on this diagram is given below, following the level of sampling sources (national, local and community).

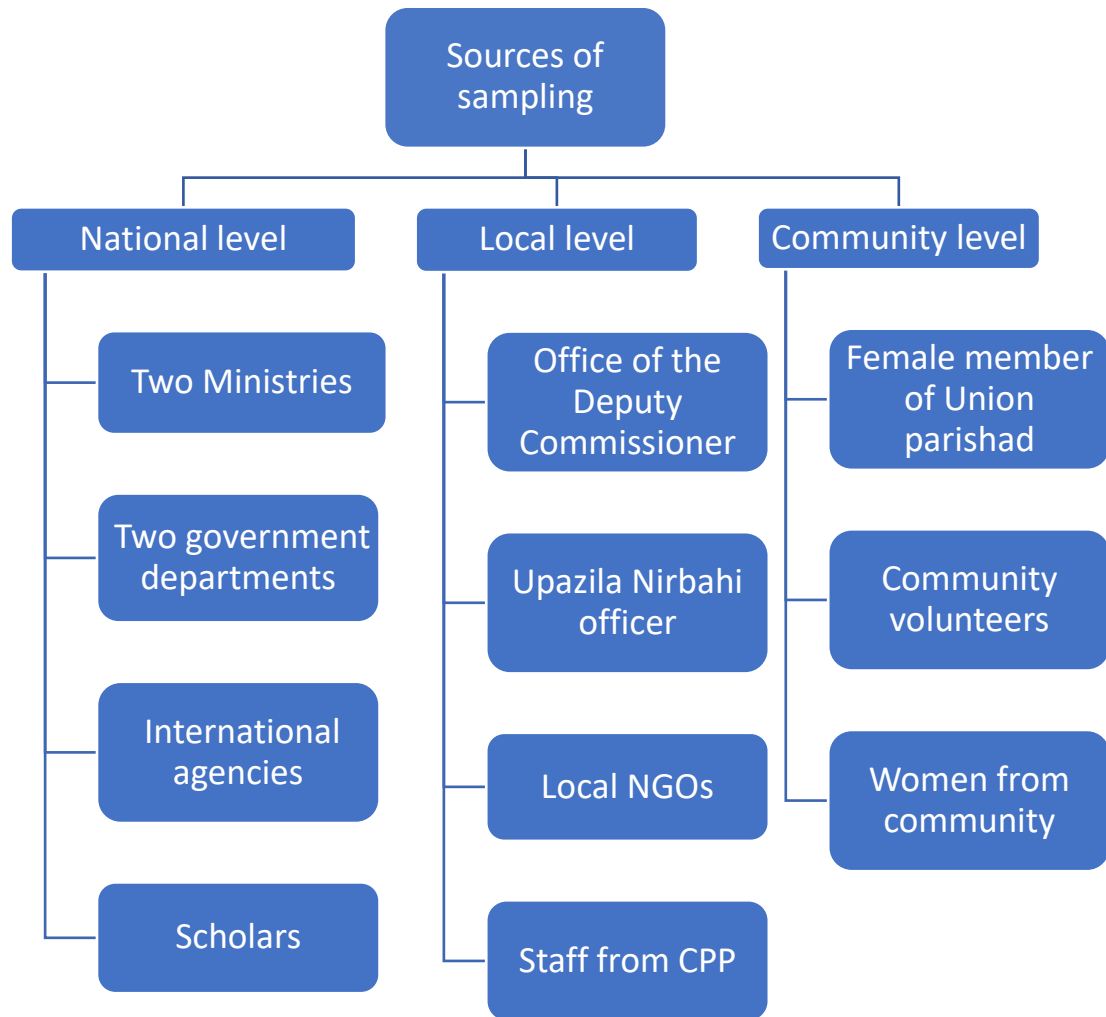


Figure 1.4: Sources of sampling

At the national level, two officials from MoDMF and one officer from MoWCA, the two ministries most concerned with disasters, were included in the semi-structure interview. Two officers from DDM (Department of Disaster Management) and one from DWA (Department of Women Affairs) were also included. In addition, a participant from IFRC and another from UN Women were interviewed. Apart from these, two scholars were also selected, based on their relevance and long experience working with gender and disaster management. They were chosen from the Institute of Disaster Management and Vulnerability Studies at Dhaka University, which has experience working with government on gender and disaster management.

Local-level participants included those from the district and *Upazila* levels. At the local level, two government officers from the Office of the Deputy Commissioner, which is the focal point for disaster management at the district in Bangladesh, were selected. The District Rehabilitation and Relief Officers and Project Implementation officer are included. *Upazila Nirbathi* officers (chief executive officers) from two *Upazilas*, Kalapara and Banshkhali, were interviewed. Two participants from local

NGOs working in cyclone areas were also interviewed, to learn about the impact of cyclones on women and perceived existing policy limitations.

Finally, from the community level, data were collected from four female union *Parishad* members, four community volunteers and 10 vulnerable women from the community, one union *Parishad* from each *Upazila*. They were evenly distributed between the two union *Parishads* from the two districts.

1.7.2.2 Sample Size and Characteristics

Altogether, 36 participants from different stakeholder groups were approached over a period of three months living in Bangladesh. The 36 participants cannot be seen as representative of the whole of Bangladesh. However, they reflect the types of communities that are vulnerable and most badly affected by cyclones in the coastal districts of Bangladesh. There is bias involved in this sample. However, as the thesis is about vulnerability faced by women in the cyclone prone areas, it is considered that this sample would provide the best evidence for interrogation. The bias was removed through the consideration of other evidence including the opinions of government, the study of official reports and policy, and the other literature.

The age range for the participants was 25–60 years. Both male and female participants were included. While 10 community members and four union *Parishad* members from two union *Parishads* were exclusively from women, the remaining 22 participants were included regardless of their sex. They were asked information about existing laws, policies and other issues relating to their job experiences regarding cyclone disaster management. Government officials from the central and local administration, national and international NGOs, scholars and community volunteers were selected based on their relevant work experience on gender and natural disasters, not on their ethnic or gender identity. For the community participants, they were also required to have some experience with coastal cyclones. No specific ethnic communities or groups or participants with cognitive impairment, intellectual disability or mental illness were included in this research.

As a qualitative study, sample size is important but not the only criterion. The researcher selected appropriate participants to meet the objectives of the research. As the aim of the research is to examine the extent to which the GoB has taken women's experiences into account in the creation, administration and implementation of disaster management policies with a special focus on coastal cyclones, participants having relevant knowledge and experiences were given highest priority. The Government is the major actor in disaster management in Bangladesh. However, there were groups from both within and outside the Government, as they also play a significant role in disasters,

influencing and implementing policies and programs. A detailed list of participants' characteristics is included in Appendix 1.6.

Of the two officers from MoDMR, one was the key officer working to introduce a comprehensive disaster management approach and gender in disaster management in Bangladesh. The other had both academic and professional qualifications on gender and disaster management from 2000. Two officers from DDM were also included; one had worked more than 22 years on disaster management in that department and the other had 14 years work experience both implementing disaster management policies in the field and formulating policy at DDM.

A further participant from MoWCA was working as a focal point to coordinate gender and disaster management activities between MoDMR and MoWCA at the time of interview. Further, a participant from DWA was included to learn about the involvement and interventions of this department on gender and disaster management.

At the local level, the district relief and rehabilitation officer (DRRO) from Patuakhali and a Project Implementation Officer from Chittagong were interviewed. The relevant *Upazila* chief executive officers from the selected *Upazilas* (Kalapara from Patuakhali and Banshkhali from Chittagong) were interviewed, with both having experience working in cyclones. One had worked during the mega Cyclone Sidr in 2007 and the other had experience working in Cyclone Mahasen in 2013. As the CPP is a major Government program (previously, an IFRC program), two staff from two districts were included. In addition, two participants from two NGOs (Caritus and YPSA) with experience working in those selected localities during Cyclones Sidr and Roanu were also interviewed.

At the community level, four female union *Parishad* members – two from each *Upazila* – who had worked in the UDMC and with the community during previous cyclones were involved. In addition, four community volunteers, two from each union, involved with warnings, rescue and other emergency activities in cyclones, were interviewed. Finally, vulnerable women from the community, having more than 20 years of experience, were included in this process.

1.7.2.4 Methods of Empirical Data Collection

The total process took about three months, from April 2017 to June 2017. This is one of two cyclone-prone seasons (April–May), and most natural disasters take place during this time of the year. During the visit, Cyclone Mora hit the coast of Chittagong on 30 May 2017, which is one (Khankhanabad) of the two union *Parishads*. The researcher also visited the relevant ministries located in Dhaka to collect

necessary documents and conducted interviews of the policymakers at the national level. The researcher also stayed in the two locations and assembled data from the local and community levels.

Interviews and observations were the two most important strategies used to collate the empirical data used in this thesis. The following section provides details on the interview and observation methods used in the process of data collection.

1.7.2.4.1 Interviews

Because of the nature of the research, the researcher chose to conduct semi-structured interviews, in which ‘a set of issues to be explored’ is advanced (National Health and Medical Research Council, 2007: 24). The interview process, here, was flexible, responding to the direction in which the participants took it, with adjustments to the emphases of this research as a result of significant issues that emerged in the course of interviews. Participants were encouraged to talk freely and give their opinions and evaluations of the efficacy of the existing disaster management system. They were asked to give their views and experiences of the impact of natural disasters on women and identify the nature of vulnerability they experienced or the experiences of others they had come across.

Depending on the nature of the participants, different questions were asked. The central- and local-level participants, government officials, NGO workers and scholars were asked to focus on the existing policies and programs. The major emphasis was given to how the Government is addressing women’s vulnerability, and could address it, to assist women to increase their resilience. The community participants were asked about various issues, with a special focus on their experiences of coastal cyclones, providing an insight into women’s experiences before, during and after cyclones. The set of questionnaires is included in Appendix 1.7.

Based on the nature of data required and the type of participant, two types of interview method were used for data collections: one-to-one interviews and focus group interviews.

One-to-one Interviews

Some 26 participants from national, local and community levels were included in the one-to-one interviews. Government officers, international organisations, NGO activists, scholars, CPP staff, union *Parishad* members and community volunteers were involved in this process as they were more willing to speak and felt less shy to communicate individually.

Focus Group Interviews

The focus group interview method was used for the 10 female participants from the community who had experienced cyclones in recent years. A focus group is an informal discussion among a group of selected individuals about a particular topic (Wilkinson 2004, cited in Liamputtong, 2011: 4). Feminist researchers are increasingly using focus groups as a mode of data collection (Liamputtong, 2011: 14). Measures were taken to reduce bias in the selection of participants in focus groups. Women from the community were chosen based on the criteria, that they resided in locations where disasters occurred in the districts of Kalapara upazilas and Banshkhali upazilas. The ten women participants were chosen through referrals. These referrals came from CPP volunteers, NGOs, and local elected representatives. The possibility of bias in the selection of these participants is acknowledged. However, as the referrals came from a range of bodies, the bias has been minimized.

Data from the affected women are regarded as the most important data for this research, as they are not usually heard. Because of the exclusive nature of the focus group, the researcher considered it the most suitable mode for collecting data from women affected by cyclones in coastal areas. As a research method, it allows group dynamics, assisting the researcher to identify shared lived experiences (Liamputtong, 2011: 5) and explore implicit aspects of disaster or daily life. Women living in the community are vulnerable not only to cyclones and other natural disasters but in real-life situations. The focus group allowed them to discuss, interact and argue with each other to establish the truth. Their conversation led them to disclose many hidden stories that had never been told before and that they might have felt shy to express alone. Maximum flexibility was ensured so that the community participants could communicate freely with the researcher. There were five female participants from Khankhanabad and Nilgonj union *Parishads* from the two districts.

1.7.2.4.2 Observation

To identify the nature and extent of vulnerability, observations were used as an analytical tool in this research, cropping up from time to time throughout the thesis. Empirical data were also analysed based on observations made during the field visit. Several pictures were added to support the arguments that reflect social norms contributing to women's vulnerability.

1.7.2.5 Empirical Data Analysis

Each group had different perspectives, experiences, opinions and ideas, which helped the researcher to collect more insightful information. For example, there were 10 government officers interviewed,

providing data on the existing system of government disaster management, plans and interventions. The government officials were from both central and field administration, working on policy formulation and implementation. The officials from the central administration provided information about the existing policies and government plans for gender mainstreaming, while the government official from the field provided data on implementation of these policies and procedures. There were two NGO workers from national organisations and two from international organisations interviewed. They offered information on government interventions on disaster management and contributed to identifying the limitations of those interventions from outside of government. Participants from NGOs who had experience working on disaster management were involved, to provide their ideas, opinions and information from their experiences. They helped the researcher view data from a different perspective. Moreover, two scholars shared with the researcher views and opinions of academic researchers who are not involved in the process of disaster management but have had experience working with vulnerable communities and other people involved in the process. The four community volunteers had a unique position as both members of the community and aid workers during cyclones. They assisted the researcher on the pros and cons of the implementation process and the problems faced by women both as volunteer and community members during cyclones. The 10 women members of the local community told the story of the actual needs of women and the services provided to them by the government. The researcher tried to reflect on the desired policy recommendations from the experiences of the women participants. The researcher felt that the community members were in a situation to truly reflect the needs of women. These interviews from the various groups identified insights into women's vulnerability in cyclones and assisted the researcher in providing effective policy suggestions.

1.7.2.5.1 Analytical Tool for Empirical Method

Data analysis in qualitative research consists of preparing and organising data for analysis, then reducing these into themes through a process of coding and condensing, and finally representing the data in figures, tables or a discussion (Creswell, 2007: 148). This research used content analysis to identify concepts and explore the relationships among them.

Three main issues were analysed as key concepts relevant to this research. These included discussion on the various forms of vulnerability faced by women, how the GoB addressed these vulnerabilities, and finally, how the response to disaster management could be strengthened. In both the one-to-one interviews and the focus group, participants highlighted stories from their experiences, which are used as examples in the discussion in the thesis.

1.7.2.5.1.1 Coding

The most prevalent form of qualitative analysis is coding (Maxwell, 2015), which is the process of generating ideas and concepts in qualitative research. The coding process refers to the steps the researcher takes to identify, arrange and systematise the ideas, concepts and categories uncovered in the data (Benaquisto, 2012). Here, the researcher created codes prior to data collection and modified and recreated some of these after the data collection. To identify the nature of vulnerability faced by women, this research developed concepts and hypotheses in advance, and categorised major codes that were deductively derived from existing theory and borrowed from the extant literature, with some modifications considering the context of Bangladesh. The existing literature revealed that women faced vulnerability more extensively than men. Some literature identified the various dimensions of women's vulnerability. Based on the existing literature and empirical data collected from the field visit, the research developed five major concepts of vulnerability faced by women (see Chapter 3). Raw data collected from the field were divided among these five major concepts. The transcript data were examined and re-examined several times to identify the kinds of vulnerabilities participants explained and which type of vulnerability they emphasised. Based on their data, they were placed into the major categories identified during the review of existing literature on gender and disaster management. The participants' data, in the form of stories, were collected and quoted to support and provide evidence for the existing literature and add to it.

In the process of developing recommendations for improving the current disaster management process and the hopes of participants, this research followed an inductive approach, which recognises the common patterns of ideas and concepts from interview data. These common ideas and concepts were merged in the discussion as appropriate. During this process, the first step was to read every detail of the transcript and identify major subthemes or sub-codes. This led to identifying the commonalities, which were then grouped into a bigger theme and coded accordingly. This process, thus, followed the open coding procedure, and continued until nothing new or interesting emerged. When a new code emerged, the researcher refined the existing codes and reread data to identify gaps in the information. The data were reviewed several times to identify gaps. Further, the researcher kept 'memos': notes on insights, patterns and connections to analyse data and draw conclusions. Finally, these codes were reassessed to synthesise into a meaningful conclusion.

1.7.3 Doctrinal Research

The Pearce Committee (cited in Hutchinson, 2018b: 7) defined doctrinal research as ‘research which provides a systematic exposition of the rules governing a particular legal category, analyses the relationship between rules, explains areas of difficulty and, perhaps, predicts further developments.’ This method entails a critical analysis of the existing literature to inform the researcher of ‘what is known and not known about the topic’ (Walter 2010 p. 485, cited in Hutchinson, 2018a: 18).

The doctrinal part of this research is basically based on primary data which is primary sources of laws. According to Hutchinson (2018a: 18), ‘In doctrinal research, primary data consist of the sources of law’. Before selecting legal and policy documents for this research, the researcher examined the relevant existing policies, rules, regulations and acts of the GoB and the relevant frameworks and conventions of international agencies and chose the most relevant examples likely to have a significant impact on the disaster management system in Bangladesh. The doctrinal method utilised document or textual analysis to identify the extent to which women’s vulnerability in disasters has been incorporated.

1.6.5.1 Sources of Data in the Doctrinal Method

1.6.5.1.1 Sources of Primary Data

There are several national policies relating women, climate change and natural disasters in Bangladesh significant to understanding the disaster management system of the country. A list of relevant laws, policies and guidelines is included in Appendix 1.2. The most relevant documents on disaster management—The Disaster Management Act of 2012, SOD 2010, Disaster Management Policy 2015 and the CPP—are analysed using doctrinal method in this research. In addition, the Ministry of Environment and Forest (MoEF), the MoWCA, the DWA, the MoDMR and the DDM have developed many other relevant acts, rules and policies which have been referred to this discussion.

1.6.5.1.2 Sources of Secondary Data

In this research, secondary materials including reports from governments, international organisations, non-governmental organisations and other agencies, and research publications, institutional blogs and consultants’ reports were also studied. Some of these documents were written in Bengali, which is the native language of the research, and therefore, those resources were not translated.

1.6.5.2 Doctrinal Analysis

The doctrinal method has two parts: locating the source of the law and interpreting and analysing the law (Hutchinson, 2018a: 18). This research interpreted and analysed the most significant laws, orders and policies in disaster management, identifying and evaluating these texts to gain a better understanding of the gender gap and develop in-depth knowledge. This thesis utilised this method to identify the enumerative approach to both quantify the frequency of the core concepts and other variables that have an impact on the core concepts. More priority was given to the interpretation and implementation of these documents, rather than the amount and frequency of occurrences. In doing so the empirical data provide the framework for analysis. The empirical data identified the women's vulnerability in natural hazards and their underlying causes; and revealed that how far these are reflected in the existing relevant legal framework.

1.8 Structure of This Thesis

With the objective of better understanding women's vulnerability in the context of disaster management in Bangladesh, this thesis is divided into seven chapters.

Chapter 1: The introductory chapter provided an overview of the research, which includes the statement of purpose, defining the key terms, scope of the research, significance of the research, research questions, objective of research, literature review and research methodology. It offered the conceptual and practical background of this research, the gaps in the existing literature and the contribution of this research. This chapter identified that very limited research has been done on cyclone vulnerability of women in Bangladesh and no research has been conducted to review the existing law, orders, policies and program on disaster management from gender perspective in Bangladesh. Moreover, most of the research on disaster vulnerability is conducted based on quantitative data.

Chapter 2: This chapter includes the theoretical framework of this research by forging liberal feminism, legal feminism and disaster vulnerability theory. More specifically, it draws heavily from the capability approach developed by Nussbaum and the vulnerability subject developed by Martha Fineman. Vulnerability theory might be the most widely used theory for explaining social and environmental aspects of natural disasters; however, this theory has failed to adequately address

women in the scholarly discussion. Considering this feature of vulnerability theory, this research tried to draw a relationship between vulnerability theory and gender analysis.

The discussion in this chapter is in three sections. First, it focuses on women's vulnerability in feminist theory and discusses feminist legal approaches that emphasise that women's experiences are not adequately reflected in legal frameworks. It summarises Fineman's vulnerability analysis, which calls for the state's role to be redesigned to support the vulnerable subject. It relies on Nussbaum's capability approach to provide guidelines on how women's different experiences can be considered part of policy development. Second, this chapter examines how vulnerability theory can allow us to consider the various dimensions of women's vulnerability during disasters. Third, it maps how women's vulnerability can be placed within the disaster discipline and within approaches to disaster management.

Chapter 3: This chapter analyses the empirical data collected from the field visited to identify how women are vulnerable to disasters with a focus on cyclones, cataloguing the causes of these vulnerabilities and how they can be resolved. In doing so, this chapter relies extensively on the inductive method, and data were collected from the most relevant population from the various relevant groups and two vulnerable locations of Bangladesh. Data analysis revealed that there were various aspects of vulnerabilities faced by coastal women, which can be categorised into five types: biological, economic, socio-cultural, political and organisational.

Data analysis also reveals that each of these categories of vulnerabilities has a major concern emphasised by the participants. The findings show that the biological dimension of women's vulnerability must be addressed, by focusing on increasing self-consciousness²⁸ among women. The economic dimension is likely to be influenced by the social exclusion of women from economic resources (supply chain), and strategies should be developed to provide access to resources and the public domain. In the case of the political dimension, more focus is required on capacity building for women as decision makers and leaders in the household, community and nation. The socio-cultural

²⁸ Self-consciousness, in this thesis, indicates something in between self-awareness, perception about self or the worth of oneself as a human being. Usually it is often in English, used to mean 'shy' or 'anxious' or 'ashamed' i.e. the negative side of self-consciousness, whereas here it is more in the sense of self-awareness perception about self or the worth of oneself as a human being – knowing and understanding value of self in the society, family or community – the positive side of self-consciousness. When a woman understands the value of herself, she will be able to balance her life with others. She will be able to take right decision of saving her life and the life of her dependent and belonging in a more rational way rather than placing her life in risk.

dimension of vulnerability suggests that the existing disaster management approach should further stress changing patriarchy through social awareness raising to develop a more women-friendly environment. Finally, the organisational dimension of vulnerability involves highlighting a more gender-sensitive approach and successful implementation of the existing gender-sensitive approach for disaster risk reduction.

Chapter 4: Based on the empirical data, this chapter examines the extent to which existing disaster-related laws, orders, policies and CPP address women's vulnerability in natural disasters. Using the findings from the field visit, the Disaster Management Act 2012, SOD 2010, Disaster Management Policy 2015 and CPP are analysed in this chapter, resulting in the finding that the major legal and policy framework has failed to emphasise women's vulnerability in disasters. This chapter also describes the supporting organisational set up for disaster management in Bangladesh to examine how women are represented. It reveals that women are less or even not represented at the top disaster management positions and few represented at the bottom. The number of representations of female member is gradually less at the top decision-making position and more at the bottom where they have fewer opportunities to contribute.

Chapter 5: This chapter highlights the significant international treaties that shape the principle of equality in the global arena. It includes the extent to which the relevant conventions and frameworks relating to disaster risk reduction have addressed women's vulnerability, using the categorisation of vulnerability to identify how the ultimate causes of vulnerability are addressed. This chapter shows that the international community have influence the disaster management system in Bangladesh. Still they are less emphasizing on gender aspect in its core interventions strategies specially in case of monitoring and evaluation of its intervention strategies.

Chapter 6: This chapter proposes recommendations on how disaster management in Bangladesh can be more responsive to women's needs. This thesis argues that as the pre-existing unequal situation is the major cause of vulnerability of women in disaster, this needs to be changed to develop effective mechanisms for disaster risk reduction. The chapter suggested six major areas of redefining the role of the state in addressing women's vulnerability. These six basic principles include collate further information on women's vulnerabilities, reorganize regulatory framework considering women's vulnerabilities, working with other organizations to develop best practices, coordinate the responses of government departments at all levels, form partnership with businesses to develop women's resilience and emphasize the importance of implementation, monitoring and evaluation to develop

operational mechanism. This chapter recommends twenty-one strategies for addressing five categories of women's vulnerability in disasters.

1.9 Conclusion

It is well established that women are more vulnerable to natural hazards, and that the increasing rate of natural hazards is placing them in a more susceptible situation. Scholars and development practitioners have argued that the Government has failed to provide adequate attention to gender aspects of disasters. Based on those arguments, this thesis identifies the extent to which the vulnerability of women is addressed in the existing disaster management policies and programs, with a special focus on cyclones in Bangladesh. Understanding the impact of natural hazards on women, however, requires addressing the multi-faceted nature of vulnerability of women. This research uses both empirical and secondary data to discover the nature and extent of women's vulnerability. As discussed above, various means of data collection were utilised to depict an accurate picture of the situation. To conceptualise and theorise the vulnerability of women in disasters, this thesis provides a theoretical analysis of gender and vulnerability in the following chapters.

Chapter 2: Theoretical Framework

2.1 Introduction

This thesis argues that gender equality is central to reducing disaster vulnerability. This chapter develops the theoretical framework used to analyse how and why women are particularly vulnerable. The previous chapter set out how women's experience has been largely understudied and underrecognised in disaster research, especially in the case of developing countries such as Bangladesh. As identified, the existing literature explains why and how women experience natural disasters differently than men and suggests that policy makers and development practitioners should focus on women while formulating and implementing laws, policies and programs. Yet, research identifying the priorities and intervention strategies of disaster-related laws, policies and programs is in its infancy.

Theory and theoretical frameworks have a very significant role to play in research. According to Swanson and Chermack (2013: xi), theory is a 'specific realm of knowledge and explains how it works'. Muhammad (2018: 1) argues that every discipline must contain a well-defined, prescribed, comprehensive and concrete body of knowledge for rational and professional progression. Theory articulates how to understand, explain and predict a phenomenon and, in many cases, to challenge and extend existing knowledge. A theoretical framework is a structure that can hold or support the theory of a research study. It depicts how this research fits into what is already known and how this research contributes to the field. Theoretical framework also provides a brief discussion on the relevance of applying these approaches and theories.

Scholars view the unequal position of women in the social system as the ultimate cause of differential impact of disaster vulnerability (Enarson, 2012; Reyes and Lu, 2016; Zakour and Gillespie, 2013). The unequal position of women is widely analysed by feminist scholarship. This chapter begins with feminist theories on the premise that these provide an appropriate perspective on how law and policy could develop to address women's vulnerability in disasters. As 'no single theoretical lens frames disaster research on gender' (Enarson et al., 2006: 130), feminist scholarship and vulnerability theory are brought together to develop a suitable framework for this thesis. This position is also supported by Enarson et al. (2006), who identified that most researchers use insights freely borrowed from all perspectives.

The construction of the theoretical framework for this thesis merges relevant feminist theories and leading scholarship in disaster management to develop a deeper understanding of the concept of vulnerability to provide an integrated approach for women, as individuals and members of institutions. The principle of equality guides the philosophical perspective of this research. Using different approaches and theories from three major relevant disciplines (disaster management, law and women's studies), this framework presents the justification for the theoretical analysis of women's experiences in natural disasters.

Feminist theory is explicitly deployed in this thesis as the most suitable theoretical lens for analysing social relationships, to provide a deeper understanding of the cyclone vulnerability specifically faced by women in the coastal areas in Bangladesh. To develop the theoretical framework, the following section brings together legal feminism focusing on Fineman's vulnerable subject based on difference debate and liberal feminism focusing on the capability approach. The liberal feminist approach explains the differential impact of natural hazards on women from a liberal point of view. Further, the capability approach provides 10 'basic criteria' of quality of life for women, which are applied in the disaster context as guidelines to reduce women's susceptibility to hazards. In addition, the 'difference debate' of legal feminism assists to analyse the existing legal framework to identify the gaps causing women's vulnerability. In doing so, this thesis highlighted to identify and extend the multi-dimensional aspects of women's vulnerability to cyclones in Bangladesh to detect the underlying causes with the purpose of pinpointing Government intervention strategies.

This chapter is divided into three parts. The first concerns women's vulnerability in feminist theory and how feminist legal approaches view women's unequal experience in society and their argument that this should be reflected through the legal framework. This section also includes Fineman's vulnerability analysis, which argues that the state's role should be reframed to address the vulnerable subject. Moreover, the all-embracing capability approach of Nussbaum is also included to provide guidelines on how women's differentiated impact can be resolved. The second section assesses women and vulnerability during disasters using vulnerability theory, while the third section locates women's vulnerability in the disaster discipline and disaster management approach.

2.2 Women and Vulnerability in Feminist Theory

Liberal feminist and legal feminist theories relating to women's unequal experience in society have grappled with how and why women's experiences are different to men. These theories can be a source of better understanding of women's experiences in disaster. Feminist theory is a wide-ranging field,

and feminists have contributed to the debate from different angles: liberal, radical,²⁹ and Marxist,³⁰ to name a few. Lorber (1997: 7) summarised this, saying that ‘each perspective has made important contributions to improving women’s status, but each also has limitations’; that they have ‘changed as the limitations of one set of ideas were critiqued and addressed by what was felt to be a better set of idea about what women and men were so unequal’. Recent scholarship³¹ indicates that women’s differentiated impact of natural disasters and disaster vulnerability is the result of existing day-to-day discrimination, inequality, past experiences, social exclusion and patriarchy. However, it appears that mainstream feminist theories have yet to acknowledge women’s experience in a situational context such as natural hazards.

Liberal feminist theorists propose that ‘gender differences are for the most part socially created’ (Enarson et al., 2006: 131); this thesis emphasises the liberal feminism approach to the analysis of the disproportionate impact of disasters on women. In stressing the ‘similarities between them and arguing that women can be as capable and as rational as men’ (Davies, 2010: 2), liberal feminism which evolved from liberalism³² (Tong, 2016: 11), which ‘viewed men and women as equal’. Bradshaw (2013: 44) claimed that liberal feminists pursue equal rights with men and argue that women and men should be rewarded based on their talents, not their sex. However, it is argued that ‘women’s situation stems from the aggregation of numerous small-scale individual deprivations’ (Bradshaw, 2013: 44), providing a basis for identifying these small-scale deprivations in disasters to develop strategies to address them.

²⁹ Patriarchal relations are central to understanding women’s subordination for radical feminists, who suggest that men as a group oppress women by calling on the ‘naturalness’ of men’s domination (Bradshaw, 2013:44). For Tong (2016), Patriarchal ideology amplifies biological differences between men and women, making certain that men always have the dominant, or masculine, roles and women always have the subordinate, or feminine, ones. It creates a hierarchical relationship between men and women whereby men are inevitably in a better situation than women in diverse social situations/settings. Examples of violence against women, the wide tolerance of sexual harassment in social and work settings, and the misogyny exhibited by the commercial media are used by radical feminists to illustrate why gender equality cannot be achieved by laws and policies alone (Lorber, 1997). Although it is not focus of analysis of women’s vulnerability and disaster, in some cases, it is relevant, such as in cases of violence and threats against women.

³⁰ ‘Marxist feminism sees patriarchy merely as a manifestation of a wider oppression and struggle’ (Bradshaw, 2013:45). Marxists and socialists assess capitalism as a system of exploitative power relations (Tong, 2016). However, the classic Marxists feminists attempted to use a class analysis rather than a gender analysis to explain women’s oppression (Tong, 2016). They believe women’s oppression, resulting from patriarchy, is an outcome of the capitalist system. ‘The capitalist classes exploit (male) labor in the workplace, but men oppressed by capitalism can in turn exploit women in the home. They are socialised into their role and are both oppressed and oppressor; and thus the system continues unchallenged’ (Bradshaw, 2013: 45). Although this is not focus of analysis of women’s vulnerability and disaster, it may be relevant in some cases, such as in the case of understanding the division of labour and ignoring the women’s issues in disaster related laws, policy and guidelines.

³¹ For more detail, see Chapter 1 and Fordham (2011).

³² Liberalism is the dominant ideology of modern times and undoubtedly the most influential political philosophy of the last 300 years. The term derives from the Latin word *liber*, which means free. Throughout history, liberalism has been committed to social progress and has sought to improve the lives of populations that are economically and politically disadvantaged. For more detail, see Pabst (2013) and Friedman (2015).

Emphasis is also placed on processes of socialisation rather than on biology, as these create and preserve a gendered structure and practice in social institutions (Davies, 2010; Enarson, 2012: 28). The focus is on ‘the identification of gender inequalities in all aspects of social and organisational life and the examination of individual, social, and organisational factors that perpetuate such inequalities’ (Davies, 2010: 2). Here, positive change in the life of women is viewed as a result of equal access to the public world through opportunity in the workplace, employment and education with an emphasis on the benefits of political and legal reform (Bradshaw, 2013: 44; Davies, 2010). This is important in the case of addressing women’s vulnerability in disaster as the findings from the empirical data show that unequal access to the public world, power and resources for women in Bangladesh is a major contributing factor to cyclone vulnerability (see Chapter 3).

The focus on ‘formal equality’³³ in the early stages of liberal feminism was based on ‘universal claims about men and women and for emphasizing the similarities between them’ (Davies, 2010: 2). Yet, formal equality, which is the foundation of liberal thought, appears to have overlooked two important indicators. The first is that contexts can be dissimilar, and the second is that the outcomes of equal treatment remain unaddressed (Bartell, 1994). Based on these arguments, the concept of substantive equality emerges, demanding rules that consider the differences between men and women to eliminate disadvantages they bring to women (Bartell, 1994: 4; Chamallas, 2003: 18). These concepts of formal and substantive equality have shaped the approaches of legal feminism, as discussed in detail below.

2.2.1 Feminist Legal Theory, Equality and the Sameness–Difference Debate

Feminist legal theorists argue that the law plays a significant role in women’s subordination historically, and they have long been concerned with achieving equality for men and women. This section provides a summary of how legal scholars view women’s vulnerability and inequality in society. It is an important debate for the research question of this thesis, which examines the way laws, policies and programs address coastal women’s vulnerability in cyclones in Bangladesh. Moreover, the findings from the empirical data show that the organisational dimension of women’s vulnerability received the highest priority among participants, which results from the formulation and implementation of laws, policies and orders mostly viewing women’s different experiences inadequately or not considering them at all.

³³ Formal equality argues that individuals who are alike should be treated alike, without special barriers or benefits due to sex. In the 1970s, feminist litigators and academics advocated for legal reform using primarily a formal equality model focused on the similarities between men and women. For more details, see Bartell (1994).

Much of this discussion has revolved around ‘sameness’³⁴ or ‘difference’; that is, whether women are the same as or different to men. This debate has been important in the design of laws and policies and to assess how legal and policy reforms can address the needs of both men and women. For legal feminists, who view men and women as the same, debate has concerned how legal strategies, including laws, policies and guidelines, can be used to achieve procedural (formal) equality (Bartell, 1994: 2). The shortcomings of the sameness approach, which is also referred to as the formal model of equality, have become evident given the lack of progress made by women despite being treated alike in employment, career progression, income and parliamentary representation, among many other fields. It has been proposed that treating men and women alike leads to unequal outcomes because of the inherent differences between men and women, giving rise to the difference approach (Bartell, 1994: 4).

The difference approach calls for differences between men and women to be taken into account to eliminate ‘past discrimination’³⁵ or disadvantages faced by women. This approach, also referred to as substantive equality, looks to outcomes requiring different legal strategies depending on the situation. Bartell (1994: 4) claims that this approach attempts to recover from the negative impact of past discrimination³⁶ and provides support for the unique capacity to bear children.³⁷ For example, it may call for a quota/special measures to increase women’s representation in parliament, or require judges to exercise discretion by considering the disproportionate time spent by women on unpaid care work in deciding on property division in divorce proceedings (Smith and Francis, 2009). Rather than emphasising sameness, feminist legal scholars argue that it is differences that are important.

This research analyses women’s differential impact from disasters using empirical data, which demonstrate that women are vulnerable in cyclones in multiple ways (see Chapter 3), and expands the multi-dimensional aspects of vulnerability. Additionally, the doctrinal analysis shows that the Government has failed to recognise and include the various aspects of vulnerabilities experienced by women in coastal districts in Bangladesh (see Chapter 4). Sameness (formal equality) argues that women should be treated equally; however, the difference of experiences (past and present) faced by women place women at a disadvantage, which needs to be considered by policy makers and development practitioners. Nevertheless, the doctrinal analysis of existing law, policy and orders

³⁴ The sameness approach assists the establishment of equal employment and other opportunities and pay. For more details, see Bartell (1994).

³⁵ For more details, see Bartell (1994).

³⁶ For more details on how women experience discrimination in work places, see Hartmann and Arronson (1994) and Law (1989).

³⁷ For more details, see Kay (1985).

reveals that differential impacts have not been adequately considered. In most cases, the sameness approach has been taken to address disaster vulnerability of the community (see Chapter 4), resulting in more vulnerability for women (see Chapter 3). To reduce community loss and damage in cyclones, this thesis argues that a difference approach (substantive equality/equity approach) should be applied to minimise the gap in women's differential experiences.

2.2.2 The Vulnerable Subject and Disaster Vulnerability

Fineman³⁸ brings a new perspective to the argument for substantive equality by viewing a human being as a vulnerable subject³⁹ rather than a liberal subject. Arguing for the concept of vulnerability to be recognised as a universal human condition by legal and feminist scholarship, Fineman connects the issues of 'difference' to vulnerability and presents a powerful conceptual tool for assessing how women and men can be treated accordingly. Aolain (2011) views Fineman's theory as an influential and powerful new critique of formal equality and as an alternative framework for understanding substantive equality.

Fineman's vulnerability is a wide concept, which goes beyond the jurisdiction of women or environmental and natural extreme events. Fineman (2008: 9) argues that vulnerability should be understood as 'arising from our embodiment, which carries with it the ever-present possibility of harm, injury, and misfortune from mildly adverse to catastrophically devastating events, whether accidental, intentional, or otherwise'. Although this analytical framework provides limited discussion on women's vulnerability in disaster, it is useful to assess aspects of vulnerability women face in disaster and provide a basic outline of the manner in which state should respond and take responsibility for addressing women's vulnerability in disasters.

Fineman (2008: 8) defines vulnerability as 'a universal, inevitable, enduring aspect of the human condition that must be at the heart of our concept of social and state responsibility'. She argues against neo-liberalism to evolve the concept of a more responsive and responsible state to commit to equality through understanding vulnerability and dependency, and paying attention to the shared vulnerability of individuals. Describing its central thesis, Kohn (2014: 6) states that 'all human beings are vulnerable and prone to dependency (both chronic and episodic), and the state therefore has a corresponding obligation to reduce, ameliorate, and compensate for that vulnerability'. The role of the

³⁸ Martha Fineman's contribution to feminist scholarship has been continuous over more than three decades, in part through the Feminism and Legal Theory Project founded in 1984.

³⁹ Fineman's vulnerable subject is quite different to the liberal subject. While the liberal subject is autonomous and competent, being able to negotiate contracts and make rational choices, the vulnerable subject is subject to misfortune and catastrophe, without capacity to make rational choices. For more detail, see Fineman (2008).

state is significant in this analysis, which assesses the way the state currently responds to vulnerability through its many institutions, and prospectively, assessing how the state can enable equality by building resilience among the vulnerable. Fineman (2008: 13, 20) proposes that a vulnerability analysis should consider three main issues: a) how the state has responded to, shaped, enabled or curtailed its institutions in recognising vulnerability, b) how the state has acted towards these institutions in a way that is consistent with its obligation to support an equality regime, and c) how the state has developed a range of assets (physical, human and social)⁴⁰ that those who are vulnerable need to provide them with resilience.

Fineman relies heavily on Kirby (2006), who argued that social organisations and institutions provide four types of assets: physical, human, social and environmental. Because of the relevance of this analysis, this thesis analyses three types of assets as discussed by Kirby (2006) to build resilience for the vulnerable women in Bangladesh: ‘physical assets (physical materials such as wealth and property), human assets (innate or developed abilities to make the most of given situation’, such as health and education), and social assets (networks of relationships from which we gain support and strength, including the family and other cultural grouping and associations). It is important to note that human assets ‘refer to something far closer to Sen’s concept of capabilities, namely people’s innate or developed abilities to make the most of a given situation’ (Kirby, 2006: 60); the Nussbaum capability approach is also heavily dependent on Sen’s concept of capability.

Fineman develops the vulnerable subject in the context of the US. Applying the vulnerable subject requires identifying the economic and socio-cultural aspects in the context of a developing country such as Bangladesh. Moreover, Fineman mentions extreme weather events with no specific intervention strategies for disaster risk management. Kohn (2014: 23) adds that this theory would be consistent with a conceptualisation of vulnerability not as an innate quality of a person but rather as a result of a relationship between an individual and his or her environment.

2.2.3 Nussbaum’s Capability Approach

Nussbaum⁴¹ capability approach provides unique criteria for developing women’s capabilities, and is helpful for reducing vulnerability. She goes further than substantive equality, adding a deeper meaning of a human entity and providing an overarching value to quality of human life. She has built on the

⁴⁰ For more details, see Kirby (2006: 60–65).

⁴¹ Martha Nussbaum, prominent scholar of feminism, was highly influenced by ‘Sen’s work through thinking about Aristotle’s ideas of human functioning and Marx’s use of them’ (2000:70), and applied Sen’s capability approach to gender, thus expanding this approach.

work of liberal feminists in the context of a developing country, India, to propose that all individuals are entitled to be treated with respect. This approach requires going beyond ‘rights on paper’ and requires support through material and institutional resources, including legal and social acceptance of the legitimacy of women’s claims (Nussbaum, 2000).

It also upholds the concept of liberal political thought on equal dignity of human beings and worth, which is a power of moral choice (Nussbaum, 2000). The core idea of this approach is human capabilities, reflected through what people are capable of doing or becoming (ability and potentiality) in the real world. It redefines the concept of ‘quality of life’ in a nation and the role of all governments in providing the basic minimum to citizens (Nussbaum, 2000).

Nussbaum (2000) does not emphasise the term ‘vulnerability’⁴² of women or women confronting disaster.⁴³ Although she does not include disaster, some scholars use this approach for risk analysis and gauging social impacts. For example, Gardoni and Colleen (2010) developed a Disaster Impact Index to gauge the social impact of disasters using four capabilities groups:⁴⁴ longevity, physical and mental health, affiliation and mobility, and command over resources. Moreover, this approach has also provided an effective tool for identifying women’s differential experiences in society and even, to some extent, differential disaster impacts, though it has not been applied to explain women’s vulnerability in disasters. Nevertheless, this thesis argues that Nussbaum’s capability approach can be effective in building capabilities to reduce vulnerability and increase resilience.

Nussbaum lists 10 basic criteria for quality of life for women as human beings, providing a platform for developing strategies for women to reduce disaster risk (or vulnerability). For example, the empirical data in this research show that participants’ views about risk reduction strategies reflect insights from the concept of equal dignity of human beings and reconfirm that each person should be treated as an end and as a source of agency and worth in her own right.⁴⁵ The following table

⁴² The term ‘vulnerability’ is used twice in Nussbaum’s (2000: 230, 261) book ‘Women and Human Development: The Capabilities Approach’, to highlight the vulnerability of the Muslim minority at the time of independence and women’s vulnerability to unwanted pregnancy and domestic violence.

⁴³ However, Dubois and Rousseau (2008) applied the capability approach developed by Sen to explain the relationship between vulnerability and poverty resulting from dramatic events, shedding light on women as a vulnerable community to explain how women are more vulnerable and how gender inequality through their life cycle influences the level of vulnerability. However, they didn’t relate this to the capability approach developed by Nussbaum.

⁴⁴ These four capability groups have been divided into capability and indicators quantifying the intensity of impact of disasters. For more detail, see Murphy and Gardoni (2006).

⁴⁵ The way Nussbaum (2000: 243) explains it is ‘the damage women suffer in the family takes a particular form: the woman is treated not as an end in herself, but as an adjunct or instrument of the needs of others, as a mere reproducer, cook, cleaner, sexual outlet, caretaker, rather than as a source of agency and worth in her own right’.

demonstrates how the 10 listed quality indicators for human life can be applied to develop the capability of women to reduce disaster vulnerability in cyclones.

Table 2.1: Expanding and Applying the Capability Approach in the Context of Disaster Vulnerability of Women in Bangladesh

Criteria	Strategies for reducing women's vulnerability
1. Life. Being able to live a normal length of human life.	Being able to survive the impact of cyclone surge and live a normal length of life (see page 69).
2. Bodily health. Being able to have good health, including reproductive and overall health.	Being able to secure and ensure support and care for reproductive (see page 70) and overall health (see page 70) before, during and after disasters.
3. Bodily integrity. Being able to move freely from place to place without fear or threat of assault, abuse or violence.	Being able to move to safe places before cyclones without fear, or threat of assault (see page 87 and 103); being able to be free from violence and harassment (see page 88) during and after cyclones specially in cyclone shelters.
4. Senses, imagination and thought. Being able to use the senses, to imagine, think and reason.	Being able to use senses, imagination and thought to be able to prepare for disasters. Early warnings and CPP should reach all women, to enable them to think, reason and plan for disasters (see page 90).
5. Emotions. Being able to have attachments to things and people outside ourselves; to love those who love and care for us, to grieve at their absence; in general, to love, to grieve, to experience longing, gratitude, and justified anger.	Being able to show grief and anger about loved and lost ones, and to find dead bodies and bury them. Mental health issues need to be addressed to increase women's capability for risk reduction (see page 71).
6. Practical reason. Being able to form a conception of the good and to engage in critical reflection about the planning of one's life.	Being able to plan for disaster risk reduction, response and recovery at the household, community and national levels (see page 95 and 97).
7. Affiliation. A. Being able to live with and towards others, to recognise and show concern for other human beings, to engage in various forms of social interaction; to be able to imagine the situation of another and to have compassion for that situation; to have the capability for both justice and friendship. B. Having the social bases of self-respect and non-humiliation; being able to be treated as a dignified being whose worth is equal to that	A. Being able to be safe and protect dependents from cyclones, and other prospective threats (see page 87). B. Being able to protect themselves, their dependents and others from discrimination (see page 87 and 88).

Criteria	Strategies for reducing women's vulnerability
<p>of others. This entails, at a minimum, protections against discrimination on the basis of race, sex, sexual orientation, religion, caste, ethnicity, or national origin; In work, being able to work as a human being, exercising practical reason and entering into meaningful relationships of mutual recognition with other workers.</p>	
<p>8 Other species. Being able to live with concern for and in relation to animals, plants and the world of nature;</p>	<p>The care-giving responsibility of women for domestic animals, plants and other possessions needs to be considered. As vulnerable women are more concern about their animals, depends and other belongings (See page 75 and 88).</p>
<p>9 Play. Being able to laugh, to play, to enjoy recreational activities.</p>	<p>For women in Bangladesh, the ability to play and engage in recreational activities can be fruitful in reducing vulnerability of women in cyclones as this provides opportunities to run and swim – essential skills to save lives during disasters. Due to social norms, girl child stop practicing swimming and playing (see page 73).</p>
<p>10. Control over one's environment. A. Political. Being able to participate effectively in political choices that govern one's life; having the right of political participation, protections of free speech and association. B. Material. Being able to hold property (both land and movable goods), not just formally but in terms of real opportunity; and having property rights on an equal basis with others; having the right to seek employment on an equal basis with others; having the freedom from unwarranted search and seizure.</p>	<p>A. Being able to make their voices heard in disaster management committee meetings and other significant decision-making processes in the household and community (see page 94 and 97).</p> <p>B. Being able to hold immovable property to be able to seek bank loans, to invest in supporting herself and her family. Ensure access to resources for recovery and risk reduction (see page 83).</p>

Both feminist theories and legal feminism lack direct engagement with disaster vulnerability of women. Women's mixed experience in disaster requires specific attention from scholars and to be theorised from a gender perspective. Even the concept of vulnerability is relatively new among scholars. Human experiences in natural disasters are emphasised and analysed by disaster management scholarship, among which, disaster vulnerability theory is the most popular to analyse vulnerability of women in disasters. The following section argues that women's vulnerability should be placed at the centre of disaster vulnerability theory and that increasing capability for women is significant for reducing overall vulnerability to natural hazards.

2.3 Understanding Women and Vulnerability During Disasters

Vulnerability is the central cause of disaster as it turns a natural hazard into a disaster (see Chapter 1). It can be understood by using disaster vulnerability theory,⁴⁶ as used in this research. Disaster vulnerability theory, as explained by Zakour (2010: 28), ‘is a systems framework with the potential to be used by the researchers to understand the complex ways in which environmental capabilities⁴⁷ and liabilities, and resilience and susceptibilities, interact to make some populations more vulnerable to disaster’. According to Zakour et al. (2018b: 11), ‘capability refers to the potential to mobilize skills and abilities in order to reduce the level of vulnerability and increase resilience’. Capabilities also reduce susceptibility—‘the likelihood of harm, loss and disruption in an extreme event triggered by a natural or anthropogenic hazard’ (Dückers et al., 2015: 87). In contrast, liabilities are environmental characteristics that magnify the effects of stress, adversity or loss (Zakour, 2010). Liability is also referred to as unsafe conditions or proximate causes (immediate causes) in disaster vulnerability theory.

This section outlines the foundational aspects of disaster vulnerability theory and connect it with feminist analysis, as this theory provide an in-depth analysis of environmental and social aspects of disasters. The theory implies that vulnerability is not equally distributed among groups and society (Zakour and Gillespie, 2013: 24–26), which provides the basis of its connection with feminist analysis. This theory applies to both developing and developed countries and encompasses every kind and stage of disaster, and both positive and negative features of social systems (Zakour and Gillespie, 2013: 18–19). Therefore, it is an effective and relevant theory for analysing cyclone vulnerability of women in Bangladesh.

However, the existing disaster vulnerability theory undermines women’s issues in three different ways. First, this theory views women as part of a vulnerable community with the poor, members of ethnic and other minorities, and the aged. Though the impact of disaster falls more heavily on women than men, this research argues that women can play a significant role in disaster recovery and risk reduction. Begum (1995) identifies that women, moreover, are not only part of a vulnerable

⁴⁶ The vulnerability concept first originated in the 1970s when scholars identified that losses from disaster were rising while the number of disasters remained about the same. After the 1980s, interest in this theory declined, but regained momentum in the early 2000s because of its applicability to all social systems. For more details, see Zakour and Gillespie (2013).

⁴⁷ In his early work, Zakour (2010) explained that environmental capabilities refer to ‘resources that reflect in the aspects of the social, physical, and natural environment which required for mitigating, preparing for, responding to, and recovering from disaster’. However, in his recent work, he provided a broader definition. Zakour et al. (2018a: 11) defines capability as the potential to mobilize skills and abilities in order to reduce the level of vulnerability and increase resilience. Capabilities also reduce susceptibility

community but also have the capacity to fight for their family and dependents and work as a force of resilience. Women's capacity and capability as a source of resilience requires more focus in this theory. Second, discussing women as part of the vulnerable community⁴⁸ highlights the limited number of issues, such as mental and physical health, violence during disasters and discrimination in emergency services, associated with gender, which are mainly short-term impacts women face during and immediate after disasters. However, there are many other issues, especially long-term impacts,⁴⁹ that need to be highlighted for effective disaster risk management. Third, disaster vulnerability theory under theorises women and can be applied to women in the same manner the concept of vulnerability has been developed and applied in the community, society or any other unit of analysis. It argues that women's issues should be placed at the centre of the discussion on disaster vulnerability theory.

Zakour and Gillespie (2013) present 12 distinctive assumptions of vulnerability theory based on various theoretical ideas from the disaster and related literatures.⁵⁰ They summarise these assumptions into two parts: the first three assumptions cover the definition of vulnerability, its distribution and dimensions, and the remaining nine contain the causal framework. Although all 12 assumptions are applicable from a gender perspective, because of the focus of this thesis, the third assumption, that 'vulnerability is multidimensional', meaning that disaster affects 'many systems and the correlates of those systems' (Zakour and Gillespie, 2013: 29), is extended and applied.

The second part, which includes the remaining nine assumptions, relate to the causal relationships, including the root and proximate causes and safe vs unsafe conditions; central to this causal framework is the pressure and release model.⁵¹ Researchers such as Ariyabandu and Wickramasinghe (2003) and Yumarni et al. (2014) have applied the PAR model to analyse the disaster experience of women in South Asia and Indonesia, respectively. In addition, Zakour and Gillespie (2013: 152) integrate vulnerability theory with resilience theory to extend the PAR model. In the case of analysing vulnerability of an individual and community, disaster vulnerability theory provides the most extensive and overarching analytical framework. Therefore, this is the most convenient way of placing women in vulnerability literature and, in doing so, this thesis provides a summary of these 12

⁴⁸ See Zakour and Gillespie (2013: 25–27).

⁴⁹ The literature review provided a summary of those impacts. Moreover, the empirical data also show that there are long-term impacts of disasters on women, including early marriage, drop outs, migration and displacement, as explained in Chapter 3. See also Bradshaw (2014), Bradshaw and Fordham (2013), Ikeda (1995, 2009), Neumayer and Plümper (2007), Belkhir and Charlemaïne (2007) and Enarson (2012).

⁵⁰ For example, the first assumption is focused on political ecology and development ideas, the second is grounded on the idea that almost all communities are stratified along some dimension, and the third is related to the conceptualisation of disasters as all-encompassing experiences that impact every dimension of life in a community. For more detail, see Zakour and Gillespie (2013).

⁵¹ The basic model is analysed in Wisner et al. (2004) and later extended and developed in Wisner et al. (2011a).

assumptions connecting to feminist analysis. A table containing a summary of these assumptions and its relevance to women is included in Appendix 2.1. In addition to the PAR model, this theory also introduced the access to resources model, which deals with the degree of ‘access’ people have to capabilities, assets and livelihood opportunities that enable them (or not) to reduce their vulnerability and avoid disaster (Wisner et al., 2004: 88).

Disaster vulnerability theory assumes and establishes that vulnerability is multi-dimensional, which means that disasters affect many systems and the correlates of those systems (Zakour and Gillespie, 2013). Zakour and Gillespie (2013: 29) also posit that vulnerability affects all social subsystems differently, and that to understand vulnerability, one should examine the relationship of the subsystems and the functioning of the community. In addition, Cardona (2004) argues that vulnerability represents the physical, economic, political or social susceptibility or predisposition of a community to damage in the case of a destabilising phenomenon of natural origin. Moreover, Wisner et al. (2004: 7) argues that ‘vulnerability is generated by social, economic and political processes that influence how hazards affect people in varying ways and with differing intensities’.

Bolin et al. (1998: 42) argue that too little attention is paid to the various cultural, political and economic forces that produce vulnerability, and no attention to how that vulnerability may be expressed along gender lines. Yet, over the last few years, some scholars (Ariyabandu and Wickramasinghe, 2003; Enarson, 2000; Yumarni et al., 2014) have analysed the multi-faceted nature of gender vulnerability. Assessing the existing literature from various disciplines reveals that the multi-faceted nature of gender vulnerability demands an all-encompassing and holistic approach to disaster risk reduction. This thesis extends the analysis by identifying the various dimensions of women’s vulnerability, such as biological, economic, socio-cultural, political and organisational, categorised based on the empirical research.⁵² It is assumed that identifying and analysing the multi-dimensional aspects of disaster vulnerability of women, which has not drawn attention among scholars of the disaster discipline, will be useful in identifying strategies and priorities for government interventions in law, policy and programs relating to gender and disaster management.

This theory places the multi-dimensional and holistic natures of disaster as complementary concepts. Oliver-Smith (2004: 11) emphasises that ‘the concept of vulnerability expresses the multidimensionality of disasters by focusing attention on the totality of relationships in a given social

⁵² It is important to note that this categorisation is based on interview data from the field visit conducted during the three-month visit to Bangladesh; extensive analysis is provided in Chapter 3. For more information about how the data were collected and analysed, see Chapter 1, Section 1.7.2.

situation which constitute a condition that, in combination with environmental forces, produces a disaster'. This theory also argues that vulnerability needs to be analysed from a holistic point of view (Cardona, 2004; Zakour and Gillespie, 2013). Cardona (2004: 8, 10, 15) argues for a 'consistent and coherent' holistic approach as a theoretical basis, which involves considering geological, structural, economic, social, political and cultural variables to guide decision making.

Yumarni et al. (2014) identify three dimensions of gender vulnerability in post-earthquake reconstruction in a Yogyakarta province. Ginige et al. (2014) discuss how the social, economic, political and environmental context influences the process of gender mainstreaming in disaster risk reduction in the built environment in Sri Lanka. Based on these ideas, the empirical data explored women's vulnerability in cyclones, identifying various types of vulnerability and merging similar vulnerabilities to constitute the dimensions (or subsystems), to develop a deeper understanding of women's vulnerability and identify the causes and link these with law, policy and programs.

As noted above, the nine assumptions of disaster vulnerability theory are related to causal relationships of vulnerability and they reveal various pre-existing factors are associated with vulnerability. Zakour and Gillespie (2013) identify that disaster results from unequal access to power, structures and resources, and ideologies, which are root causes of vulnerability. They highlight both the root (ultimate) and proximate (immediate) causes of vulnerability, and emphasise turning unsafe conditions (liabilities) into safe conditions (capabilities) to reduce vulnerability and increase resilience. Unsafe living conditions add to vulnerability as they are the most proximate and immediate societal causes of disaster (Zakour and Gillespie, 2013: 31). Unsafe conditions involve dangerous locations, unprotected infrastructure, low levels of development and a lack of disaster preparedness (Wisner et al., 2004). The empirical data identify the types of impacts of disaster and their causes, classifying these into various dimensions to ensure effective interventions by government. It is important to note that as disaster vulnerability is viewed as a process, the chain of relationships mean causes and consequences are interdependent.

As a root cause, women's lack of access to resources, power and structure have been emphasised by scholars from various disciplines, such as feminism, disaster management and geography. Scholars such as Anderson (1994), Enarson (2000: 2–4) and Gray and Mueller (2012: 6004) have identified that women's less-secure access to resources makes them more vulnerable. In the case of disaster vulnerability of women in Bangladesh, studies such as Begum (1995), Alam and Rahman (2014), Asaduzzaman (2015) and Azad et al. (2013) also contribute to the discussion of root causes of vulnerability. The empirical data reveal that it is not only lack of access to resources (see page 83),

power or structure (see page 95 and 127), but also perceptions of self (see page 75 and section 3.3.1.5 and 3.3.1.5.6) and capability (see chapter 3 section 3.3.4.4.3 and 3.3.4.4.4) that affect the impact of the disaster, risk reduction and recovery process.

The disaster discipline emphasises the role of government to address disaster vulnerability. Disaster vulnerability theory suggests a more responsible role for government, such as in the vulnerability thesis and the capability approach. Zakour and Gillespie (2013: 114) criticise the neo-liberal reforms,⁵³ which reduce the size of government and public expenditures. Zakour and Gillespie (2013: 158) add that this is particularly critical in developing nations, where individuals and the private sector have few available resources beyond those needed for survival. According to Wisner et al. (2004: 53), the vulnerable are likely to be a low priority for government interventions intended to deal with hazard mitigation; Bangladesh is not an exception (see Chapter 4). Scholars (Bradshaw, 2014; Reyes and Lu, 2016) argue that women's issues are not taken into consideration while preparing and implementing disaster risk reduction.

2.4 Locating Women and Vulnerability in Disaster Management

The government plays the vital role in disaster risk management in every society. There is some consensus among scholars on the extent to which governments should intervene to reduce disaster risk. The discourse on disaster vulnerability⁵⁴ and Fineman⁵⁵ criticises neo-liberalism for developing the concept of a 'restrained state' adopting a non-intervention approach. 'A restrained state' cannot be effective and efficient in addressing the unequal distribution of resources, socio-cultural aspects of discrimination and day-to-day deprivation to reduce disaster vulnerability for women.

Though natural hazard is an old phenomenon, as a discipline, disaster study is comparatively new and yet evolving. Disciplines relating to disaster study have already made significant contributions to reducing disaster risk and casualties in some cases. Still, theories relating to disaster are evolving.⁵⁶ According to Muhammad (2018: 2), 'Natural hazards have been listed in the highest category of disasters but on the other hand the theoretical development has not had comprised fairly in the conceptual development of a theoretical model'. Initially, this focused on emergency management; however, a true theory of emergency management is yet to flourish (Drabek, 2005). Geography and

⁵³ Neo-liberal philosophy is distinct from modern liberalism, which encourages minimising government intervention. See <https://www.britannica.com/topic/neoliberalism>

⁵⁴ For more detail, see Kadetz et al. (2018).

⁵⁵ For more detail, see Fineman (2010).

⁵⁶ There is a significant amount of dissatisfaction among scholars about the theoretical development of this discipline; see Muhammad (2018), Nojavan et al. (2018) and Sherman-Morris et al. (2018).

sociology are the two key academic disciplines that have contributed to emergency management (Muhammad, 2018: 3), and it is gradually encompassing theoretical contributions from science, engineering, psychology and anthropology (Drabek, 2005). However, disaster affects all aspects of human life, including economics, finances, the physical, the psychological, infrastructure, politics and law. It is important to note that a theory of emergency management and a theory of disaster response may overlap but they are not the same (Drabek, 2005).

Similarly, the discipline relating to disaster management is rapidly emerging to cover all related aspects from other disciplines. The diffraction of the study of disaster has been explained by Sherman-Morris et al. (2018) as a ‘disciplinary silo’. The significance of theoretical advancements enriched with related disciplines has been noted by scholars such as Muhammad (2018), Nojavan et al. (2018), Sherman-Morris et al. (2018), David (2007), Van der Walddt (2013) and Wisner et al. (2011b). Yet, there has been a failure to include gender as a discipline.⁵⁷ The disaster discipline argues for multi-disciplinary theory development; however, the mainstream disaster discussion does not include a discipline relating to women or gender. Feminist or gender scholars should think about incorporating the idea of an integrated, holistic approach for disaster risk reduction for women. Conversely, the concept of disaster risk reduction should mainstream the gender perspective as central.

Moreover, the subject of disaster has evolved over time; the most crucial paradigm shift was from response to disaster risk reduction, which is supported by much literature (Shaw et al., 2013a). Initially, the concept of response, also known as the traditional disaster management approach,⁵⁸ emphasised response to disaster in the aftermath of the event through relief and rehabilitation programs. The concept of disaster risk reduction is an accepted trend globally in this regard (Shaw et al., 2013a). Further, the Hyogo Framework for Action (HFA) 2005–2015 promotes integration with the concept of disaster risk reduction (Shaw et al., 2013a). Both scholarly research and agencies contributed to this paradigm shift, and now argue that collaboration and cooperation among all stakeholders is crucial to improve the resilience of communities and reduce risk (Box, 2014; Koivisto, 2014; Wisner et al., 2011b). Multi-stakeholder collaboration and cooperation are considered key aspects of disaster risk reduction, especially at the community level, which emphasises local

⁵⁷ For more detail, see Gardoni et al. (2015).

⁵⁸ Traditionally, the disaster management approach has been to respond in the aftermath of events through relief and rehabilitation programs. The discourse of disaster management has undergone significant changes in recent decades, with profound effects in the developing world, particularly in terms of a reduction in the loss of human lives. The main argument behind this shift was that preparedness would minimise impacts, resulting in a reduced need for relief and rehabilitation. For more detail, see Haque Emdad and Uddin Salim (2013).

knowledge (Shaw et al., 2013a; Wisner et al., 2011b). In the case of multi-stakeholders, women's organisations, and women in general, are still absent from the disaster discipline.

As an applied discipline, it has developed a wide variety of approaches and models to address emergency and disaster risk. According to Swanson and Chermack (2013: xi), applied disciplines are 'realms of study and practice that are fully understood through their use in the functioning world'. The disaster management approach and models have experienced considerable change and development (Habiba et al., 2013). Among various models,⁵⁹ community-based disaster risk reduction (CBDRR) is applicable for addressing cyclones in Bangladesh. Bangladesh has pioneered community-based approaches (see chapter 4 section 4.4) to reduce vulnerability of the community (Habiba et al., 2013: 265; Shaw, 2015). The CPP⁶⁰ is a well-recognised model of the CBDRR approach in Bangladesh (Habiba et al., 2013: 260; Shaw, 2015). Habiba et al. (2013) analysed eight characteristics of CBDRR: participatory process, responsive, proactive, comprehensive, integrated, multi-sectoral and multi-disciplinary, empowering and developmental. Interestingly, gender mainstreaming is not the central focus in the CBDRR approach, requiring attention.

2.5 Conclusion

Women's vulnerability in disaster cannot be explained through one theory; it requires a multi-disciplinary framework to provide a solid foundation for analysis. This thesis stands on the shoulders of the major comprehensive theories of feminism and disaster management to develop a deeper understanding of the liabilities and capabilities in women's vulnerability to disaster. It addresses only the social aspects of women's vulnerability in natural hazards, applying and extending disaster vulnerability theory, which emphasises how and why a community becomes vulnerable to hazards. It also applies the capability approach to provide guidelines for policy makers and development practitioner as a basis for risk reduction for women.

The existing inequality in the society accelerated during and after hazards which need to be adequately addressed in existing disaster-related laws, policies and programs. Vulnerability theory, however, provides limited attention to women's vulnerability and ignores women's capacity to risk reduction and resilience. This thesis draws explicitly from feminist theories to merge the gap of disaster

⁵⁹ Various models for disaster management have developed over time; see Nojavan et al. (2018).

⁶⁰ In Bangladesh, the CPP was first raised after the devastating disaster of 1970 caused by Cyclone Bhola. The CPP is a CBDRR approach, which is the first of its kind in South Asia. The CPP started in the coastal districts of Bangladesh with the help of community volunteers by disseminating cyclone warnings and helping community recovery. For more detail, see Chapter 4.

vulnerability theory. The common ground for vulnerability theory and feminism is that they both stresses on pre-existing variables. The theories on feminism focuses how and why women are discriminated, deprived, and excluded from the social process and argued that discrimination, deprivation, and exclusion of women is undermined in laws, policies, programs of social institutions.

As the disaster vulnerability of women and discrimination against women are ingrained and widespread, it is necessary to identify the multi-dimensional factors of vulnerability, which will assist in including all stakeholders to support women to overcome vulnerability. Moreover, the concept of developing an ongoing process of disaster management and risk reduction and resilience based on multi-disciplines and multi-stakeholders requires involving gender studies as a central to its discussion and including women as major stakeholder considering them as a significant force of risk reduction.

Chapter 3: Dimensions and Causes of Women's Vulnerability in Cyclones: Participants' Concerns

3.1 Introduction

Bangladeshi women are vulnerable as a result of systematic marginalisation, inequal experiences and discrimination; however, it is difficult to identify the multi-faceted manifestation and causes of vulnerability. The extent of marginalisation, discrimination and inequality resulting in vulnerability in the social system is embedded in ways that both men and women fail to realise its nature and extent. The three-month field visit explored the various ways women suffer from disaster vulnerability and the causes resulting from existing inequality, marginalisation and discrimination. Based on the assumption of multi-dimensional aspects of vulnerability from disaster vulnerability theory, this thesis categorises women's vulnerability from empirical data collected from the field.

Considering the lack of qualitative research on women's vulnerability, on how far women's vulnerability has been reflected in disaster risk reduction approaches and on the overall experience of women's vulnerability, this research has identified the different experiences of women in disasters and their underlining causes to evaluate the extent to which they are reflected in the existing regulatory framework of disaster management.

Birkmann (2013: 10) explained that 'the concept of vulnerability stresses the fundamental importance of examining the preconditions and context of societies and communities and elements at risk to effectively promote risk reduction and climate change adaptation'. The empirical data reconfirmed that women's vulnerability to natural hazards derives from pre-existing inequality, discrimination and marginalisation. Further, it was identified that women's perceptions of herself and her capability added an extra burden to this vulnerable situation. The first part of this chapter summarises the empirical data collected from interviews, both one-to-one and focus group, as well as some of the observations. The second part discusses in detail the five dimensions of vulnerability and contributing factors, while the third part provides a summary of the overall findings.

3.2 Overview of Data: Categorisation of Vulnerability and General Trends

The categorisation of this research is based on the categories of vulnerability developed by Birkmann (2013) and Yumarni et al. (2014), which have been modified and recreated in line with the evidence

from the data collection. Based on these data, five dimensions of vulnerability (biological, economic, socio-cultural, political and organisational) have been identified (see Figure 3.1).

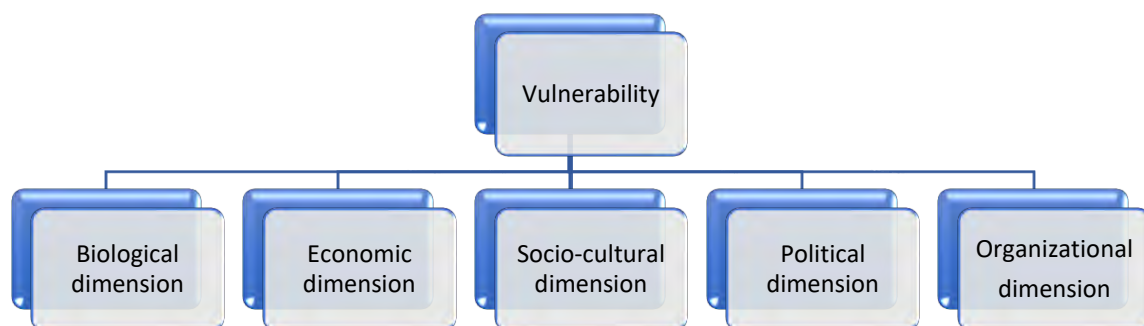


Figure 3.1: Five dimensions of vulnerability categorised based on empirical data

This categorisation is relevant for reforming the existing regulatory framework and incorporating gender in DRM. It entails an all-encompassing but simple categorisation for a better understanding of the concept of vulnerability and to provide better policy options for the government and development practitioners. Although it is difficult to clearly distinguish these five categories of vulnerability because of the interrelatedness of these social systems, the categorisation was done based on relevance, particularly in terms of providing policy suggestions.

Table 3.1 presents a summary of data to provide a bird's eye view of the participants' priorities regarding the different dimensions of vulnerabilities.

Table 3.1: Number of Participants Focusing on Various Dimensions of Vulnerability⁶¹

Sl. No.	Dimensions of vulnerabilities	Number of participants from one-to-one interviews emphasising specific types of vulnerabilities	Participant code	Focus groups emphasising specific types of vulnerabilities
1.	Biological dimensions	11	1.1.1; 1.1.3; 1.2.2; 1.3.1; 2.3.1; 2.3.2; 2.1.3; 3.1.1; 3.1.2; 3.1.4; and 3.2.4	Both focus groups
2.	Economic dimensions	17	1.1.3; 1.1.5; 1.1.6; 1.2.1; 1.2.2; 1.3.1; 2.1.3; 2.1.4; 2.2.1; 2.2.2; 2.3.1; 2.3.2; 3.1.2; 3.1.3; 3.2.2; 3.2.3; and 3.2.4	Both focus groups
3.	Socio-cultural dimensions	15	1.1.1; 1.1.2; 1.1.3; 1.1.5; 1.1.6; 1.2.1; 1.2.2; 1.3.1; 1.3.2; 2.1.3; 2.1.4; 3.1.2; 3.1.3; 3.2.3; and 3.2.4	-
4.	Political dimensions	8	1.1.1; 1.1.2; 1.1.3; 1.2.2; 1.3.1; 1.3.2; 2.1.4; and 2.2.1	-
5.	Organisational dimensions	20	1.1.1; 1.1.3; 1.1.5; 1.1.6; 1.2.2; 1.3.1; 1.3.2; 2.1.1; 2.1.2; 2.1.3; 2.2.1; 2.2.2; 2.3.1; 3.1.1; 3.1.3; 3.1.4; 3.2.1; 3.2.2; 3.2.3; and 3.2.4	Both focus groups

Table 3.1 demonstrates that among the five dimensions, the organisational, socio-cultural and economic dimensions were more frequently highlighted by participants as major dimensions of vulnerability. Some 11 interviewees and the two focus groups emphasised the biological dimension of vulnerability and 17 interviewees and the two focus groups highlighted the economic dimension of vulnerability. The socio-cultural dimension was the third highest priority by the participants, with 15

⁶¹ Table 3.1 has been developed based on data collected from field visit. See Appendix 3.1 for information on coding used for participants.

one-to-one interviewees emphasising this in various ways. Only eight participants from the one-to-one interviews stressed the political dimension of vulnerability of women in the community, and no focus group emphasised the socio-cultural and political dimensions. Finally, the empirical data identified that the participants from both one-to-one interviews and both focus groups heavily emphasised the organisational dimension of vulnerability. Among these five categories, it received the highest priority, with 20 participants focusing on this dimension. Interestingly, the existing literature has not considered organisational dimensions of vulnerability separately (see Chapter 1 section 1.6.1).

In addition, interesting findings arose that went beyond the data sought for basic research questions. The various sub-groups of participants emphasised different dimensions of vulnerability. These various sub-groups provided their valuable opinions to develop strategies for disaster risk reduction and disaster management; this research suggested including the participations of those sub-groups to develop risk reduction strategies addressing specific types of vulnerabilities. Table 3.2 summarises the data collected from those sub-groups based on their emphasis on various dimensions of vulnerability.

Table 3.2: Various Sub-groups Focusing on Various Dimensions of Vulnerabilities⁶²

Sl. No.	Dimensions of vulnerability	Considered the highest priority dimension:	Considered the lowest priority dimension:
1.	Biological dimension	NGOs and international agencies	CPP staff
2.	Economic dimension	NGOs, international agencies, government officers, scholars, CPP staff and community volunteers	Union <i>Parishad</i> members
3.	Socio-cultural dimension	Scholars and international agencies	Union <i>Parishad</i> members and community volunteers
4.	Political dimension	Scholars and government officers	Union <i>Parishad</i> members, community volunteers, and women from community
5.	Organisational dimension	Community volunteers, union <i>Parishad</i> members, scholars, international agencies and women from the community	CPP staff

⁶² See Appendix 1.5 and 1.6 for more information on participants and its categorization.

Different sub-groups emphasised different dimensions of vulnerability. Among the nine sub-groups,⁶³ the interviewees from NGOs and international agencies were more concerned about the biological vulnerability of women than any other groups. Out of four participants from NGOs and international agencies, three highlighted women's health and psychological problems during and after disasters. Two government officers from the MoDMR and the DDM highlighted the biological dimensions of women's vulnerability. Out of four government officers from the field (local) administration, one argued for women's medical needs in cyclones. Among the rest of the participants, one scholar and one union *Parishad* member also highlighted medical issues related to disasters. Conversely, CPP staff completely ignored this dimension of vulnerability.

The economic vulnerability of women was emphasised by seven sub-groups; in particular, half of the government officers from the national and local levels, scholars, CPP staff and community volunteers. Interestingly, the rate was highest among NGO and international agency participants, who focused on economic vulnerability more than any other group. In contrast, the union *Parishad* members showed the least emphasis on this issue.

Scholars focused on the socio-cultural dimension extensively and there was a considerable difference in opinion between officers from the field and central levels. Interestingly, participants from the community focused less on the socio-cultural dimension of vulnerability than participants from the national level. A detailed observation of the data reveals that participants from international agencies, academics, officers from the department and ministries working at the centre focused more on socio-cultural aspects of women's vulnerability; for example, of the six interviewees from ministries and departments, four discussed socio-cultural aspects of vulnerability heavily. Conversely, only one of four government officers from the field (local) administration focused on this dimension. Interviewees from international agencies such as UN Women and IFRC emphasised the socio-cultural dimensions of vulnerability. On the contrary, the interviewee from a local NGO almost ignored issues relating to socio-cultural aspects. Half of the interviews with local government representatives and community volunteers emphasised socio-cultural aspects of vulnerability.

In regard to political dimensions of vulnerabilities, participants from the national level were more aware of the significance of decision making and participation compared with participants from the community level. Half of the government officers from the central and a quarter from the field (local)

⁶³ Nine sub-groups include government officers from the national level, government officers from the local level, scholars, NGO activists, participants from international agencies, CPP staff, CPP volunteers, union *Parishad* members, and women from the community. For more detail, see Chapter 1, Section 1.7.2.1.4 and Appendix 4.

levels highlighted the issue of women's decision making at various levels of disaster management in Bangladesh. Scholars also emphasised the role of decision making and lack of leadership skills among women. Conversely, community participants, including the community volunteers, union *Parishad* members and vulnerable women from the community, completely ignored the political dimensions of the vulnerability of women.

Within the nine sub-groups, every participant from community volunteers, union *Parishad* members, international agencies and scholars on gender and disaster noted the organisational dimension of vulnerabilities as a leading reason for the vulnerability of women. In addition, more than half of the government officers both from the central and field (local) administration emphasised this. Moreover, women from the community in the focus group interview also focused on this dimension. In contrast, CPP staff ignored this dimension of vulnerability.

3.3 Findings on Dimensions of Women's Vulnerability: Consequences and Causes

During the interview process, attention was given to the various experiences women confront in natural hazards with a special focus on cyclones in Bangladesh, the causes of their vulnerabilities and the solutions they suggested. The theoretical ideology underpinning of the process was to identify 'unsafe conditions' and suggestions to turn these into 'safe conditions' (see Chapter 2, Section 2.3). This section offers an extension of vulnerability theory by identifying various dimensions of women's vulnerability, as argued in the third assumption of disaster vulnerability theory. Moreover, the findings of the field visit provide an extension of Fineman's vulnerable subject by identifying the role of the responsible state (see Chapter 2, Section 2.2.2). Although Fineman argued for a more responsible state in her discussion for the US, in the case of a developing country such as Bangladesh, the role of the state should be extended and redefined to address the vulnerability of women; for example, the research findings show that the participants are arguing for a more responsive government through providing opportunities for risk reduction.

3.3.1 Biological Dimension of Women's Vulnerability

The biological dimensions of vulnerabilities, here, delimit the different biological as well as physiological conditions between women and men that increase disaster risk and affect capabilities to cope with disasters. Scholars such as Yumarni et al. (2014) and Enarson (2012) analyse this as a physical⁶⁴ dimension of vulnerability of women, which includes pregnancy, physical disability of

⁶⁴ Instead of using 'physical', this study uses the term biological because the disaster vulnerability discipline mostly uses physical as buildings or infrastructure. For example, for McEntire (2001), the term 'physical' refers to the proximity of

women, old age and malnutrition. The empirical data identified four biological dimensions of women's vulnerabilities, which are not adequately addressed by the existing disaster management approach in Bangladesh (see Chapter 4). Table 3.3 summarises the various types of biological dimensions of vulnerability and their causes.

people and property to triggering agents, improper construction of buildings, inadequate foresight relating to infrastructure, and degradation of environment.

Table 3.3: Number of Participants Focused on Various Types and Causes of the Biological Dimension of Vulnerability⁶⁵

	Issues identified by participants	Number of participants	Participant code	Name of focus group
Types of biological dimension of vulnerability	High mortality rate	2	1.1.1 and 3.2.1	Kalapara
	Health-related complications	3	1.1.1; 2.3.1; and 2.3.2	Both
	Pregnancy and resulting complications	3	1.1.1; 3.1.2; and 3.1.4	Kalapara
	Psychological vulnerability	2	1.1.3 and 1.2.2	Kalapara
Major causes of vulnerability	Traditional dress code	6	1.1.1; 1.1.3; 1.2.1; 3.1.2; 3.1.3; and 3.2.3	-
	Lack of life-saving skills	2	1.1.1 and 1.3.2	-
	Lack of adequate medical and sanitation facilities	5	1.1.3; 1.3.1; 2.1.2; 2.3.1; and 2.3.2	Kalapara
	Lack of psychological and mental health support	2	-	Kalapara
	Lack of adequate support for pregnant women.	4	2.2.2; 2.3.1; 3.1.4; and 3.2.4	Kalapara
	Lack of self-consciousness	6	1.1.1; 1.1.3; 1.3.1; 1.3.2; 3.1.2; and 3.1.4	-

3.3.1.1 High Mortality Rate

Compared with men, women are more likely to be casualties in cyclones in Bangladesh. Participants 1.1.1 and 3.2.1 from the one-to-one interviews and focus group 3.3.1 from Kalapara heavily emphasised the high mortality rate among women in disasters. The focus group also raised the issue as a cause of death and injury during cyclones, stating that their community still bears devastating

⁶⁵ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants background and experiences.

memories of cyclones. Bangladeshi women experienced very high mortality rates in previous cyclones,⁶⁶ though this has been reduced recently.

3.3.1.2 Health-related Complications

The empirical findings demonstrate that women suffer more health-related complications during and after disasters than men. Participants 1.1.1, 2.3.1 and 2.3.2 (see Appendix 3.1) from the one-to-one interviews and both focus groups emphasised the health-related complications of women in disasters. Most of the time, water-borne diseases break out, and cyclones increase salinity in coastal areas, resulting in complications for women; for example, Participant 1.1.1 from the government said that ‘the average fat content is high among girls in the coastal area compared with the rest of the country because of the salinity, which may cause eclampsia in pregnant women and also causes maternal mortality’⁶⁷. Further, Participant 2.3.1 from a local NGO underlined infectious diseases and the impact of salinity on women.

3.3.1.3 Pregnancy and Complications

Pregnant women face various difficulties during disasters. The interview data show that pregnancy resulted in more vulnerability for women, and they required special attention for health-related complications. The participants from focus group 3.3.1 revealed that they had experienced early delivery during cyclones, stating that ‘During Sidr, two women from the same household gave birth to three babies. We assumed that it happened because of the extreme mental pressure the pregnant mothers faced during Sidr. The deliveries was not due and the pregnant women experienced trouble giving birth during the cyclone.’⁶⁸ Moreover, Participant 2.3.1 from a local NGO stated that he had seen many women giving birth on the way to shelter houses. The data also reveal that pregnant women are not willing to go to the shelter houses as they feel shy and insecure. Participants 1.1.3, 3.1.2 and 3.1.4 and the participants from focus group 3.3.1 stated that pregnant women are not willing to go to shelters even after cyclone warnings have been issued.

⁶⁶ For more detail, see Chapter 1. A brief information is provided on cyclones over the last 15 years in Appendix 1.1.

⁶⁷ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants’ background and experience.

⁶⁸ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants’ background and experience.

3.3.1.4 Psychological Vulnerability

Women suffer severe and long-lasting mental illness as a result of loss of lives. Participants 1.1.3 and 1.2.2 underlined the psychological impact of natural disasters on women. Participant 3.3.1⁶⁹ from the focus group said that many women continued to suffer from mental illness after losing their children in cyclones, stating that ‘I helped one woman who lost her two children during Sidr and become mentally sick. I provided her shelter at my house during her following pregnancy with a hope that this following pregnancy and childbirth would help her to recover from the shock of child loss and psychological disorder. I did everything possible for her, providing good food, shelter, and other daily necessities with a hope that a decent life could help her to recover. But I failed. The lack of medical support for mental illness places the community in a more vulnerable position.’⁷⁰

3.3.1.5 Causes of the Biological Dimension of Vulnerability

This section summarises the empirical evidence on the causes of the biological dimension of women’s vulnerability, with support from the literature. Pre-existing variables, as identified by the participants, emerged as six types: traditional dress code, lack of practice of life-saving skills, lack of medical facilities, lack of psychological and mental health support, insufficient support for pregnant women, and lack of self-consciousness among women; these are analysed below.

Interestingly, among those causes, the findings demonstrate that participants focused more on lack of women’s self-consciousness about their health and lives to reduce the biological dimension of vulnerability. Though there are other issues involved, changing women’s perceptions of themselves could significantly contribute to the reduction of the biological dimension of vulnerability among coastal women in Bangladesh. This research identifies that women’s self-perception is influenced by their belongings and their children; they prioritise themselves less as an identity and place others’ needs first.

This can be explained by the core value that ‘treats each person as an end and as a source of agency and worth in her own right’, as argued by Nussbaum (2000: 69) in the capability approach. This approach also highlights the perception of women (see chapter 3 section 3.3.1.5.6) of themselves to explain these findings, where ‘each person is treated as an end’. Mehrotra (2014) applied and extended

⁶⁹ See Appendix 3.1 for more information relating to participants.

⁷⁰ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants’ background and experience.

the capability approach,⁷¹ arguing that women should be placed up-front and centre. Mehrotra (2004: 274) argued ‘Since women have normally been treated as supporters of the ends of others, rather than as ends in their own right, this principle has particular force in regard to women’s lives’. This argument explains why women in Bangladesh try to save their children, dependents and property rather than their own lives. The empirical data show that women are less concerned about their own lives, which may increase casualties and the biological vulnerability experienced by women.

Further, fragile conditions such as traditional dress code, lack of adequate medical and sanitary facilities; lack of support service for pregnant women are directly related to ‘unsafe conditions’ as described by Wisner et al. (2011a) and Zakour and Gillespie (2013: 47–48), though some biological dimensions of women’s vulnerability, such as disability, pregnancy, childbirth and psychological impacts, can be more accurately analysed using Fineman’s (2008) vulnerable subject, which explains vulnerability as a universal human condition.

3.3.1.5.1 Traditional Dress Code

Dress code was the most discussed issue among participants, as they believed it resulted in the high rate of female mortality, especially in Cyclone Bhola (1970), Cyclone Gorky (1991) and Cyclone Sidr (2007). Although it is a cultural issue, it has resulted in a biological vulnerability for women. Altogether, six of the participants (see Table 3.3) from among the community volunteers, union *Parishad* members, government officers and international agencies underlined the impact of the traditional dress ‘sharee’⁷² and long hair. Participant 1.1.1 said ‘the traditional dress “sharee” causes trouble for them to move and swim’⁷³. Participant 3.2.3, a community volunteer, and participant 3.1.3, a union *Parishad* member, shared their experiences of the 1970 and 1991 cyclones, respectively. Participant 3.2.3 said that he had seen women’s dead bodies ‘hanging in a tree with their hair stuck to the branches’ in the 1970 cyclone.⁷⁴ The existing literature (Ohiduzzaman, 1993 cited in Alam and

⁷¹ For more detail, see Mehrotra (2014), who argued that the capability approach places capabilities of women up-front and centre, for their intrinsic as well as instrumental value. She also added that Nussbaum’s project leads her to identify *central human capabilities*. She adopts the principle of each person as an end, and the principle of each person’s capability.

⁷² A *sharee* is a female dress, widely worn in the Indian subcontinent, especially in Bangladesh, which consists of a rectangular piece of cloth, with length varying from 5 to 9 yards and width varying from 2 to 4 feet. It is wrapped around the waist, with one end draped over the shoulder. However, it not only the *sharee* but the traditional male dress *longee* that is not suitable during cyclones.

⁷³ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants’ background and experience.

⁷⁴ It is important to note that the number of deaths has decreased sharply because of the precaution of taking shelter in a shelter house or other safe place, dramatically reducing the overall death rate in the country.

Collins, 2010: 937; Rashid and Shafie, 2013: 353) proposes that traditional dress may be a cause of vulnerability.

3.3.1.5.2 Lack of Practice of Life-saving Skills

The existing literature suggests that physiological differences are also responsible for women's vulnerability in cyclones. Interestingly, the participants suggested that lack of practicing life-saving skills was responsible for drownings in cyclones. Participant 1.1.1, a government officer, and Participant 1.3.2, a scholar, emphasised this life-saving skill for women. Traditional both male and female children learn to swim in their childhood in Bangladesh. Gradually, with a lack of practice, women forget how to climb trees, run fast and swim, and as a result, fail to survive tidal surges. There should be awareness among girls and women in the community about the importance of life-saving skills, and men should encourage women to practice these.

Participant 1.1.1 stated that 'Women need enough life-saving skills such as swimming, climbing and running to survive natural hazards'. He added, 'It results from lack of practicing those physical activities after a certain age, which reduces their capacity to survive'⁷⁵. Because of socio-cultural norms, shyness and limited scope for practicing, women stop practicing those life-saving skills, which in turn, decreases their capacity to survive and increases their vulnerability. The empirical data demonstrate that though girls are allowed to learn these skills, after childhood, because of social norms, shyness and other responsibilities, they stop practicing the skill and eventually their capacity is reduced.

3.3.1.5.3 Lack of Adequate Medical and Sanitation Facilities

Five participants (see Table 3.3) from the one-to-one interviews and participants from the focus group 3.3.1 at Kalapara highly emphasised medical support for women. Participant 2.3.2 from a local NGO said that, 'Medical facilities are not enough. We ourselves arrange for their treatment with whatever resources we have. We also try to bring medical doctors from outside. Because of post-disaster dilapidated conditions of roads, doctors may not want to come here. Even if doctors come eventually, it's too late. Sometimes we take emergency patients, especially women, to the *Upazila* Hospital.'⁷⁶ Participant 2.3.1 from another NGO underlined the lack of sanitation facilities in the community,

⁷⁵ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants' background and experience.

⁷⁶ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants' background and experience.

stating that only 20% of the total population was concerned about basic health and sanitation, with the rest not using the sanitary facilities in the village. They argued that *Upazila* Health Complex requires more medical practitioners, equipment and other facilities to support women to recover from health-related complications. Participant 3.3.1 from the focus group at Kalapara emphasised the lack of medical facilities for mental health, which resulted in many continuing to suffer.

3.3.1.5.4 Lack of Psychological and Mental Health Support

Participants 1.2.2 and 1.3.2 from the one-to-one interviews and focus group 3.3.1 emphasised the lack of mental health support and ‘concealing’ of conditions. As women suffer from various losses, especially of family members and children, which lead to severe mental health consequences, mental health support is urgently required in the community. There was no such support available in the case study areas. The focus group from Patuakhali suggested mental health facilities in the community were required to support women with post-traumatic disorders. Providing medical support for coastal women in disasters, or in normal daily life, is a concern for coastal communities in Bangladesh. A review of the existing health policy⁷⁷ reveals that it has failed to consider mental health in disasters; it considers infectious diseases but ignores injuries, mental stress and other post-traumatic disorders.

3.3.1.5.5 Lack of Adequate Support for Pregnant Women

Four one-to-one interview participants (see Table 3.3) highlighted the need for special medical and other support for pregnant women during cyclones. Each participant from four sub-groups – community volunteers, union Parishad members, CPP staff and government officers – and Participants 3.3.1 from the focus group at Kalapara emphasised the significance of special care for cyclone-affected pregnant women. The focus group suggested a midwifery service for early delivery and special attention. Moreover, participant 3.1.2 from union *Parishad* members focused on the significance of transport facilities and separate space for pregnant women in the cyclone shelter house, saying that ‘Carrying the pregnant women to the shelter house is a big problem. They require transport and a separate space or room at the shelter house.’⁷⁸

3.3.1.5.6 Lack of Self-consciousness Among Women

The lack of self-consciousness among women was a highest priority among participants as a cause of biological dimension of vulnerability. Six participants (see Table 3.3) underlined the lack of self-

⁷⁷ For more detail, see Government of Bangladesh (2011).

⁷⁸ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants’ background and experience.

consciousness among women. Two significant stories came from Participant 1.1.3, who said, ‘The sense of self is absent among women in the village. They always think about their husband, children, cattle and other belongings.’⁷⁹ Women focus more on their dependents and belongings than on themselves. Explaining her experiences, she said that a village woman took shelter in a shelter house just before a cyclone and suddenly remembered about her cattle and went to collect them. Unfortunately, she failed to come back and drowned in the tidal surge. The participant added, ‘The common problem of not taking care of themselves or ignoring their own safety and health issues are causing trouble in disaster management’. Additionally, three other participants stated that pregnant women were not willing to go to a shelter house as they felt shy, which indicated that they were not self-aware about their wellbeing. The research also reveals that women are less aware of health and hygiene, and unwilling to take steps to secure their health during disasters, although there are health-related awareness programs organised for communities from time to time. A story reconfirms this issue: ‘A training program was organized by the government highlighting the significance of nutrient food for a healthy child for pregnant women. The pregnant women were also provided with some fund for buying some nutritious food after that training program. However, it had been identified that some women had handed over the money to their husbands.’

3.3.2 Economic Dimensions of Women’s Vulnerability

Economic dimensions of women’s vulnerabilities are those generated from the different access to and control of economic resources between women and men that diminish women’s capacities to cope with and resist disaster. Difference in access to and control over economic resources, especially unequal access between women and men to job opportunities, income-generating activities, markets, public places and productive assets, drive the economic dimension of women’s vulnerability. Studies (Arora-Jonsson, 2011: 745; Austin and McKinney, 2016: 360; Dhungel and Ojha, 2012; Neumayer and Plümper, 2007) have posited that women’s economic status influences disaster vulnerability, and conversely, enhanced economic autonomy, security and control over resources are likely to mitigate disaster suffering and reduce disaster deaths (Austin and McKinney, 2016). Scholars (Akhter et al., 2015; Asaduzzaman, 2015; Azad et al., 2013) have identified and analysed the impacts of disasters on the economic situation of the community and on women in Bangladesh. The findings of these empirical data reaffirm the existing literature, revealing the following types and causes of economic

⁷⁹ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants’ background and experience.

dimensions of vulnerability faced by women in Bangladesh. Table 3.4 includes the number of participants focused on various economic dimensions of vulnerability and causes of these.

Table 3.4: Number of Participants Focused on Various Types and Causes of the Economic Dimension of Vulnerability⁸⁰

Economic dimension of women's vulnerability	Issues identified by the participants	Number of participants from one-to-one interviews	Code number for participants	Name of focus group
Types of economic dimension of vulnerability	Increase unemployment, decrease livelihood options and increase poverty	12	1.1.3; 1.1.6; 1.2.1; 2.1.2; 2.1.3; 2.1.4; 2.2.1; 2.2.2; 2.3.1; 2.3.2; 3.1.3; 3.1.4; 3.2.2; and 3.2.3	Both
	Increase food insecurity	7	1.3.1; 1.3.2; 3.1.1; 3.1.2; 3.2.2; 3.2.3; and 3.2.4	Both
	Loss of property	10	1.3.2; 2.3.2; 3.1.1; 3.1.2; 3.1.3; 3.1.4; 3.2.1; 3.2.2; 3.2.3; and 3.2.4	both
	Loss of small but significant possessions	1	1.1.1	-
	Dropping out for girl child	1	3.2.2	Kalapara
	Early and forced marriage	3	3.2.2; 3.1.3; and 1.3.2	Kalapara
	Migration and long-term displacement	1	2.3.2	Kalapara
Major causes of economic dimensions of vulnerability	Lack of income-generating activities	6	1.1.2; 1.1.6; 1.2.1; 2.1.3; 2.3.2; and 3.2.3	Both
	Lack of skills for income generation for women	6	1.1.6; 1.2.1; 1.3.1; 2.1.4; 3.1.3; and 3.2.2	Both
	No relief from micro-credit obligations	2	2.2.1 and 2.3.2	Kalapara
	Insufficient relief support	2	3.2.4 and 3.1.4	Banshkhali
	Lack of access to public domain and economic resources	8	1.1.1; 1.3.1; 1.2.2; 2.2.1; 1.1.3; 1.1.6; 3.1.2; and 2.3.1	Kalapara

⁸⁰ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants background and experiences

3.3.2.1 Increased Unemployment, Decreased Livelihood Options and Increased Poverty

Both focus groups and 12 participants highlighted that cyclones increase unemployment, decrease livelihood options and increase poverty for women. Compared with men, women's employment opportunities and livelihood options are very limited in Bangladesh. The field data show that women have very few employment opportunities during the normal period, which increases their suffering after cyclones. As the coastal districts are basically agrarian,⁸¹ the dependence on natural resources is high in the visited areas. The field data from Kalapara Upazila reveal that women have very few options for employment because of dependence on agriculture, social norms, traditions and gender roles. Although the major occupation is cultivation and fishing, no women fish in the sea and very few work in the field. Women assist in food processing, home gardening and cattle rearing. They have very limited access to the world outside their homes. The situation was worse at Khankhanabad in Banshkali Upazila, where some land areas were unusable for cultivation because of salinity from cyclones and tidal surges. As a result, women's economic contribution in agriculture was squeezed massively after cyclones and salinity. Participant 3.1.3 from union *Parishad* said that 'Some of the parts of Khankhanabad is not suitable for cultivation. Mainly in ward no 3, 7 and north-south and the west part of ward no.8. Because of salinity, they can't grow anything. Therefore, people only catch fish in the sea. Women never go fishing. They don't do anything.'⁸² Her statement provided an overview of women's economic vulnerability in those areas. Women's limited access to those economic activities made them more vulnerable to natural hazards and slowed the process of recovery from cyclones. As cyclones hit the community every year, this reinforces women's existing vulnerability.

3.3.2.2 Increased Food Insecurity

Although the GoB is strongly committed to providing food for disaster-affected people in the coastal districts, the findings reveal that the community suffers from food insecurity immediately after cyclones. In the most remote places, it takes time for relief materials to reach the community. Among the sub-groups, the problem of the food insecurity was discussed by community participants such as union *Parishad* members, community volunteers and community women. Both focus groups and three of the four community volunteers⁸³ highlighted the issue of food security. Participant 3.1.2, a union *Parishad* member, stated, 'After Cyclone Roanu, there was no sign of their houses. Many people

⁸¹ For more information, see Chapter 1, Section 1.7.2.1.

⁸² See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants' background and experience.

⁸³ Participants 3.2.2, 3.2.3 and 3.2.4; for more information, see Appendix 3.1.

starved for seven days. The tidal surge hit, and then for seven days, they ate only puffed rice and flattened rice.⁸⁴

3.3.2.3 Loss of Property

Both focus groups and 10 participants (see Table 3.4) stressed the impact of loss of property on women, sharing that although severe cyclones such as Bhola, Gorky and Sidr were not regular, these communities experience cyclones every year, in which they lose crops, harvests and houses. The destruction of houses was emphasised by participants from the community, as it has a severe impact on women. Focus group 3.3.2 from Banskali explained that the recurrent cyclones destroyed their property and trapped them in a vicious cycle of poverty; they continued to suffer throughout their lives. They said, ‘There are many women who lost everything in the cyclone. After the cyclone, we lost everything. We get relief materials and food from the government and other NGOs. Almost every year, there are cyclones that repeatedly destroy our property and as a result we remain poor forever.’ They also stated that because of salinity caused by cyclones, they had lost their traditional source of income. As women have lack of options for income generation, they continue to suffer more.

3.3.2.4 Loss of Small but Significant Possessions

Compared with men’s material losses, women’s losses are very low, as women have very few material possessions, such as goats, chickens, kitchen gardens and kitchen utensils. Nevertheless, these small possessions and their utility to women are significant, as they provide the opportunity to contribute to the family’s informal income. Young (1999: 150) argues that women’s income from informal sectors is not a supplement to household income but a vital component of the household budget, crucial for its members’ survival. Moreover, the significance of those small possessions increases after natural hazards. The interview findings demonstrate that the loss of small productive assets increases the dependency of women and the loss of kitchen appliances increases their time spent in domestic work. Participant 1.1.1, a government officer, said, ‘Women are given the responsibility of cooking in society. They lose their cooking facilities during cyclones and it becomes hard for them to provide cooked food for themselves and their families.’

⁸⁴ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants’ background and experience.

3.3.2.5 Dropping out of School for Girl Children⁸⁵

The findings also demonstrate that because of financial loss and other reasons, girl children lose their opportunity to go to school. The focus group participants from Banshkhali and Kalapara stated that there is a lack of educational institutions in some parts of those *Upazilas*. In addition, the female literacy rate is lower than that for men in those districts.⁸⁶ When cyclones hit, this further reduces the opportunities for girls to go to school. Some participants disclosed that the destruction of roads, educational institutions and financial losses of the family diminished the chance of continuing education for girls. Thus, cyclones have a long-lasting impact on girl children and women. To overcome the financial burden of families, a girl child is the first to have to drop out of school. Moreover, a girl child is not considered a breadwinner and has no option for income generation for the family.

3.3.2.6 Early Marriage⁸⁷

Both empirical and existing literature shows that there is an increase of early and forced marriage after natural hazards. Participant 1.3.2 described that she had experienced an alarming rate of increase in early marriages during floods, as parents are scared for their daughters' security, especially in shelter houses and embankments. Moreover, a participant from focus group 3.3.1 from Nilgong union *Parishad* at Kalapara said that, 'Many families suffering financial losses have withdrawn their girl child from school and some of them are married off to overcome the financial burden'⁸⁸. Compared with floods, a cyclone has a lower rate of early and child marriages, as during floods, families have to stay longer in shelter houses or embankments, where girls' security is under threat.

3.3.2.7 Migration and Long-term Displacement

Migration and long-term displacement are common after natural disasters. Sometimes, the entire family or the male members of the family migrate for financial reasons. The empirical findings re-establish the prevailing scholarship identifying that many families, or the male members of the family,

⁸⁵ This could also be seen as a socio-cultural dimension of vulnerability as it can be viewed from a socio-cultural perspective; however, because of its economic weight, it has been included in this category.

⁸⁶ According to the Bangladesh Bureau of Statistics, Kalapa Upazila has a total population of 238,000 and a literary rate of 52%. Male literacy is 52.6% and female literacy is 51.5%. For more information, see Bangladesh Bureau of Statistics (2013).

⁸⁷ This could also be viewed as a socio-cultural dimension of vulnerability, as it can be viewed from a socio-cultural perspective. However, in the case of cyclones, as this results more from the financial burden of a family, it has been included in this category.

⁸⁸ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants' background and experience.

migrate during cyclones in the coastal districts. The participants from focus group 3.3.1 from Kalapara, Patuakhali said, ‘Almost 85% of the women live alone in the community as their husbands migrate for employment’⁸⁹. This in turn creates social vulnerability, adding to women’s financial and social insecurity. Moreover, Participant 2.3.2 stated, ‘Moulvipara neighbourhood of Khankhanabad union was hit hard by Cyclone Aila and homesteads were damaged terribly. There were 750 families living there before these terrible cyclones took place. After these calamities, the number of families reduced to 220 at ward no 7 in Moulvipara. The rest of the population migrated to other places such as Patenga or other big cities, causing women to suffer more.’ Women living in the community alone face insecurity, are overburdened with responsibility and sometimes face extreme poverty.

3.3.2.8 Findings on Causes of Economic Dimensions of Vulnerability

While the participants were asked for causes of these vulnerabilities, of 26 interviewees, 17 interviewees⁹⁰ underlined the following economic issues as needing to be addressed extensively and 35 opinions came up. The participants believed that a self-reliant woman can become more resilient. Financial solvency can ensure a stronger community to fight natural hazards. Regardless of various sub-groups, economic support and financial solvency were the most significant aspects of disaster risk management among the participants. Some also highlighted that economic dimensions of vulnerability could help women to overcome other forms of vulnerability. These 35 opinions collected from the field were merged into five groups, as follows.

3.3.2.8.1 Lack of Income-generating Activities

A more general view of the participants from the community was that they were less willing to depend on relief materials. Especially, the two focus groups emphasised that they wanted more support to increase their livelihood. There was a consensus that they considered being financial self-reliant as being less susceptible to disaster. Six participants (see Table 3.4) directly emphasised being financially self-reliant, increasing income-generating activities, support for income-generating activities, employment opportunities, eradicating poverty and tree plantation programs for women and men. Focus group 3.3.1 from Patuakhali stated that, ‘Women need income-generating activities for survival’. Participant 2.3.1 from a local NGO stated that, ‘About relief work, I would say, it should be done in a way that people don’t depend solely on it. Rather, they should be offered support up-

⁸⁹ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants’ background and experience.

⁹⁰ The term ‘interviewee’ means a participant in the one-to-one interviews. In the case of the focus group interviews, the terms ‘focus group’ or ‘focus group participants’ are used. In the case of the one-to-one interviews, ‘participants’ or ‘interviewees’ are used.

front so that they can be self-reliant.⁹¹ Participant 2.1.3, a field administrator, said, ‘By eradicating poverty and making women self-reliant financially, you can manage to make them more conscious and reduce the disaster-related loss of lives and resources. They will come forward and play their roles.’ Participant 2.1.3 was more specific, stating that, ‘Women should be given enough employment opportunities, such as in cottage industries’.

Moreover, participants from focus group 3.3.2 from Chittagong revealed that humanitarian and social safety net programs⁹² have failed to lift them out of the poverty, although they have helped them to survive starvation. A more detailed observation was given by participant 1.2.1 from IFRC, who said:

The increasing livelihood of women in other programs such as education, vocational training, and other technical education should be introduced. The government should think about income-generating activities for women on a regular basis, not periodic. They should have the required skills as well. Usually, the program or project⁹³ run by the government and the NGO to support vulnerable community are provided for a certain period of time and these programme and projects are not integrated with other developmental activities.

The IFRC has highlighted the importance of a package of programs that need to be connected to bring positive change rather than a solo program.

3.3.2.8.2 Lack of Skills for Income Generation for Women

Six participants (see Table 3.4) emphasised the lack of skills women have in income-generating activities, which resulted in fewer options for income generation. Participants believed that skills development can ensure income generation as a tool for disaster risk reduction and recommended more training in specific areas, such as cane-work, weaving nets, rearing livestock, floating gardening, producing a saline-tolerant variety of paddy and crab fattening, that would be suitable for those communities because of their environmental relevance and traditions. They believed that these could help women to cope with post-disaster situations effectively. Participants 1.2.1 and 3.2.2 suggested that the existing education does not provide livelihood skills, which they required above all, especially

⁹¹ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants’ background and experience.

⁹² The Government of Bangladesh has ongoing programs for humanitarian assistance and social safety nets, such as Test Relief (TR), Food for Work (FFW), Employment Generation Programme for the Poor (EGPP), Vulnerable Group Development (VGD) and Vulnerable Group Feeding (VGF), which are implemented with a special focus on women to provide humanitarian assistance to ensure food security and employment opportunities for the ultra-poor during the lean period. The TR and FFW are provided for rural infrastructure development and maintenance programs (Government of Bangladesh, 2016).

⁹³ The participant indicates EGPP, FFW etc. program

after cyclones to overcome financial losses. Participant 3.2.2 emphasised the lack of vocational educational institutions for skills development to improve livelihoods. Participant 1.3.1 thought that women required skills development in rearing livestock and poultry, hatcheries and agriculture, block-boutiques and computer operation. These participants argued for increasing training facilities and training options for women in the coastal districts.

3.3.2.8.3 Compulsory Micro-credit Repayment Obligations

Participants 2.2.1 and 2.3.2 and the focus group from Kalapara *Upazila* emphasised the obligation to pay micro-credit instalments, which increase women's vulnerability and makes their recovery process very difficult after cyclones. This finding is supported by Islam and Walkerden (2015), who found that micro-credit instalments had unreasonably high interest rates, making women more vulnerable during the recovery period. The participants from focus group 3.3.1 said 'the interest rate is very high such as 100% which is difficult to repay if cyclone hits.'⁹⁴ They also stated that many people fled from the community to escape instalment payments.

Two types of micro-finance support were suggested by participants: relief from existing loan instalments and a new loan for recovery. Community participants suggested repayment holidays for a certain period depending on the intensity of cyclones. Participant 2.2.1 said, 'These loans should be relaxed for the cyclone-affected people and their families. The NGOs could only take the capital without interest, which could help the family to recover.' Even an NGO participant suggested a repayment holiday. Moreover, the participants from focus group 3.3.1 emphasised credit support for building cyclone-resilient houses.

3.3.2.8.4 Insufficient Relief Support

Surprisingly, most of the women from the community were not interested in receiving more relief materials from the Government or other donors. They had different views about relief. Only two participants (Participants 3.1.4 and 3.2.4) focused on providing more relief materials for the community and especially for women. Some were more specific about what sort of relief they require, arguing that women should be provided with more livestock, poultry, supply materials for weaving nets and provided with salinity-tolerant paddies to enable them to become more self-reliant rather than relief materials. Participant 3.1.2, a union *Parishad* member, said that only 10–25% of the affected community receive relief, which is very low, and the rest receive nothing. She argued that the

⁹⁴ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants' background and experience.

Government should emphasise other strategies of recovery and reconstruction rather than relief distribution. The participants from focus group 3.3.1 stated that ‘Instead of rice and other relief materials, the Government and NGO could provide us with a cow and house loan, that could help us survive⁹⁵’. The Government is also aware of the fact that the community has different views about relief support. For example, Participants 1.1.2 and 1.1.3 from the Government also noted that the Government needs to review relief materials. Participant 1.1.2 from MoDMR noted that the Government provides dry food as relief after disasters. In one incident, some women asked for machines to husk the rice, showing they are more inclined to work and ensure their survival.

3.3.2.8.5 Lack of Access to Economic Resources and Public Domains

The findings also strengthen the existing assumption relating to lack of access to resources as a pre-existing cause of women’s vulnerability. Disaster vulnerability theory and Nussbaum’s capability approach may be a better source of analysing this. More specifically, the findings add that women’s lack of access to public places, domains and vehicles in coastal communities have contributed much to the pre-existing economic vulnerability and post-disaster impact and recovery. Eight participants and both focus groups (see Table 3.4) highlighted the need for access to public places, marketplaces and resources such as immovable property for women to become capable of economic resilience.

The lack of access to resources and productive assets prevents women from being an active part of economic activities in the community. Participant 1.1.1 said, ‘Women don’t have control or access to resources, especially immovable property. The control over land resources is not established in this country and it makes things difficult for women to get a loan or do any other activity.’ Although women generally have property rights, these are not ensured. In addition, women have less access to the world outside their home, which restricts their mobility and access to public places and vehicles. At Kalapara in Patuakhali, women have very few options for employment because of social norms, tradition and gender roles. Although the major occupation is cultivation and fishing, women are not allowed to fish in the sea and very few jobs in the field. The situation for women in Khankhanabad is more difficult than in Kalapara.

Further, women are excluded from many public places and have less access to markets, means of production and distribution. This is significant as it reduces women’s capacity to sell their skills and products for a living. Participant 1.1.3 stated, ‘There are many women who have the skills to produce

⁹⁵ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants’ background and experience.

quality products; however, they do not have access to the marketplace to sell their product to earn money. Many existing training programs run by the Government which support women's skills development for income-generating activities; but lack of Government intervention to support women access to the marketplace resulted less opportunities for income generation'⁹⁶. Moreover, participants from focus group 3.3.2 stated, 'We have the skill to make nets and mats. If the Government supported it, we could survive.' Women's social mobility is low in communities.⁹⁷ During field visits, the researcher saw girls going to school wearing school dresses, but very few going anywhere else. In the marketplaces, only two middle-aged women were selling fresh vegetables. All small stalls for tea and hotels were occupied by men. Few women went to cafeterias as customers, even with male relatives. The situation is worse at Khankhanabad in Banshkhali Upazila compared with Kalapara Upazila, as the land is unusable for cultivation because of salinity from cyclones and tidal surges.

Finally, during the field visit, the researcher did not witness any females driving vehicles in the community;⁹⁸ women may experience bullying if they tried to drive. In addition, women and girls are not allowed to drive vehicles because of social norms in both places. The vehicles used in Kalapara are mostly vans (a local three-wheel mode of transport with no engine), autos (a three-wheel transport with a light engine), motorcycles and bicycles. Women can access vans or autos, or a long-distance bus if they wish. A woman is only allowed to ride a motorcycle with her male relatives.⁹⁹ At night, women's presence is not noticeable in places outside the home and they are not welcome in public places alone. The sense of a lack of security is high and social norms restrict their mobility. Participant 2.3.1 highlighted that women have less access to training facilities, as most of the big training institutions are situated in distant places that are difficult for women to access.

The Government has failed to recognise the significance of providing access to marketplaces and the public domain. Although the seventh Five-year Plan includes provision of access to markets and productive assets such as land, seeds, fertiliser and extension services (Government of Bangladesh, 2015), it does not include women's physical access to marketplaces. Moreover, the researcher noted that no women drive in the community. Though they can use public transport, social norms do not

⁹⁶ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants' background and experience.

⁹⁷ See Figure 3.2.

⁹⁸ Women are not willing to drive, even in big cities. In case of selecting a profession, the traditional division of labour still plays a significant role among women in Bangladesh. There are few cases where women drive in cities. Moreover, the norm is strictly followed by the village community.

⁹⁹ See Appendix 3.2 for pictures showing men driving vehicle and involved in various professions where women's access is limited.

allow women to drive vehicles, which reduces their access to various places, which is also ignored by planners and policy makers.

3.3.3 Socio-cultural Dimensions of Women's Vulnerability

The socio-cultural dimensions of women's vulnerability, here, depict the inability of women to resist adverse impacts from natural disasters because of characteristics inherent in socio-cultural norms, practices and interactions in society. The findings show that this dimension received the third highest attention from participants, with the largest number of issues highlighted (see Table 3.6). Most of the issues in socio-cultural vulnerability might also influence and regulate other dimensions of vulnerability, and vice versa. For example, the lack of access to cyclone warnings may be connected to the organisational dimension; however, the researcher views this as a socio-cultural dimension because it results from the cultural practice and traditions in the village. It is contended that Nussbaum's capability approach, discussed in section 2.2.3, provides a better framework for understanding the socio-cultural dimension of vulnerability. The findings from such socio-cultural dimensions of vulnerability experienced by women in natural disasters are summarised and analysed in the table below.

Table 3.5: Number of Participants Focused on Various Types and Causes of the Socio-cultural Dimension of Vulnerability¹⁰⁰

Women's vulnerability	Issues identified by the participants	Number of participants	Participants code	Name of focus group
Types of socio-cultural dimension of women's vulnerability	Hardship in maintaining daily domestic duties; increased workload and time burden	3	1.1.1; 1.3.1; and 3.1.2	Both
	Insecurity for women and adolescents	5	1.1.3; 1.2.1; 1.2.2; 1.3.1; and 1.3.2	-
	Increased violence and harassment	3	1.3.1; 1.2.1; and 2.1.4	Kalapara
	Increased reproductive burden	1	3.1.4	Kalapara
	Vulnerability as care givers	4	1.1.1; 1.2.2; 3.1.1; and 3.1.4	
	Vulnerability as single women	1	1.3.1	Banskhali
	Cultural sensitivity	4	1.1.3; 1.2.1; 1.2.2; and 3.2.3	
	Lack of access to early warnings	-		Kalapara
Major causes of the economic dimension of vulnerability	Lack of women-friendly environments	3	1.1.6; 1.3.1; and 3.2.3	
	Lack of gender-sensitive education	3	1.1.3; 2.1.4; and 3.1.2	
	Lack of gender-sensitive training through social institutions	2	1.1.2 and 3.1.1	
	Patriarchal attitude	5	1.1.2; 1.1.3; 1.1.5; 1.3.2; and 2.3.1	
	Cultural restriction of <i>Purdhah</i>	2	1.3.2 and 3.1.2	
	Lack of sense of community	1	1.3.2	-

¹⁰⁰ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants background and experiences

3.3.3.1.1 Hardship in Maintaining Daily Domestic Duties; Increased Workload and Time Burden

Participants 1.1.1, 1.3.1 and 3.1.2 and two focus group members emphasised the hardship in maintaining domestic duties, and the increases in workload and time burden. The findings reveal that women are overburdened with responsibilities, which makes them more vulnerable before and after cyclones. Participant 3.1.2 said that because of the increase of salinity of water, women's workload had increased. Participant 1.1.1 said that he had seen 'many women fetching drinking water from three or four miles away from home'. The participant from focus group 3.3.1 stated that they had nothing – not even the sign of their house – after Cyclone Sidr in 2007, and had to rebuild everything. The situation became worse when the male member of the family migrated. Participant 1.3.1 highlights the relationship between male migration and women's vulnerability. Moreover, sometimes the male members failed to provide financial support for the family which results more responsibilities and eventually they become single women.

3.3.3.1.2 Insecurity of Women and Adolescent Girls and the Feeling of Being Exposed

Five participants (see Table 3.5) emphasised the issue of security of women and adolescent girls before, during and after disaster. Among various issues, insecurity of women and adolescent girls in shelter houses, feelings of being exposed and insecurity in the community were discussed. Mothers' concerns regarding the security of their daughters, particularly adolescent daughters, in shelter houses are discussed by Neumayer and Plümper (2007: 556), Ikeda (2009: 71) and Shah (2012: 252).

The empirical data demonstrate that insecurity in the shelter house is a serious concern for parents. Participant 1.3.1 said, 'Previously, women were surrounded by the male members of their family like a circle to secure them during cyclones in the cyclone shelter'¹⁰¹. Participant 1.1.3 stated, 'Specially a mother of an adolescent girl is always unwilling to go to the shelter houses as incidences of harassment increase during and after disaster as there is no work for men'. Participant 1.3.2 shared a story where a father was forced to bring his family to a shelter house. However, Participant 1.2.1 claimed that the situation had improved, as the Government now ensures separate facilities for women in shelter houses.

The empirical findings include a new dimension regarding women's insecurity in the community: the absence of male family members, specially when they have migrated after a disaster to make a living.

¹⁰¹ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants' background and experience.

Participant 1.3.1 said that women suffer a greater lack of security when male members migrate for jobs, and the culture does not allow women to move as freely as men.

3.3.3.1.3 Increase Violence and Harassment

The incidence of violence and harassment increases during and after natural disasters. Three participants (see Table 3.5) and focus group 3.3.1 emphasised violence against women during disasters. Participant 1.2.2 said, ‘Violence also takes place during and after disasters as male partners are not there to provide security. This is also because they need to go to a far-off place to fetch drinking water as salinity increases in the water in the coastal belt.’¹⁰² A participant from focus group 3.3.1 stated that one of her relatives had disappeared after a cyclone and was found killed a few days later.

3.3.3.1.4 Increase Reproductive Burden

The findings show that cyclones sometimes increase women’s reproductive burden. Pradhan (2005: 22–23) showed that women face undue pressure from their family if a male child is lost or injured during disasters in India. Although the field data did not show any pressure to bear a male child, the pressure for another child is present in the community if all children are lost in a cyclone. Focus group 3.3.1 stated that the loss of children places on women a reproductive burden, though some are too old to be a mother again. Participant 3.1.4 said, ‘Women also suffer more when they lose their family members. Also, some women became childless after losing their only child. They faced social problems.’

3.3.3.1.5 Vulnerability as a Caregiver

The findings reveal that women’s care-giving responsibility is not confined to family members, though Reyes and Lu (2016) and Juran and Trivedi (2015: 604) stress women’s responsibility as caregivers to family members. They argue that this makes women more vulnerable to natural disasters by placing their own personal concerns last and that women often sacrifice personal safety for the survival of their family, which is similar to the concern relating to women’s sense of responsibility towards the household, household belongings, poultry and cattle that discourage them from going to shelter house. Four participants (see Table 3.5) posited that women’s roles as caregivers may make women more vulnerable before, during and after cyclones in various ways. Participant 1.1.1 said, ‘Women find it difficult to go to shelter houses because of two kinds of burden, such as family burden

¹⁰² See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants’ background and experience.

and economic burden. The family members, especially the old and children, are dependent on her and she is the custodian of the household assets.’ Participant 3.1.4 provided a detailed story of Cyclone Gorky in 1991, saying, ‘Women didn’t go to the cyclone centres leaving their sons, cattle or poultry. As a result, they faced death. But men went there to save their lives. Thousands of women died in our area. One of my relatives along with her daughter fell in a hole while going to the cyclone shelter at the last minute and both died instantly.’¹⁰³

3.3.3.1.6 Vulnerability as Single Women

The findings reveal that single-headed households and women who lose family members in disasters suffer more vulnerability than other women. This finding is supported by the existing literature, such as Juran and Trivedi (2015: 607), Azad et al. (2013: 197) and Sultana (2010), who argued that as a marginalised and powerless group, women are more exposed to disaster vulnerability because of limited access to social support and resources and a smaller support network compared with men.

Women who lose family members in cyclones or become single face more vulnerability than others, and this continues throughout their lives. Participant 1.3.1 and focus group 3.3.2 from Chittagong discussed the problem of single-headed households. Participants from focus group 3.3.2 from Banskali shared their experiences that women’s vulnerability increases tremendously if they become single. One said, ‘In the cyclone of 1991, I lost my father and my brothers. My suffering started since the cyclone and never ends. When the cyclone came again, it destroyed my property and increased my suffering. I am working very hard – harder than a man – to make my living, but it doesn’t help.’

3.3.3.1.7 Cultural Sensitivity

The findings from four interviews identify that cultural sensitivity also made women more vulnerable. Participant 1.1.3 said, ‘The society is still very conservative. The women in villages still hesitate to hold the hand of a man, even in a disaster situation. In the rescue team, most of them are male, especially the fire service. Therefore, women feel shy to have assistance from a male in that situation.’ The issue of cultural sensitivity was also found in the Indian Ocean Tsunami in Sri Lanka, where Jayarathne (2014) identified that in some cases, women chose to drown rather be rescued naked.

¹⁰³ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants’ background and experience.

3.3.3.1.8 Lack of Access to Early Warnings

Previous studies¹⁰⁴ identify that women's limited access to early warnings causes high mortality. The empirical data reveal that the situation has improved dramatically over the last three decades. The field data show that participants from focus group 3.3.1 said that there were still some women who could not be reached, but the rest of the participants argued that the warning system had developed significantly in terms of reaching women in the community. The participants said that they had women community volunteers to inform women, and radio, television and mobile services available for disseminating early warnings. Participants from focus group 3.3.1 stated, 'Early warnings mostly reach women. Nowadays, people understand the importance of the warning system. But there are a few women who fail to understand the early warning. There are 10% of women who can't understand the early warning and can't be reached',¹⁰⁵.

3.3.3.2 Findings on Causes of the Socio-cultural Dimension of Vulnerability

Alexander (2012: 28) argued that 'culture is important to any understanding of the significance and role of disaster in the modern world'. Yumarni et al. (2014: 770) argued that gender vulnerability in a disaster is deeply rooted in social and cultural practices and beliefs in a society. Scholars (Asaduzzaman, 2015; Azad et al., 2013; Yumarni et al., 2014) added that the root causes of vulnerability are patriarchal culture and existing inequality. These are manifested through discrimination against women, male dominance and negligence of women's rights and capacity. It is important to note, here, that Wisner et al. (2011a) identify 'traditions and religion' as a root cause of vulnerability. The findings from the empirical data reconfirm the existing theory on vulnerability. Among those causes, traditional dress code and patriarchal attitude received the highest emphasis among participants; government intervention should prioritise accordingly to address the root causes of disasters.

The participants identified various causes of the socio-cultural dimension of vulnerability and made suggestions for addressing those causes. In total, 11 participants highlighted causes and suggested remedies to address social vulnerability, which can be grouped into five categories as below.

¹⁰⁴ For more detail, see Ikeda (1995) and OXFAM and Nirapad (2011).

¹⁰⁵ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants background and experiences.

3.3.3.2.1 Lack of a Women-Friendly Environment

Three participants (see Table 3.5) emphasised the lack of a women-friendly environment as a major cause of socio-cultural dimensions of vulnerability. The participants indicated that women must have social security during disasters and when male members of a family leave after cyclones. Participant 1.6.1 said, ‘A women-friendly environment is important to improve women’s overall situation’.

3.3.3.2.2 Lack of Gender-sensitive Education

Three participants stressed the lack of gender-sensitive education for the community. Participant 1.1.3 and 2.1.4 focused on gender-sensitive education for both men and women, and one focused only on women. Participant 3.1.2 from Khankhanabad union *Parishad* recommended this, arguing that it has an impact on disaster risk reduction. Referring to the dress code and risk of drowning, she stated, ‘Most of the women are used to wearing ‘sharee’ all the time here, which causes trouble during cyclones. As they are uneducated, they don’t understand. Only 20% of women wear Salwar-Kamiz.¹⁰⁶ If they can be provided with education (gender-sensitive education), they could change.¹⁰⁷’ One government officer said that gender-sensitive education should be given the highest priority to reduce the socio-cultural dimension of women’s vulnerability.

3.3.3.2.3 Lack of Gender-Sensitive Training Through Social Institutions

Participants 1.1.2 and 3.1.1 underlined the lack of gender-sensitive training for the community. Participant 3.1.1 emphasised the need for training for women on their rights and responsibilities. She said, ‘As women are uneducated, they need more training on their rights and responsibilities to enable them to take on their responsibilities. In most cases, they come to me to help them. They do not know of their rights and responsibilities and where to go and how to seek help to solve problems.’ Participant 1.1.2 focused on gender-sensitive training for men, adding, ‘We need more gender-sensitive training for men to ensure mutual respect between men and women’.

3.3.3.2.4 Patriarchal Attitude

Five participants (see Table 3.5) focused on attitudes towards women as a major cause of vulnerabilities. Participant 1.1.2 emphasised attitudes towards women and argued that involving women in disaster risk management requires a more positive attitude of men towards women

¹⁰⁶ A traditional dress usually worn by women in Bangladesh, India and Pakistan.

¹⁰⁷ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants’ background and experience.

(patriarchal). She also added that it also applies to some top government officers as well. Participant 1.1.3 underlined awareness raising for changing attitudes to women to enable them to understand their roles and responsibilities pre, during and post cyclones. Moreover, Participant 1.3.2 suggested involving celebrities as a means of changing attitudes. Further, Participant 3.2.1 advised that the government should consider awareness raising more. His experience of working with a local community showed that awareness-raising programs could do wonders in reducing disaster risk in the community.

3.3.3.2.5 Cultural Restrictions Such as *Purdhah*

Compared with the existing literature,¹⁰⁸ the empirical findings showed less concern about *Purdhah* as a dimension of women's vulnerability – only Participants 1.3.2 and 3.1.2 emphasised this. Participant 1.3.2 said that one family was unwilling to go to the shelter house before a cyclone because of *Purdhah*. Participant 3.1.2 revealed that they maintained *Purdhah*, which discourages women from working in the field or outside the house. Although women enjoy more freedom and less restrictions when responding to early warnings, they still suffer from this norm in performing day-to-day activities.

3.3.3.2.6 Lack of Sense of Community Among Women

Finally, Participant 1.3.2 argued that a lack of sense of community among women was a major cause of vulnerability. She suggested 'Women should develop a sense of community among themselves to prepare themselves for any kind of disaster. Women need to develop a sense of belongingness for each other and for the community to survive.' She added, 'Women need to work together to survive and sustain.'

3.3.4 Political Dimension of Women's Vulnerability

The political dimensions of vulnerability, here, describe the unequal access of women in the decision-making process and leadership in the household, organisations and community in the case of addressing natural hazards. The significance of decision making in disaster management has been identified by many (see the Chapter 1 literature review). Nussbaum's (2000) criteria six and 10 are

¹⁰⁸ *Purdah* is considered a significant contributing factor to disproportionate disaster mortality rates by Juran and Trivedi (2015). See also Alam and Collins (2010), who describe that though *Purdhah* is a protective instrument meant to shield women from harm, it is paradoxically unprotective – a double-edged sword that impinges on women's capacity to cope with disasters. Another study showed that this segregated practice makes women more vulnerable to disasters by restricting them from access to information, relief materials and other material and non-material resources (IDMC and NRC, 2011).

relevant for the analysis of political dimensions of vulnerability; these concern ‘being able to form a conception of the good and to engage in critical reflection about the planning of one’s life’ and ‘being able to participate effectively in political choices that govern one’s life; having the right of political participation, protections of free speech and association’.

Although scholars argue for the participation of women in various decision-making bodies at community, local and national levels, the significance of decision making at the household level is highly evident in the case of Bangladesh. The tremendous achievement in reducing the death toll during cyclones in Bangladesh has been discussed among many (Aldrich et al., 2015: 345–346; Ashraf and Azad, 2015: 30–38; Bisson, 2012: 90–95; Habib et al., 2012: 40–45), who have argued that strong early warning dissemination, construction of more shelter houses and the hard work of CPP volunteers has significantly reduced unexpected human casualties, including women. However, the empirical evidence suggests that women’s ability to make the decision to leave their houses alone without depending on a husband or male members of the family is one of the most significant causes of decreasing mortality rates in cyclones. Because of socio-cultural practices and patriarchal power distribution, women have not been encouraged to leave their houses alone or without the permission of elder male members of the family. For example, some incidences showed that women are not allowed to take shelter before coastal cyclones without the permission of their husbands, and that this increases the number of drownings (Alam and Collins, 2010). The empirical data show that after devastating Cyclone Sidr, people realised the significance of women’s decision making and women’s ability to decide to leave their house to take shelter before cyclones. The field visit identified three types of political dimension of women’s vulnerability and five types of causes of this vulnerability. Table 3.6 summarises the data collected from the field.

Table 3.6: Number of Participants Focused on Various Types and Causes of the Political Dimension of Vulnerability¹⁰⁹

	Issues identified by the participants	Number of participants	Participant code	Focus group
Types of political dimension of vulnerability	Voices not heard in day-to-day activities	4	1.1.1, 1.1.3; 1.2.2; and 1.3.1	-
	Female members excluded from allocating resources	2	1.3.2 and 3.1.1	-
	Male dependency in decision making	3	1.1.3; 1.3.2; and 2.2.1	-
Major causes of political dimensions of vulnerability	Underrepresentation of women on disaster management committees	2	1.2.2 and 1.3.2	-
	Lack of active women's participation	4	1.1.1; 1.1.4; 1.2.1; and 1.2.2	-
	Lack of women's capability as decision makers	5	1.1.1; 1.1.3; 1.3.1; 1.3.2; and 3.1.1	-
	Lack of leadership among women	2	1.1.6 and 1.2.2	-
	Lack of genuine female representation in elections	1	1.3.2	-
	Traditional power relations	1	1.1.6	-

3.3.4.1 Voices Not Heard in Day-to-Day Decision-making

The field data reveal that women's voices are not heard in decision-making processes at the household, organisation or community levels, especially in the case of cyclone risk management, where participation of women is in its infancy. Four participants (see Table 3.6) expressed their concerns about this issue in various ways, using terms such as 'voice not raised', 'can't talk for themselves', 'not involved in existing machineries', 'no qualitative participation' and 'no active participation'. Participant 1.2.2 highlighted that 'only a wearer knows where the shoe pinches. Likewise, only women can tell you best about their problems.' Participants 1.1.1 and 1.1.3 emphasised the significance of participation in the various levels of women's lives. Participant 1.1.1 added, 'Women's voices aren't

¹⁰⁹ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants background and experiences

raised and heard properly’ during disaster, or in normal situations. Participant 1.3.1 stressed that the lack of women’s involvement in shelter house management increases the vulnerability of women in cyclone shelters. Participant 1.1.3 argued that the quality of participation is not ensured, stating, ‘The problem with women’s participation in various decision making bodies is not quantitative, but qualitative’.

3.3.4.2 Female Members Excluded from Allocating Resources

Allocating and distributing relief material and other facilities is important in disaster management. The UDMC plays a significant role in selecting affected people after disasters for relief. However, Participant 3.1.1 from the UDMC complained that female members are not consulted before the preparing list of affected destitute people for relief materials. As a result, they have failed to include women they consider vulnerable. Participant 1.3.2, a scholar, said that female members of UDMCs are inactive, especially in the case of relief distribution.

3.3.4.3 Male Dependency in Decision-making

The empirical evidence reveals that women are significantly influenced by male members of the family in decision making. Women’s secondary position in decision making generates inequalities in freedom of choice before, during and after disasters. In the case of responding to early warnings, the situation has improved. However, dependency on male members of the family in the case of other disaster-management-related activities has not improved. Very little research has been done so far on women’s decision making in disaster management activities at the household, community and local levels.¹¹⁰

The finding shows that three participants (see Table 3.6) focused on how women’s decisions were influenced by male members of the family. Participant 1.1.3 expressed that female members of union *Parishad*, who are also members of UDMC, were overshadowed by their husbands. Sometimes, husbands attended meetings on behalf of female members, and signed on behalf of their wives.

¹¹⁰ There are a significant number of studies conducted on women’s decision-making status in the case of health-related and economic empowerment issues, such as reproductive health, child nutrition, use of contraceptives, economic empowerment, micro-finance and women’s participation. For more detail, see Story and Burgard (2012), ‘Couples’ reports of household decision-making and the utilization of maternal health services in Bangladesh’, Jayasundera, R (2012), ‘Improvements in women’s status, decision making and child nutrition: Evidence from Bangladesh and Indonesia’; Begum, A and Chakraborty, K (1995), ‘Economic contribution of rural women and their participation in the household decision making process in Bangladesh’; Murshid, NS and Ely, GE (2016), ‘Microfinance participation and contraceptive decision-making: results from a national sample of women in Bangladesh’. No significant study has been conducted on the factors that influence women’s decision-making power in regards to disaster risk management in the household, community or state.

Sharing her experience, another participant stated that she found that one member was elected contingent on her husband being elected; as her husband was not eligible for election for some reason, his wife contested his position and won the election. The participant identified that this member of parliament was highly influenced by her husband in every decision. ‘A highly educated woman elected as a member of parliament. Actually, she was elected from the constituency where her husband is usually elected. I never saw her make a decision, sometimes in the local administrative meetings, she brought her husband to conduct the meeting.’

Further, Participant 1.3.2, a scholar, indicated that there was doubt about the voting rights of women, with decisions influenced by male members of the family. Participant also argued that the relationship between a women’s presence in the political process and their genuine participation was not clear, given the influence of male members of the family; thus, democracy or political representation may not have a significant effect on women’s participation in the formal political arena. Finally, they correlated this existing situation with the decision-making ability of female members of union Parishad in the UDMC.

3.3.4.4 Causes of Political Dimensions of Women’s Vulnerability

The participants emphasised the various causes of the political dimensions of women’s vulnerability. The participants who highlighted the political dimension of women’s vulnerability also analysed its major causes.

3.3.4.4.1 Underrepresentation of Female Members in DMCs

The disaster management system in Bangladesh is highly regulated by various committees working at different levels of Government.¹¹¹ Compared with the total number of members of various DMCs, the number of female members is very low. Participant 1.2.2 emphasised the underrepresentation of women, stating, ‘nowhere is there equal representation’. He suggested the gradual inclusion of women, stating, ‘we can include 30–40% women in the committee by 2020. By 2030, we will reach the goal of equal representation of women.’ He argued that underrepresentation of women in various

¹¹¹ A review of the formation of various disaster management bodies showed that they have an underrepresentation of women in the various disaster management bodies from the national to the community level in Bangladesh. At the national level, some committees have only one representative from MoWCA or DWA, and at the local level, there are few members at the three levels of disaster management committees. Compared with the total number of members, the number of women is low, particularly at the top relative to the periphery (see Chapter 4 for more detail).

bodies might discourage women from raising their voices and influencing the decision-making process in the planning, formulation and implementation of disaster risk management.

3.3.4.4.2 Lack of Participation

Four participants (see Table 3.6) argued that there is a lack of women's participation in disaster management activities at the household, community and national levels. Participant 1.1.1 stated, 'women should participate in all kinds of decision-making processes in society, not only in disaster management'. Moreover, Participant 1.2.2 emphasised increasing participation of women in various disaster management bodies and activities, arguing for women's involvement and participation to be ensured at all levels including interventions, planning and processes. The empirical data reconfirm the findings of the study conducted by UN Women (2015)¹¹² in Bangladesh, and extend the argument further, revealing the inclusion of women in DMCs¹¹³ does not have a significant impact on decision-making processes. Three participants (1.1.1, 1.2.1 and 1.2.2) extensively highlighted the issues of lack of women's leadership at various levels. Participant 1.2.2 highlighted this in the case of the community and local levels, as there is no organisation to influence the decision making of DMCs at the union, Upazila and district levels.

Participant 1.1.1, an officer, provided a deeper understanding of this situation. He added that women do not have access to information required to participate in DMCs. Moreover, a union *Parishad* member stated that they did not have access to various Government documents. Participant 1.2.2 argued that some of the documents were written in English, which was difficult for all to understand in the local community, especially women. He also said that these were gradually being translated into Bengali. However, the question of whether access to information will help female members to become involved in decision-making processes remains. Moreover, the secondary position of women in the household and community and social exclusion might leave them with fewer opportunities to participate in decision making. According to Reyes and Lu (2016: 163), the gender imbalance that women face in organisational responses to disasters is only a reflection of the gender gap that they face and experience in their everyday lives.

¹¹² That study investigated the quality of the government intervention to include women in DMCs and found that it failed to bring about the desired outcome. It identified that female members are less aware of their duties and responsibilities, that participation of female members is a 'mere presence', that their voices in most cases are not heard and that they gradually stop raising their voices.

¹¹³ The empirical evidence shows that the activities of DMCs increase during disaster periods. However, they are less active in disaster management activities during normal periods, and DMC meetings are not taken seriously. Some participants said that these meetings do not even usually take place.

3.3.4.4.3 Lack of Capability as Decision Makers

This study revealed that the concept of women's representation in decision-making bodies is not only about providing a place or position to participate, it is about providing opportunities for building awareness and developing skills that make women willing and efficient to make decisions. The social practice of non-participation and non-making of decisions leaves women in a position where they are not willing to take the role of decision maker in the community. The empirical data identified that the participants from the community, such as union *Parishad* female members and CPP volunteers, barely discussed decision making. Moreover, nothing was mentioned about the political dimension of women's vulnerability by the focus group participants. They showed the lowest priority on the political dimension of vulnerability (see Table 3.2). Among the four female members of union *Parishad*, Participant 3.1.1 emphasised that she raised her voice to ensure women's rights in the community.

Although some participants focused on underrepresentation of women or 'lower levels of participation at decision-making bodies',¹¹⁴ this research also revealed that women have failed to perform their responsibilities in some cases. Five participants (see Table 3.6) emphasized the significance of increasing women's skills and capacity as decision makers at the household, community and national levels. Sharing her experience of bringing women to the shelter house from a very remote place before a cyclone, Participant 1.1.3 said that women found it very hard to decide what to take with them to the shelter house, which delayed their action of taking shelter and made them vulnerable to drowning in the cyclone surge. She added that women want to take many things with them and fail to decide which are their most important belongings. She stated, 'There is huge scope for women's participation, but women need to have the skill to take advantage to participate'. Participant 3.1.1 from UDMC blamed this on 'women's inability to talk for themselves'.

Participants also suggested that there is a lack of awareness about responsibilities and skills among women members of various decision-making bodies, which contributes to the lack of capability in decision making. Women are less willing to participate in the union *Parishad* and DMC meetings. Sometimes their husbands attend the meeting and sign on their behalf. There are multiple factors responsible for this situation, such as lack of skills and decision-making capacity; women are overburdened with responsibilities, lack awareness of their responsibilities, and can struggle with distance or lack of transportation. Participant 1.2.2 stated that women members of the union *Parishad*

¹¹⁴ See UNISDR et al. (2009), which argued that women's poor representation in decision-making bodies and socio-cultural norms and attitudes bar women's participation.

and disaster management committee were not aware of their duties and responsibilities, and some were not able to read the rules and regulations.

This thesis posits that women have fewer opportunities, which makes them less capable of deciding matters relating to disaster than male counterparts. The decision-making jurisdiction is also spilt along the same lines as the division of labour. Women are more concerned about household activities and day-to-day decision-making issues involving cooking, home gardening, rearing kitchens and taking care of children and other dependents. The domain outside the household (*bari*) is where women have to make decisions, especially in the case of an emergency. The capacity of decision making in day-to-day matters outside those issues and decisions during disaster preparedness, recovery and mitigation at the household, community or local level require practice. Their daily role as a housemaker confines their skills in decision making to their day-to-day activities. They need to develop the willingness and ability to make decisions relating to disaster risk reduction to reduce vulnerability.

3.3.4.4.4 Lack of Leadership Among Women

Participant 1.1.6 and 1.2.2 focused on the lack of leadership among women, especially in the community. They emphasised building women's leadership from the national to the community level for disaster management activities. Participant 1.2.2 stressed the leadership of women groups both at the community and national levels, and also from within government. He stated:

We need to enhance the capacity of women's organisations, both government and non-government, to raise their voices. There are very few organisations that work with disaster management and gender. Bangladesh Naree Progotee Sangha has done some work on women and disaster. They actually work on women rights or violence but not on disaster or climate. They also lack leadership in disaster management. Women need to take the leading role to address women's issues. Especially in the policy formulation meetings, there should be more women involved¹¹⁵.

He argued for training on leadership for women and encouraged development of women's groups in the community.

¹¹⁵ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants' background and experience.

3.3.4.4.5 Lack of Genuine Female Representation in Elections

The lack of genuine representation of women at the local level was emphasised by Participant 1.3.2 ‘to ensure true representation’. In Bangladesh, female members of union *Parishad*¹¹⁶ work as members of UDMCs. To ensure effective representation of women on DMCs requires a genuine representation of women in union *Parishad* elections. Participant 1.3.2 also added that women members at the union *Parishad* and other levels are family members of powerful male politicians of that constituency or others, which make them dependent on male members in various decision-making issues. Therefore, some participants emphasised developing laws and policies to ensure true participation of women in elections.

3.3.4.4.6 Traditional Power Relations (Patriarchy)

Participant 1.1.6 from the Government identified traditional power relations as a cause of women’s vulnerability and suggested changing the traditional power relations between men and women. She added that this would require challenging patriarchy and all other gender relationships in society. Although it is a cause of the political dimension of women’s vulnerability, patriarchy itself is a socio-cultural issue.

3.3.5 Organisational Dimension of Women’s Vulnerability¹¹⁷

Empirical data also identified that there are pre-existing situations within the organisational structure, the process, the practice and its capacity that contributed to the progression of women’s vulnerability in cyclones. The organisational dimension of vulnerability indicates, here, that unequal treatment, policies and practices within the disaster risk management approach cause vulnerability for women or affect women more rigorously than men. This section of the thesis is influenced by the work of Birkmann (2013), who stated that the organisational dimension of vulnerability should be framed as its own dimension.¹¹⁸ Birkmann (2013: 30–31) outlined this dimension as ‘modes and constrain in

¹¹⁶ In the case of political participation, Bangladesh has made significant progress for women. The government enacted the Local Government Act 1997, a milestone in the development of women’s political rights in Bangladesh, reserving one-third of seats for women candidates directly elected by women citizens of the community in local government bodies. For more detail, see Panday and Li (2014). The SOD has included some of these female members acting as members of UDMCs. For more detail, see Ministry of Food and Disaster Management (2010).

¹¹⁷ Organisational dimensions, here, indicate only government organisations/agencies. However, this could be expanded to other organisations such as international agencies, NGOs or charities working for disaster management.

¹¹⁸ He predicted that one could argue that this dimension had been derived from other dimensions. He accepted the interdependence of dimensions, agreeing that other dimensions do influence and regulate the organisational dimension, and that it has practical value. Considering my empirical evidence, I agree with him. In addition, I argue that the gender aspect is, sometimes, magnified within the organisational framework, as it has a long history of not recognising this fact. Though gender aspects are starting to be recognised, there is a long way to go.

governance, underlying rules and norm systems that govern society and also to the capacity or incapacity of (formal) organizations to deal with risks and adaptation challenges'. Bolin et al. (1998) demonstrate that gender issues were absent for many years in designing and planning disaster management strategies. It is only recently that scholars and development practitioners have identified that the gender aspect of disaster management should be considered in disaster risk reduction activities, and that there are many existing laws, policies and programs that lack gender sensitivity or fail to address gender appropriately, resulting in more vulnerability for women.¹¹⁹

Table 3.7 summarises the empirical data provided by the participants in their interviews, which discussed 14 types of issues that can be divided into five broad categories of vulnerability and six various types of causes. Some of these dimensions have been analysed in previous research.

¹¹⁹ A detailed analysis of major laws, policies and programs relating to cyclones in Bangladesh is presented in Chapter 4.

Table 3.7: Number of Participants Focused on Various Types and Causes of the Organisational Dimension of Vulnerability¹²⁰

	Issues identified by the participants	Number of participants	Codes for the participants	Name of focus group
Types of organisational dimension of vulnerability	Unfriendly shelter houses	13	1.1.3; 1.1.5; 1.2.1; 2.1.1; 2.1.3; 2.3.1; 3.1.1; 3.1.2; 3.1.3; 3.1.4; 3.2.1; 3.2.2; and 3.2.3;	Both
	Insufficient and disproportionate shelter houses	5	1.1.3; 2.3.1; 3.1.1; 3.1.2; and 3.2.1	Kalapara
	Women's needs not recognised in relief distribution	5	1.1.1; 2.1.3; 2.1.1; 3.1.4; and 3.2.4	Kalapara
	Inadequate logistic support, equipment and training	7	2.11; 2.1.2.; 2.1.3; 2.2.1; 2.2.2; 3.1.4; and 3.2.2	-
	Gap between policy and practice	3	1.3.1; 1.2.2; and 2.3.1	-
Major causes of the organisational dimensional of vulnerability	Lack of proper management of shelter houses ¹²¹	9	1.1.2; 1.1.3, 2.3.1; 2.1.1; 2.1.3; 2.2.1; 3.1.3; 3.2.1; and 2.1.2	Kalapara
	Lack of adequate support services for staff	7	2.1.3; 2.1.4; 3.2.2; 3.2.3; 3.2.4; 2.2.1; and 2.2.2	-
	Lack of gender-sensitive laws, policies and programs	8	1.2.2; 1.1.3; 1.1.4; 1.1.6; 1.3.1; 1.3.2; 2.2.2; and 3.1.4	-
	Lack of implementation, monitoring and evaluation	4	1.1.1; 1.1.2; 1.2.2; and 1.3.2	-
	Lack of capacity building for organisations and human resources	6	1.1.1; 1.2.5; 1.2.2; 1.3.2; 1.2.2; and 3.2.4	-
	Lack of coordination	2	1.1.5 and 1.2.2	-

¹²⁰ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants background and experiences.

¹²¹ Although nine participants highlighted increasing and ensuring more shelter house facilities for women, the researcher argues that this could be ensured by proper implementation of the existing Cyclone Shelter Construction, Maintenance, and Management Policy 2011, which already addresses women's concerns by ensuring separate spaces and toilet facilities for women, drinking water supply, food, water harvesting, road communication and ramp facilities for cattle and others. The policy also notes that the location of cyclone 'shelters must be in close proximity to the vulnerable communities'; for more detail, see Ministry of Disaster Management and Relief (2012). However, it is the state's responsibility to ensure

3.3.5.1 Unfriendly Shelter Houses

The interview data show that shelter house facilities were the single most discussed issue among different sub-groups, especially participants from the community level. Thirteen participants (see Table 3.7) from the one-to-one interviews and two focus group participants emphasised the lack of women-friendly shelter houses, including the lack of separate spaces for women and lactating mothers, lack of separate toilets, lack of security and overcrowded shelter houses.

Recalling his memory of the 1997 cyclone¹²² at Chakaria Union in Cox's Bazar, Participant 1.2.1 said, 'I was in a cyclone shelter in 1997 when a cyclone hit Chakaria Union where there was no separate facility or space for women. Their security was not ensured. Women were suffering for a long time.' Participant 1.1.5 said, 'The shelter facilities are not sufficient. There aren't enough toilet facilities, no facilities for the elderly and children, and a lack of proper management to oversee women, especially women's issues in the shelter house.'¹²³ This situation has improved in many places following the enactment of the Cyclone Shelter Construction Maintenance and Management Policy 2011, which includes provision for providing a separate room for women, separate toilet facilities for pregnant women, and road communication to the shelter house for women and others (Ministry of Disaster Management and Relief, 2012). The newer generation of shelters is better equipped, with separate bathroom facilities for men and women, special rooms for pregnant women and ramps leading to a second story for cattle and goats. It is a notable contribution on the part of the Government to ensure a women-friendly environment and provide spaces for goats and cattle, which supports women to go to such shelter houses.

However, Participant 2.1.3 said that the old existing shelter houses do not have such facilities. In addition, Participant 2.3.1 stated that lack of maintenance sometimes hampers the women-friendly environment in shelter houses. Further, Participant 1.1.3 revealed that the lack of female representation in shelter house management during disasters fails to ensure a women-friendly environment, as 'women feel uncomfortable talking to men about their problems'.

proper implementation of this policy. Therefore, it is more about implementation of existing policy rather than lack of shelter house facilities for women.

¹²² See Appendix 1.1 for information on cyclone 1997.

¹²³ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants background and experiences.

3.3.5.2 Insufficient and Disproportionate Shelter Houses

The empirical data identify several issues such as inadequate numbers of shelter houses,¹²⁴ locations of shelter house and access to shelter houses as significant contributing factors to women's vulnerability in cyclones. Five participants (see Table 3.7) emphasised the lack of shelter houses in affected areas. Participant 3.2.1 argued for more shelter houses to ensure women's safety. Participant 3.1.2, sharing her experience in Cyclone Gorky in 1991, said, 'We took shelter on rooftops during Cyclone Gorky in 1991 ... When cyclones hit, people here move to the mountains with their domestic animals, which can't ensure their security.' Participant 3.1.1 added that sometimes people shelter in schools and in strongly built safe houses nearby because of the lack of shelter houses. Although the Government is taking the initiative to build more shelter houses, there are many communities that require shelter houses. Participant 2.3.1 said that there are inadequate shelter houses in remote areas including Chanua, Khankhanabad and Barguna in Chittagong.

Interestingly, the participants from focus group 3.3.1 said that the construction of cyclone shelter house was not equitably distributed. They added that in some places, there was more than one cyclone shelter house and in other places, there was no shelter house. Sometimes, cyclone shelters have been constructed based on the political power of the elected representative of that locality, not based on the needs of the community. They also added that there was no cyclone shelter house outside the embankment in a studied area, and people living in that locality was poorer than others and more vulnerable to cyclones and tidal surges. Participant 2.3.1 emphasised the issue of distance to the cyclone shelter, adding that there was a river to cross to reach the shelter house. Participant 2.3.1 noted that because of bad communication, it was difficult for many to reach the shelter house, adding that 'many pregnant women give birth to children on the way, a few cases of which I witnessed'.

3.3.5.3 Women's Needs Not Recognized in Relief Distribution

The findings from the field reveal that there is no separate relief provision for women. Participants 3.1.4 and 3.2.4 highlighted the issue of inadequacy of relief materials after cyclones. Studies conducted by OXFAM and Nirapad (2011: 27, 34) and Yonder et al. (2009: 208) argued that women's needs are not addressed and relief generally targets male-head households as the primary claimants for support. However, this study identifies that the vulnerability of women in terms of not recognising

¹²⁴ There are 3,751 shelter houses, which is insufficient for supporting the large population in the 13 most cyclone-affected coastal districts. For more detail, see Department of Disaster Management (2013). According to Rahman and Islam (undated), shelters can accommodate only 27% of the population at risk and overcrowding discourages women from seeking shelter.

their specific needs is more extensive. Participant 3.2.4 said, ‘There is no separate relief for women, and they are considered a part of their family’. Participant 2.1.1 explained the view of the Government as follows: ‘Women are not separated from families. The Government considers women a part of the household and distributes the relief materials accordingly. If there is any family without a male or any widow, the Government takes care of this case separately. We prioritise those women. The chairman and members of the union *Parishad* provide all required support for these women.’

In addition, Participant 2.1.3 stated that ‘There is no instruction from the Government during cyclones to address women separately. It has been done as humanitarian issues.’ Referring to women’s small losses in disasters, Participant 1.1.1 emphasised that ‘We (the Government) need to think about this practical problem and prioritise them for women for developing policy. The Government should think about those practical aspects of policy formulation more intensely.’

Moreover, the distributed relief materials mostly forget women’s specific needs. The empirical data show that it was only recently that hygiene kits had been distributed considering women’s needs in a flood and cyclone shelter house; it is still not done on a regular basis. In addition, Participant 1.1.1 described that women do not feel easy queuing in public places for relief materials; thus, they cannot collect relief materials because of social restrictions on women’s mobility. Moreover, it is difficult for women to receive relief materials by competing with a huge number of males, and sometimes, women face reprehensible incidents in relief distribution centres. Participant 1.1.1 added, ‘we need to think about how women want to get their relief materials and we need to provide them relief in such a way that makes them feel comfortable’¹²⁵.

3.3.5.4 Insufficiency in Logistic Support, Equipment and Training

Seven participants (see Table 3.7) argued that there is a lack of support facilities from the Government to help vulnerable women during cyclones. Participant 2.1.1, UNO from Kalapara Upazila, said that there was no rescue board to save the lives of women and children, and others. He was also in charge of Rangabali *Upazila*, on a remote island with a sea-crossing of about 25 kilometres. As there was no rescue boat in case of emergency, there was no option to help women or anyone else in danger. Indicating Rangabali *Upazila*, he added, ‘There are some places where there are not enough cyclone shelters. There are some unions where you must cross a river of about seven or eight miles. So, we need strong logistic support for those people, especially women.’ The need for vehicle support was

¹²⁵ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants background and experiences.

also suggested by another government officer working in the field. Three participants focused on transport support for pregnant women. Moreover, Participant 3.2.2 argued for equipment support for pregnant women. A participant from focus group 3.3.1 said, ‘The CPP volunteers don’t have enough equipment to perform their duties. Most of them have no raincoats, no touch, no uniform and no radio to perform their duties effectively.’ The need for gender-sensitive training was also highlighted by these participants.

3.3.5.5 Gap Between Policy and Practice

Three participants (see Table 3.7) highlighted the gaps between policy and practice. Participant 1.3.1 highlighted the gap between ‘paper’ and practice, emphasising proper implementation of existing disaster management law, policy and orders. She stated, ‘What I feel is that Bangladesh does not lag behind in commitment and documentation. The Government is very sincere. It consults with us on a regular basis. But there is still a lack of implementation and dissemination. The ccGAP should be translated into Bengali and spread out at the grass-root level. We also clearly mentioned the roles and responsibilities of all concerned; however, the ccGAP is not yet implemented accordingly.’

3.3.5.6 Causes of the Organizational Dimension of Vulnerability

Several issues were identified by the participants as causes of organisational dimension of women’s vulnerability, and recommendations to reduce these suggested (see Table 3.7). Among the various sub-groups, participants from the community and participants working closely with the community emphasised this type of vulnerability (see table 3.2). Various issues discussed among the participants were merged into six broad issues: lack of shelter house facilities for women, lack of gender-sensitive support, lack of gender-sensitive laws, policies and programs, lack of implementation, monitoring and evaluation, lack of capacity building for organisations and human resources, and lack of coordination (see Table 3.7).

Considering the number of participants emphasising the causes of the organisational dimension of vulnerability, the lack of shelter house facilities for women, lack of gender-sensitive laws, policies and programs, and lack of capacity building for organisations and human resources received the highest priority among participants. However, a comprehensive analysis of those data revealed that successful implementation, monitoring and evaluation was the most significant aspect of disaster risk reduction in Bangladesh. Among 20 participants, nine highlighted increasing and ensuring more shelter house facilities for women (see table 3.7); however, the Cyclone Shelter Construction, Maintenance, and Management Policy 2011 already includes various facilities for women, such as

separate spaces and toilet facilities, drinking water supply, food, water harvesting, road communication and ramps for cattle and goats. The policy also notes that the location of cyclone ‘shelters must be in close proximity to the vulnerable communities’ (Ministry of Disaster Management and Relief, 2012). However, the data revealed that the existing shelter houses do not have those facilities; thus, suggesting the need for successful implementation of this policy. A detailed analysis of the findings is provided below.

3.3.5.6.1 Lack of Proper Shelter House Management

Nine participants and the focus group from Kalapara (see Table 3.7) emphasised the lack of proper planning for shelter house facilities, which included various dimension identified during the discussion. Participant 2.3.1 from a local NGO and Participant 3.2.1 from the CPP volunteers emphasised the significance of building more cyclone shelters in cyclone-affected areas and four participants focused on separate facilities for women. The UNO from Kalapara said, ‘We need proper planning to separate the space for men and women in the existing old cyclone shelters. In the old cyclone shelter houses, the toilets are in one space. If we can rebuild a new toilet for women in the old cyclone shelters, it would encourage them to go to cyclone shelters.’¹²⁶ Participant 3.1.3, a union *Parishad* member, stressed the construction of access roads to cyclone shelters, and one participant underlined the significance of building storage and providing food to support women to feed their family in shelters. Moreover, the DRRO from Patuakhali recognised the need for a first aid service in shelter houses and Participant 2.3.1 from a local NGO also recommended ‘rebuilding and repairing’ the tube well for drinking water. Further, Participant 3.2.1 suggested shelter for cattle and livestock, which he believed would encourage women to take shelter and feel secure. The focus group from Kalapara focused on the significance of facilities for pregnant women in cyclone centres, such as separate spaces and midwifery support.

3.3.5.6.2 Lack of Adequate Support Services for Staff

Seven participants (see Table 3.7) identified a lack of support services for staff involved in disaster management activities, such as CPP volunteers, UNO and others working within the community. Four of those participants underlined the lack of vehicle support to evacuate people during cyclone warnings, especially the pregnant, the elderly and children. Participant 2.1.3 emphasised the significance of a speed boat for rescue and evacuation of the vulnerable community on various islands.

¹²⁶ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants background and experiences.

Participant 2.1.4 from Banshkhali stressed the importance of introducing tracking services for fishermen at sea. Another officer stated that the Government was considering introducing this service – in the recent Cyclone Mora, some fisherman died because of a lack of warning facilities at sea.

3.3.5.6.3 Lack of Gender-Sensitive Law and Policy

Eight participants (see Table 3.7) focused on a lack of gender-sensitive law, policies and programs for disaster management. Participant 1.2.2 from UN Women argued for gender-sensitive planning in disaster management. Two participants from DMM and one from CPP underlined the significance of recruiting more women as community volunteers. However, Participant 2.2.2 from CPP said that the Government had already taken steps to implement 50% recruitment of women as community volunteers.¹²⁷ Finally, Participant 3.1.4 from union *Parishad* requested rethinking the Government's two-children policy¹²⁸. She argued that there were many incidences of child death in cyclones. Many women lost all children in cyclones. She thought if they were not encouraged by the two-children policy of the Government they would not be childless now. The focus group participants from Kalapara also said that women who have fewer children suffer when they lose their children in cyclones. Because of old age, some fail to have more children. Some participants suggested reviewing the existing population policy of the Government.

3.3.5.6.4 Lack of Implementation, Monitoring and Evaluation

Four participants emphasised the lack of implementation, monitoring and evaluation of existing gender-sensitive law, policy, orders and programs (see Table 3.7). Participant 1.1.1, a government officer who is a pioneer in introducing women's issues in disaster management in Bangladesh, focused on its importance, suggesting that 'We can say that we have so far established the regulatory framework, but we need to work on its successful implementation'. Participant 1.2.2 from UN Women also highlighted the issue of proper implementation, stating that it is most important to ensure implementation and application of policies at field levels. He also suggested introducing gender-responsive reporting on the part of the government. Participant 1.1.2, a government officer, also focused on follow up and suggested monitoring and evaluation of existing programs and projects. She

¹²⁷ Very recently, the government adapted the equal recruitment policy of community volunteers in the CPP. However, some of the community participants were not aware of that new rule.

¹²⁸ Bangladesh is one of the densely populated countries of the world. The government of Bangladesh is focusing on reducing the birth rate by introducing two children policy. The slogan the GoB use is 'No more than two children, but one is better' (Ministry of Health and Family Welfare 2012). Most of the parents who lost their children are encouraged by the two children policy. There are many couple who lost their two children in cyclones criticize this policy. They thought that if they have more children, they might not be childless then.

also focused on more monitoring to successfully implement programs and increase transparency and evaluation of safety net programs.

3.3.5.6.5 Lack of Capacity Building for Organisations and Human Resources

Six participants (see Table 3.7) discussed the importance of capacity building of institutions and human resources for gender-sensitive disaster risk reduction. Among these, two government officers and one union *Parishad* member emphasised organisational capacity building. Participant 1.1.1, a government officer, said, ‘We need two things to develop for successful implementation of existing policies. First, we require organisational capacity for the effective implementation of those policies and second, capable human resources for successful implementation.’¹²⁹ They underlined capacity building of both central and local levels. Participant 1.2.2 from UN Women focused on the lack of capacity of government bodies such as MoWCA, MoDMR and CPP. Moreover, he added that as a concerned ministry, MoWCA is not regularly included in the various disaster management activities of Government.

The MoWCA collects information about gender advancement all over the country and provides a report to the international organisation for the advancement of women in climate change and disaster. The empirical data demonstrate that the MoWCA is not regularly involved in the disaster management activities of the Government. Participant 1.2.2, from UN Women, said, ‘The Ministry of Disaster Management and Relief usually joins Asian Ministerial Conferences and other international negotiations. Only at the last conference in Delhi did the Ministry of Women and Children Affairs (MoWCA) join. If there are no representatives from that ministry, especially women representatives on behalf of the country, then who will take a solid stand on women’s issues in terms of disaster management!’

Participant 3.1.1, from a union *Parishad*, stated, ‘The Government can strengthen its *Upazila*- and union-level departments to function more effectively’. Human resource development received high priority among participants from the national level, with four focusing on skills development and suggesting more training on gender and disaster management.

¹²⁹ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants background and experiences.

3.3.5.6.6 Lack of Coordination

Participant 1.1.5 from the MoWCA emphasised the need for coordination among various Government bodies to address gender vulnerability in disaster management. She added that there are various activities undertaken by various Government agencies which need to be harmonised. Moreover, Participant 1.2.2 from UN Women highlighted the issue of synchronisation of various policies, rules and regulations on gender and disaster management.

3.4 Summary of Empirical Findings

This chapter provided a detailed analysis of the five dimensions of vulnerabilities experienced by women in cyclones in Bangladesh. The underlying objective of this categorisation is to help policy makers to identify the most significant contributing factors for the progression of various dimensions of vulnerability. Based on the findings of the field visit, this research identifies the gaps in the existing disaster-related laws, policies and programs. It is contended that Fineman's argument on the role of the state should be reframed to address the vulnerable subject: women. The empirical data provide evidence of how the state should respond, shape and enable its institutions addressing vulnerability to support its equality regime. This would assist policy and decision makers in setting well-informed and responsible policy priorities and making decisions regarding disaster risk reduction for women. Table 3.8 summarises the causes of disaster vulnerability given by participants and identifies the most significant contributing factors for the progression of various dimensions of vulnerability.

Table 3.8: Various Dimensions of Vulnerability and Most Frequently Identified Contributing Factors¹³⁰

	Various dimensions of vulnerability	Identified causes	Most frequently identified contributing factors
1.	Biological dimension of vulnerability	Lack of life-saving skills; Lack of adequate medical facilities; Lack of psychological and mental health support; Lack of adequate support for pregnant women; Lack of self-consciousness	Lack of consciousness of women
2.	Economic dimension of vulnerability	Lack of income-generating activities; Lack of skills for income generation for women; No relief from micro-credit obligations; Insufficient relief support; Lack of access to the public domain and economic resources	Lack of access to resources and public places
3.	Socio-cultural dimension of vulnerability	Traditional dress code; Lack of a women-friendly environment; Lack of education; Lack of gender-sensitive training through social institutions; Patriarchal attitudes; Lack of sense of community	Lack of social consciousness
4.	Political dimension of vulnerability	Underrepresentation of women in disaster management committees; Lack of active women's participation; Lack of women's capability as decision makers; Lack of leadership among women; Lack of genuine female representation in elections; Traditional power relations	Lack of decision-making and leadership skills
5.	Organisational dimension of vulnerability	Lack of shelter house facilities for women; Lack of gender-sensitive support; Lack of gender-sensitive laws, policies and programs; Lack of implementation, monitoring and evaluation; Lack of capacity building for organisations and human resources; Lack of coordination	Lack of gender mainstreaming and proper implementation, monitoring and evaluation

The participants (see table 3.3) revealed that lack of life-saving skills, lack of adequate medical facilities, lack of psychological and mental health support, lack of adequate support for pregnant women and lack of self-consciousness were the causes of the biological dimension of women's disaster vulnerability. A comprehensive analysis of these data showed that lack of self-consciousness/awareness/worth of women received the highest priority among women as the major

¹³⁰ Table 3.8 provides a summary of causes of various dimensions of vulnerability and participants major focus

contributing cause of biological vulnerability for women. By increasing women's self-consciousness, the state could solve most of their biological dimensions of vulnerability, by increasing life-saving skills, ensuring hygiene and preventing infectious diseases and even encouraging pregnant women to go to shelter houses. Women's lack of consciousness or awareness about themselves makes them less willing to take care of themselves, which influences their capability to survive.

Disaster vulnerability theory analyses 'perceptions of threat' and states that 'individuals interpret the nature of a disaster's impact',¹³¹ however, perception of self also has an impact in determining the consequence of natural hazards, which need to be emphasized by disaster vulnerability theory. The biological dimension of vulnerability can be better explained by Nussbaum's capability approach, which highlights the perceptions of women about themselves to explain these findings, where 'each person is treated as an end'. In Bangladesh, women's perception of self is influenced primarily by their belongings and children. They consider themselves as means rather than ends, which requires attention from the state. The state should reframe and act in a way to raise women's self-consciousness to reduce the biological dimension of women's vulnerability. To recapitulate, the empirical data demonstrate that women are less emphasizes on themselves. Their 'bodily health' and 'bodily integrity'¹³² have received less priority by themselves and also by the disaster risk reduction approaches in Bangladesh. The Government and other stakeholders should be tasked with urgently developing policies and programs to increase self-consciousness among women, as discussed in greater detail in section 3.3.1.

The participants (see table 3.4) emphasised the lack of income-generating activities, lack of skills for income generation for women, lack of relief from micro-credit obligations, insufficient relief support and lack of access to the public domain and economic resources as causes of the economic dimension of women's vulnerability. Among those causes, lack of access to resources and the public domain received the most attention. Disaster vulnerability theory discusses a lack of resources and poor access to markets (Wisner et al., 2011a; Zakour and Swager, 2018) as causes of disaster vulnerability. Scholars such as Anderson (1994), Enarson (2000: 2–4), Gray and Mueller (2012: 6004), Begum (1995), Alam and Rahman (2014), Asaduzzaman (2015) and Azad et al. (2013) have identified that women's less-secure access to resources makes them more vulnerable to disasters. However, this study demonstrated that the economic dimension of vulnerability is also exacerbated by social exclusion. Though empirical data revealed that the economic dimension of women's vulnerability is

¹³¹ For more detail, see Zakour and Gillespie (2013: 32–33).

¹³² See Nussbaum (2000:78) and table 2.1

more likely to be influenced by social exclusion, this does not imply that other aspects are not important for increasing resilience in women. However, the GoB is focusing on income-generating activities and skills development training, providing micro-credit and distribution of relief (see chapter 4 section 4.3 and 4.4) rather than providing access to the public domain and resources. This lack of access places women in a vulnerable situation that deprives them of the ability to invest in their expertise and marketise their skills and product. Rather than acting as a ‘restrained state’ as discussed by Fineman (2008), the state should adopt an intervention strategy to effectively and efficiently address unequal access to resources. Therefore, the government should focus more on the issues of lack of access for women and develop mechanisms to address vulnerability for women and develop strategies for resilience and risk reduction for women.

The socio-cultural dimension of women’s vulnerability received the third highest priority among participants (see table 3.1). The participants (see table 3.5) highlighted the traditional dress code, lack of a women-friendly environment, lack of education, lack of gender-sensitive training through social institutions, patriarchal attitudes and lack of sense of community among women as causes of the socio-cultural dimension of women’s vulnerability in disasters. Among the various forms of socio-cultural vulnerability, traditional dress code and patriarchal attitudes received the highest attention. These differences make women less capable of addressing disaster. To address these, participants felt that the state should focus on social awareness. As a responsive state, it should address socio-cultural aspects of discrimination for more effective strategies for a gender-responsive community for disaster risk reduction.

The participants (see table 3.6) identified underrepresentation of women in disaster management committees, lack of active women’s participation, lack of capacity of women as decision makers, lack of leadership among women, lack of genuine female representation in elections and traditional power relations as causes of the political dimension of vulnerability. Among those causes, lack of active women’s participation and lack of capacity of women as decision makers were highlighted. These causes are related to ability and willingness to participate in decision-making processes. Criterion six from Nussbaum’s capability approach (see table 2.1) argues that one should be ‘able to form a conception of the good and to engage in critical reflection about the planning of one’s life’¹³³, which needs to be applied in the case of planning for disaster risk reduction at the household, community and national levels. Criterion 10 from Nussbaum’s capability approach (see table 2.1) emphasises effective participation in political choices that govern one’s life. In the case of decision making

¹³³ See Nussbaum (2000: 78-79) and table 2.1.

relating to disaster risk reduction, women need to be capable of raising their voices and the state should create an enabling environment for women's voices to be heard in public decision-making bodies. Government intervention strategies should focus on increasing women's capability as decision makers.

The organisational dimension of vulnerability received the highest focus from the participants (see table 3.1). They underlined the lack of shelter house facilities for women, lack of gender-sensitive support, lack of gender-sensitive laws, policies and programs, lack of implementation, monitoring and evaluation, lack of capacity building for organisations and human resources, and lack of coordination (see table 3.7). A comprehensive analysis revealed that implementation, monitoring and evaluation of existing laws, policies and programs may be most effective in ensuring more successful disaster risk reduction.

3.5 Conclusion

As mentioned above, various categories have been developed to identify the different types of vulnerability experienced by women and to develop a more sensible approach to overcome the crisis. In Bangladesh, the biological dimension of women's vulnerability requires focusing more on increasing self-consciousness among women. The economic dimension is more likely to be influenced by the social exclusion of women from economic resources (supply chain); strategies should be developed to provide access to resources and the public domain. The political dimension needs more focus on capacity building for women as decision makers and leaders at the household, community and national levels. Additionally, the socio-cultural dimension of vulnerability argued that the existing disaster management approach should stress changing attitudes of the community to develop a more women-friendly environment. Finally, the organisational dimension of vulnerability highlighted the need for a more gender-sensitive approach and successful implementation of existing gender-sensitive approaches for women for disaster risk reduction.

As noted above, vulnerability is a process. The impact of natural hazard manifests in various ways. The vulnerability of women is nothing new that appears after a hazard; it is a pre-existing situation that has been magnified and manifested in a different way after natural hazards. The pre-existing weakness that places women in vulnerable situations needs to be identified meticulously to understand it how can be addressed. Developing a multi-dimensional framework of vulnerability can contribute to a more sensible approach to disaster risk reduction. The empirical data suggest that five dimensions of vulnerability can be helpful to identify the locus for a disaster risk approach in Bangladesh. This

study predicts that the multi-dimensional nature of vulnerability may vary from society to society. Additionally, the major emphasis of those dimensions could also differ depending on social dynamics and nature of disasters. Researchers and development practitioners need to identify how issues of the vulnerability should be approached to reduce the risk of hazards for women and the community. The following chapter argues, based on these pre-existing variables in the society, how and why government and development practitioners should take measures to combat vulnerability to reduce the impact of natural hazards.

Chapter 4: Women's Vulnerability and Disaster Laws, Orders, Policies and Programs in Bangladesh

4.1 Introduction

This chapter explores the second sub-question: to what extent do the current disaster laws, orders, policies and programs address vulnerabilities of women in disaster, with a special focus on the cyclones that rip through the country with regularity. In doing so, this chapter identifies the most significant disaster laws, orders, policies and programs and analyses the extent to which they address the issues relating to the various dimensions of vulnerability faced by women, which have been categorised into five dimensions. The empirical findings show that the participants focused on the organisational dimension of vulnerabilities, which include limitations in the organisational and legal framework of the Government to address women's vulnerability in disasters.

Although the GoB has made significant progress in reducing the female mortality rate, significant progress has not been made in addressing other impacts of disaster on women. This thesis argues that disaster risk management needs to be addressed considering all aspects of the vulnerability of women to ensure sustainable development. The GoB is committed to achieving the SDGs of the UN, where gender equality and climate action are two significant goals.

The GoB has a strong commitment to the reduction of the human, economic and environmental losses of disasters through enhancing overall disaster management capacity (Habib et al., 2012). Addressing human, economic and environmental losses of disasters requires a proactive, rather than reactive, approach. The GoB, both through its own initiatives based on its experience and with the help of other donor agencies, has shifted its approach from relief and rehabilitation to a proactive approach to disaster risk reduction (Habib et al., 2012; Ministry of Food and Disaster Management, 2010). This chapter evaluates to what extent the biological, economic, political, socio-cultural and organisational vulnerabilities of women as identified from the empirical data are reflected in disaster management with a special focus on cyclones in Bangladesh.

After the repeated disasters of 1988 and 1991, the GoB, with support from development partners, evolved a more effective system of disaster management, concentrated on three fronts: the development of appropriate disaster management theories and concepts, creating a consistent legal framework, and developing an institutional mechanism to perform the extensive responsibilities of

disaster management (Sabur, 2012). The following analysis is based on these three fronts, and provides a brief and concise overview of the disaster management system and the position of women and women's vulnerability. The first section discusses the development of the disaster management system: concepts, theories and inclusion of women in Bangladesh, the second section follows the legal and policy framework for disaster management and assesses the extent to which it considers women's vulnerability, and the final section incorporates the organisational mechanism for disaster management to assess the status of gender mainstreaming in Bangladesh.

4.2 Development of the Disaster Management System: Concepts, Theories and Inclusion of Women

Although the government plays the most significant role in every society in the case of addressing disasters, scholars argue that the state and its institutions should reconsider its role; for example, Fineman's vulnerable subject, Nussbaum's capability approach and the discourse on disaster vulnerability propose a more responsible and responsive state. Fineman (2008) argues that the state should respond to, shape and enable its institutions to recognise vulnerability to be consistent with its obligation to support an equality regime (see Chapter 2). Nussbaum (2000) claims that the role of the government is to provide the basic minimum to citizens to ensure 'quality of life' (see Chapter 2), which entails basic criteria that can also reduce vulnerability of women in disasters. However, these analyses have not identified how, where and to what extent the state can respond in addressing the impact of disasters.

On the other hand, though the disaster discipline is still evolving, it has made some significant developments as a theory. It is moving towards a holistic approach and encompassing multi-disciplinary contributions, multi-stakeholder collaborations and cooperation, community involvement and emphasising disadvantaged groups (see Chapter 2). This holistic approach integrates development and disaster risk management, planning and responding to disaster, management of both risks and consequences of disaster, and pre-disaster and long-term rehabilitation. Concurrently, a comprehensive disaster management approach has been developed in Bangladesh, intertwining disaster management with long-standing socio-economic development (Sabur, 2012), with women are essential stakeholders.

The period since the early 1990s has witnessed a process of paradigm shift in disaster management, from the conventional response of relief and rehabilitation to a more holistic approach of comprehensive risk reduction culture and ensuring the resilience of communities to known hazards

(Sabur, 2012). This has been reflected in the concepts and theories that now govern the theoretical discourse and their implications in developing legal and organisational frameworks in Bangladesh; for example, the formation and development of the SOD reflect an integrated, multi-sectoral and interdisciplinary approach.

In addition, Bangladesh has pioneered the community-based approach to disaster management, and CPP has developed as a community-based approach that has become a best practice model in early warnings and reducing the death toll in cyclones. Theoretically, the six major criteria¹³⁴ of the CBDRR approach have not considered gender sensitivity; however, from the repeated experience of devastating cyclones, the GoB now emphasises the inclusion of women at the early warning stage and in other activities of CPP. It also highlights concern for women and other disadvantaged groups and involvement of local government and community.

Several studies have argued (Habib et al., 2012: 31; Luxbacher and Uddin, undated; Sabur, 2012: 29–30) that as a crucial and challenging national endeavour, disaster management in Bangladesh has undergone a complex process of development involving changes in its approaches, regulatory framework and organisational mechanism over the last few decades. The overall development of both theory and practice has involved significant change. However, recognising the differential impact on women and responses to this has been slow compared with the volume of impacts of natural disasters on women. Moreover, the initiative of organised response and preparedness to address disaster by the Government is comparatively new, as is the inclusion of women's issues in various legal and organisational frameworks.

Interestingly, a review of the regulatory framework of the disaster management system of Bangladesh identified that the gradual development of this system is a consequence of major natural disasters, especially the cyclones of 1965, 1970, 1991, 1998, 2007 and 2009.¹³⁵ Figure 4.1 summarises the impact of major disasters on the overall disaster management system in Bangladesh, with an emphasis on women. This is also true for other countries; for example, Gardoni and Murphy (2008: 319) made a similar statement about the disaster management system of the US, saying 'Federal programs and

¹³⁴ See Chapter 2 for more information; the eight basic characteristics of CBDRR are participatory process, responsive, proactive, comprehensive, integrated, multi-sectoral and multi-disciplinary, empowering and developmental. Thus, gender issues are not highlighted.

¹³⁵ Several studies have identified separately the consequences of those cyclones. Extensive research has been done to identify the impacts of various disasters on the disaster management approach in Bangladesh. For more detail, see Esteban et al. (2015), Habiba et al. (2013) and Sabur (2012).

guidelines for recovery often developed in response to particular events, rather than out of a comprehensive theoretical framework for recovery’.

In the early warning system, the Government and development partners failed to consider women as a separate entity. The sameness approach¹³⁶ dominated this stage of disaster management; for example, following the cyclones in 1965, the disaster management program started with the cyclone warning system initially in the coastal districts of Bangladesh in 1966 (Esteban et al., 2015). In this early stage, the disaster management program solely focused on relief and rehabilitation activities – a post-event response (Haque Emdad and Uddin Salim, 2013), where concern for women was not visible. Five years later, with the devastating Cyclone Bhola in 1970, the CPP¹³⁷ was formed with an aim of providing early warnings to the community, yet no emphasis was given to women. Half a million lives were in Cyclone Bhola, drawing the attention of the UN General Assembly, which requested the League of Red Cross¹³⁸ to undertake a leading role in pre-disaster planning for the country (Habiba et al., 2013: 265–266). Thus, the CPP¹³⁹ of the BDRCS came into being in 1972 (Ministry of Disaster Management and Relief, 2013b). Still, concern for women in these early stages of warning and cyclone preparedness was absent.

It is, however, true that the major focus shifted from relief and rehabilitation activities to disaster prediction and preparedness to long-term recovery and reconstruction as well as future disaster risk management, starting after the devastating cyclone of 1991 (Sabur, 2012: 36) and floods of 1998 (Haque Emdad and Uddin Salim, 2013: 35). It was felt that a well-prepared community could minimise the impact of natural disasters and thus reduce the need for relief and rehabilitation (Haque Emdad and Uddin Salim, 2013). Especially, after the cyclone in 1991, scholars (Begum, 1993; Ikeda, 1995; Zimmermann et al., 2010) revealed that the number of women casualties had significantly contributed to the total death toll. This was one of the driving forces that led the government and development practitioners to identify the causes of such casualties, which led to the inclusion of women in early warning systems and the emphasis on women in policy planning and implementation. It has been identified that the inclusion of women in warning systems can result in better outcomes for all initiatives (Haque Emdad and Uddin Salim, 2013: 37; BDRCS, undated). Figure 4.1 shows that the inclusion of women in disaster management started after the devastating cyclone of 1991 and flood of 1998.

¹³⁶ For more information on the sameness approach, see Chapter 2, Section 2.2.1.

¹³⁷ For more detail on the CPP, see Section 4.4.3.5.

¹³⁸ The League of Red Cross is now known as the International Federation and Red Crescent Society (IFRC).

¹³⁹ Very recently, CPP shifted as a program of the GoB regulated by the Ministry of Disaster Management and Relief.

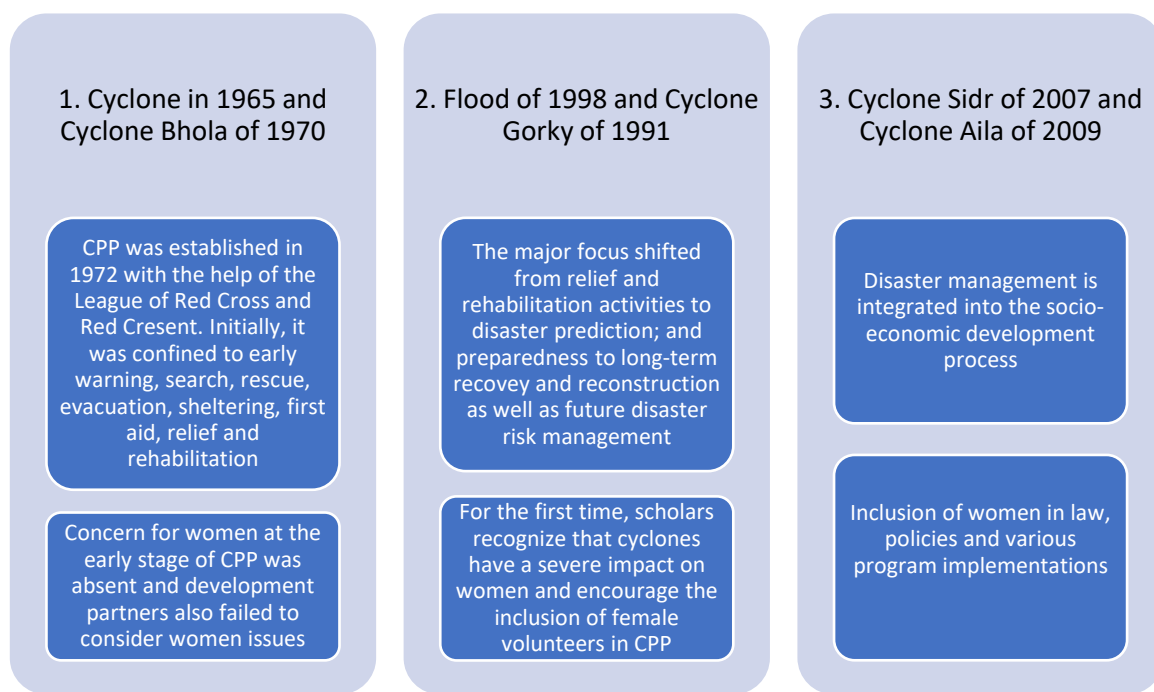


Figure 4.1: Notable disasters and impacts on disaster management

After Cyclone Sidr of 2007 and Cyclone Aila of 2009, another major shift took place, towards a more integrated approach and inclusion of women in policies and programs. During this period, it was also intensely felt by the public institutions that if disaster preparedness could be integrated into the socio-economic development process at the household, community, regional and national levels, it would build the long-term capacity of the community to mitigate risk and vulnerability to disasters (Mallick et al., 2005). This comprised changing disaster management approaches and measures from structural engineering interventions to social dimensions and community partnerships, which has also contributed to considering women as stakeholders in disaster risk reduction. ‘In recent decades, government agencies, NGOs and local communities in Bangladesh have commenced various measures to mitigate the impacts of natural disasters on the people, economy, and society’ (Haque Emdad and Uddin Salim, 2013: 35–36) and some of these approaches included women in the process of formulation and implementation of disaster management activities¹⁴⁰. Khan and Rahman (2007: 362–366) argued that in this process of development, the state emerged as the dominant agent, while Bangladesh’s development partners and NGOs came to play a significant role in disaster management. Though it received impetus from the concrete challenges faced at home, it also received input on

¹⁴⁰ For example inclusion of female volunteers in CPP, inclusion of female members in disaster management committees in different administrative levels.

ideas, institutions and policies from outside Bangladesh, especially in the case of inclusion of women.¹⁴¹

4.3 Legal and Policy Framework for Disaster Management: Considering Women's Vulnerability

Although the supreme law of the state, Bangladesh's constitution, does not include the term 'vulnerable', it provides equal protection and formal equality¹⁴² for its citizens as well as tries to address substantive inequality through the differential allocation of privilege.¹⁴³ According to section 19(3) of the Constitution of Bangladesh, 'The State shall endeavour to ensure equality of opportunity and participation of women in all spheres of national life'. As the constitution is the supreme law of the state, all other laws should be consistent with this. The existing regulatory framework tries to ensure equality of opportunity and participation of women in all spheres of national life, but the degree to which it has succeeded is questionable.

Though many national and international agencies appreciate the Government interventions in disaster management and disaster risk reduction, in the case of a regulatory framework, the inclusion of women is still in its infancy. The Government interventions indicate that women's issues are not prioritised and sometimes even forgotten. Wisner et al. (2004: 53) argued that women are not a focus, stating, 'they (women) are likely to be a low priority for government interventions intended to deal with hazard mitigation'.

A significant number of orders, policies, rules, guidelines, plans and laws have been developed by the MoDMR to effectively manage the disaster management activities of Bangladesh (see Appendix 1.2). Nevertheless, considering their relevance and significance, this chapter analyses the Disaster Management Act 2012, the SOD 2010, the National Disaster Management Policy 2015 and the CPP.

4.3.1 Disaster Management Act 2012

The Disaster Management Act was enacted in 2012 (see Appendix 4.1) to provide a legal basis for disaster and emergency management in Bangladesh; it creates mandatory obligations and responsibilities for ministries, committees and other bodies. It brings together multi-sectoral agencies to develop the organisational set up for disaster management in Bangladesh, participation of armed

¹⁴¹ Chapter 5 provides a detailed analysis of various international treaties that include women's issues and aim to achieve gender equality.

¹⁴² For more information, see Government of Bangladesh (2016).

¹⁴³ See sections 19, 27 and 29 of Government of Bangladesh (2016).

forces in emergency relief, legal procedures for impending duties and other relevant issues (Government of Bangladesh, 2012). However, the act has failed to pay sufficient attention to women's issues and vulnerabilities in disaster management. It includes women in one section only, section 27, which states, 'Provided that preference would be given to protection and risk reduction for ultra-poor and underprivileged community especially the older persons, women, children and handicapped persons while providing assistance'.

It is also important to note that the act considers women with other vulnerable groups, such as older persons, children and handicapped persons, and completely ignores the capability of women to be resilient. In addition, the difference between disaster vulnerability of women and the other vulnerable groups is overlooked. Moreover, section 2(18) provides a narrow definition of vulnerability that ignores its multi-dimensional aspects, which could have assisted to address women's vulnerability in disaster management.

Section 4 of the Act provides the legal basis for the formulation and structure of the National Disaster Management Council, the highest body for disaster management. Unfortunately, it fails to include the MoWCA and its secretary as members of the council, and no female representative or gender expert is included in this council to oversee gender issues in disaster. Within the 31 pages of the Disaster Management Act 2012, only once is the term 'women' included. There are provisions of punishment for various acts conducted under this law, such as negligence of duties; however, there is no provision for protecting women from violence or any other adversity they experience during disasters.

4.3.2 Standing Orders on Disaster 2010

The SOD is considered the most comprehensive government orders for disaster management, providing the structural compositions and functions of some 22 coordinating bodies and the duties and responsibilities of around 50 government bodies, both at a national and local level, to address disaster risk reduction and emergency management activities. A list of these 22 coordinating bodies and 50 government bodies is attached in Appendices 4.3 and 4.4. It has developed a mechanism that upholds the concept of the holistic approach involving a multi-sectoral, multi-disciplinary and multi-level integrated approach to disaster.

The initiative on gender mainstreaming in the SOD is also relatively new. The SOD was first in effect in 1985 and replaced by the SOD 1997. A review of the SOD 1997 reveals that it has made no

reference to women ¹⁴⁴. In 2010 the Government of Bangladesh reviewed the SOD in line with the general principle of the Hyogo Framework of Action¹⁴⁵ (Ministry of Food and Disaster Management, 2010: iii–vii). For the first time, the SOD 2010 incorporated empowering ‘women as a community at risk’, as a follow up to the Hyogo Framework of Action and Disaster Management in South Asia: A Comprehensive Regional Framework for Action 2006–2015 (Ministry of Food and Disaster Management, 2010: 2).

The SOD 2010 assigns responsibilities for overseeing women’s issues to the MoWCA; the MoDMR is the focal ministry for disaster management (Ministry of Food and Disaster Management, 2010). Interestingly, the issue of women or gender has not been included in the activities of MoDMR.¹⁴⁶ A comprehensive review of the SOD 2010 reveals that it has failed to adequately address various dimensions of vulnerability faced by women with a special focus on cyclones.

The SOD 2010 does not consider women’s biological dimensions of vulnerability adequately. Although in the case of reducing high mortality, the GoB and CPP have had tremendous success by ensuring timely evacuation and sheltering facilities for all, other issues, such as health-related complications, pregnancy and its consequences, and psychological vulnerability remain concerns for women. According to section 4.2.8, 4.2.8.1 and 4.2.8.1.1 of SOD 2010, the Ministry of Health and Family Welfare (MoHFW), Directorate General of Health Office (DGHO) and the Field Office of the DG Health Service¹⁴⁷ are assigned with many health-related responsibilities. Unfortunately, no specific reference is made to addressing women’s health-related problems or pregnancies during risk reduction or emergency responses, including the normal period, disaster stage or rehabilitation.

The empirical data identified that the issues of mental stress and trauma experienced by women require special attention after cyclones, especially for those who lose their children and family members (see chapter 3 section 3.3.1). SOD 2010 assigns some psychosocial support roles to MoWCA, Ministry of

¹⁴⁴For more detail, see Ministry of Disaster Management and Relief (1997).

¹⁴⁵ See Chapter 5 for more information on intervention in international conventions and conferences on disaster.

¹⁴⁶ See section 4.2.2 of SOD 2010, which includes the responsibilities of the Disaster Management and Relief Division (DM&RD); Food Division; Disaster Management Bureau; Directorate of Relief and Rehabilitation; Duties of Relief and Rehabilitation Officers at the district and *Upazila* levels, the CPP; the CPP (Head Quarters, Dhaka); Field Level CPP; Directorate of Food (DGFood); and the Field Offices of the Directorate of Food. However, none of these includes any provision for women or gender issues.

¹⁴⁷ In the case of disaster, the SOD assigns the MoHFW with 38 responsibilities that emphasise providing curative and preventive health services to people during disasters. The Directorate General of Health Office is responsible for 44 functions, which include special planning, risk assessment, initiating programs, establishing mobile hospitals, establishing 24-hour control rooms, reviewing programs three months after disasters, ensuring medicine, vaccinations, public health arrangements and drinking water at shelter houses. The Field Office of the DG Health Services is assigned with 35 functions to address health issues in disasters, which include providing medical support at shelters, ensuring medicine and vaccine supply, ambulance services and surgical equipment at the *Upazila* level. For more detail, see section 4.2.8, 4.2.8.1 and 4.2.8.1.1 of the SOD in Ministry of Food and Disaster Management (2010).

Social Welfare and DMCs.¹⁴⁸ According to section 4.2.17(g), the MoWCA is responsible for providing ‘psychosocial support kits for children and adolescents’. Section 4.2.19(c) and (e) assign the Ministry of Social Welfare with the responsibility of developing basic skills and competence for *Upazila* social services officers and union social workers to provide psychosocial support to children and ensure the supply of psychosocial support kits. On the other hand, various DMCs from city corporations, districts, *Upazila*, *Pauroshavas* and unions have been assigned the responsibility of arranging counselling for people suffering from psycho-trauma because of disaster. However, no specific emphasis is given in those sections to women. Further, although empirical data show that pregnant women require special care during evacuation and sheltering, no specific reference is made in the SOD to pregnant women.¹⁴⁹

In addition, the empirical data suggest (see table 3.3 and section 3.3.1) that the lack of self-consciousness of women is a major contributing factor to women’s suffering. The SOD 2010 fails to recognise the significance of self-consciousness of women to reducing their vulnerability and disaster risk. However, the Bureau of Health Education (BHE)¹⁵⁰ under the MoHFW, MoE, and MoPME can be utilised for educating women about this.

The SOD 2010 tries to address some of the economic dimensions of vulnerability, such as increased unemployment, decreased livelihood options and increased poverty, increased food insecurity and loss of property. However, the loss of small but significant possessions, dropping out of girl children, early and forced marriages, and migration and long-term displacement have not been considered. On the other hand, among the various causes of economic dimensions of vulnerability as identified by participants, the SOD 2010 focuses on income-generation activities and providing relief support. Moreover, section 4.2.1.3 of SOD 2010 instructs the NGO Bureau to instruct NGOs to hold collection of micro-credit instalments in affected areas. Still, women’s lack of skills for income-generating activities¹⁵¹ and lack of access to the public domain and resources do not receive adequate attention in the SOD.

¹⁴⁸ See sections 3.1.5.4.5, 3.2.5.4.7, 3.3.5.4.7, 3.4.6.5 and 3.5.4.4.5 of the SOD in Ministry of Food and Disaster Management (2010).

¹⁴⁹ It is important to note that a government officer participant said that they consider issues to do with women, pregnancy, children and old women humanitarian issues and prioritise these. However, the implicit nature of a gender approach places women in a more vulnerable situation.

¹⁵⁰ The Bureau of Health Education, working since 1958, has contributed significantly to health education and promotion of the people in Bangladesh. It has launched various programs on health awareness among citizens and developed various toolkits and checklists for awareness-raising programs relating to health issues that can be utilised to develop materials for such training. For more detail, see <http://bhe.dghs.gov.bd/>

¹⁵¹ Although there are some provisions for skill development of the staff within and outside government, no provision has to be included to address skill development of vulnerable women. For more detail, see pp. 6–180 of the SOD.

The SOD 2010 emphasises decreasing poverty and food insecurity through employment-generation activities after disasters and in normal periods. The SOD 2010 emphasises various rehabilitation programs such as Food for Work, VGF, Test Relief and other programs for disaster-affected people. Although no specific reference is made in SOD 2010, these programs target vulnerable women.¹⁵² It assigns humanitarian and social safety net programs to the MoDMF, DDM, DWA, DRRO, PIO, UNO, Chairman union Parishad and related committees.¹⁵³ The SOD 2010 assigns the Food Division¹⁵⁴ the responsibility for ensuring ‘effective coordination with DRR for delivery of VGF, VGD and other test relief supports’ (Ministry of Food and Disaster Management, 2010: 56). In addition, the *Upazila Nirbahi* officer is responsible for successful implementation of these programs and the Chairman of Union *Parishad* is assigned the duty of preparing rehabilitation schemes for affected areas (Ministry of Food and Disaster Management, 2010: 172–175). However, these programs have been reported as not effective (see Chapter 3).

Section 4.2.17.1 of SOD 2010 states that DWA is responsible for providing livelihood support to women and children. Participant 1.1.5 (see Appendix 3.1) from the MoWCA informed that ‘there is no project going on to separately support women for a livelihood from the DWA¹⁵⁵’ during the time of interview.¹⁵⁶

To address women’s vulnerability, the empirical data show that more emphasis should be given to addressing the pre-existing situation to address women’s vulnerability. Yet, the SOD emphasises rehabilitation through income-generating activities for a short period of time, which fails to break the cycle of vulnerability, which is reinforced by the recurrent cyclones in coastal areas. Moreover, it fails to ensure access to resources and the public domain for women. The MoLGRDC and Bangladesh

¹⁵² For more detail, see Ministry of Disaster Management and Relief (2013a, 2013c, 2016).

¹⁵³ According to section 4.2.2.2, the Food Division (Now DDM is responsible for this function) is responsible for supporting the government for the social safety net program. According to section 4.2.2.4, the Directorate of Relief and Rehabilitation is responsible for design and implementation of safety net programs to contribute to community-level risk reduction efforts. In addition, it should ‘utilize the materials received under the Food for Works Programme for construction of roads to raised places and shelter places and for tree plantation’. Moreover, the ‘District Relief and Rehabilitation Officer (DRRO) is responsible for employment generation for disaster affected people through test relief’ (see section 4.2.2.4.1). According to section 5.3, the *Upazila Nirbahi* Officer is assigned the responsibility for ensuring rehabilitation of people of affected areas through successful implementation of Test Relief/Food for Work Programme/VGF and other programs. According to section 5.4, the chairman of union *Parishad* is responsible for preparing rehabilitation schemes for affected areas through Test Relief, Food for Work Programme, VGF and others and arranging for their proper implementation.

¹⁵⁴ This responsibility has been transferred to the DDM.

¹⁵⁵ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants background and experiences.

¹⁵⁶ It is important to note that very recently the government with the help of the MoDMR, Programming Division of the Bangladesh Planning Commission, MoWCA and the Local Government Division (LGD) have launched a program known as the National Resilience Programme. See more detail (Newshour 2018).

Rural Development Board (BRDB) have the opportunity to support women by ensuring access to these resources which has been ignored by SOD.

To address the socio-cultural dimensions of vulnerability, the SOD 2010 emphasises ensuring security of women, providing timely warning messages to women, and ensuring evacuation of women and widows. For example, it has assigned the DMCs at city corporations, districts, *Upazilas* and unions the responsibility of ensuring the overall security of women, children and persons with disabilities during disasters, in shelter houses and other places.¹⁵⁷ In addition, according to section 4.2.17, one of the functions of the MoWCA is to ensure timely warning messages to women, children and the elderly, with support from the Bangladesh Meteorological Department and Disaster Management and Relief Division¹⁵⁸ (DMRD) of MoDMR. Moreover, in section 4.2.19, the Ministry for Social Welfare is assigned the responsibility for rehabilitation of widows, alerting women about disaster preparedness, and evacuation plans and procedures. Further, it is responsible for ‘conducting rescue and relief work and assemble workers and volunteers for survey of loss and damage taking into consideration the protection and vulnerability of women children and people with disabilities’ (Ministry of Food and Disaster Management 2010, 135).

The other socio-cultural dimensions of vulnerability, such as hardship in maintaining daily domestic duties, increased workload and time burden, vulnerability as care givers and cultural sensitivity, remain outside the purview of SOD 2010. There is scope for SOD 2010 to address these dimensions of vulnerability; for example, responsibility for collecting and supplying safe water for a family is a responsibility for women, which increases their workload, time burden and hardship during and after disasters. According to section 4.2.12 of SOD, ensuring the provision of drinking water lies with the Ministry of Local Government, Rural Development, and Cooperatives (Ministry of Food and Disaster Management, 2010: 118). However, no attention is given to women’s issues such as considering the access of women to water bodies or tube wells. As women’s access to public places such as bazars and marketplaces is not supported, establishing a water body or tube well in such a place may not result in a positive outcome. The policy should include provisions relating to accessibility of drinking water for women. In addition, section 4.2.8 of SOD 2010 assigns the MoHFW the responsibility for examining water sources and providing water purification materials in the affected areas (Ministry of Food and Disaster Management, 2010: 103). However, no special focus is given to reaching women.

¹⁵⁷ The security of women is included in five places: sections 3.1.5.3.6, 3.2.5.3.6, 3.3.5.3.6, 3.4.6.3.6 and 3.5.4.3.6 of SOD 2010, which includes provisions to ensure security of women in shelters and other places.

¹⁵⁸ This is now known as the Department of Disaster Management.

To address causes of the socio-cultural dimension of vulnerability, the SOD should emphasise the lack of a women-friendly environment, lack of education, lack of gender-sensitive training through social institutions, patriarchal attitudes, cultural restrictions of *Purdhah* and lack of sense of community among women in developing a disaster risk reduction approach. The SOD fails to address these issues; however, it notes that the National Plan for Disaster Management should demonstrate commitment to gender issues, and the DWA plays an active role to identify gender gaps. In addition, attention should be given to awareness-raising programs. According to SOD 2010, the MoWCA is responsible for raising awareness of the rights of children and women for special protection measures and monitoring and reporting of the fulfilment of the rights of these vulnerable groups. However, this requires a specific emphasis to address women's vulnerability in disaster. The Ministry of Education (MoE), the Ministry of Primary and Mass Education (MoPME), NGOs and the media can be a source of awareness raising for reducing women's vulnerability in disasters, which has been ignored.

The political dimension of women's vulnerability identified from the empirical data (see Chapter 3, Section 3.3.4) includes voices not heard in day-to-day activities, female members failing to allocate resources and male dependency in decision making. Nevertheless, SOD 2010 has failed to recognize these issues of women's vulnerability specially the case of allocating relief material and other resources for vulnerable community, which has resulted frustration among female members of UDMCs. In regard to allocating resources, the empirical data (see Chapter 3, Section 3.3.4.1) show that female members play insignificant roles. The role of female representatives of DMCs must be more specific in SOD 2010 for successful implementation. Their mere presence in DMCs does not ensure their participation, and there should be detail outlining the responsibility of women representatives to oversee issues of women's vulnerability.

The empirical data (see chapter 3 Section 3.3.4.4) identified several causes of political dimension of women's vulnerabilities, such as underrepresentation of women in DMCs, lack of active women's participation, lack of capacity building as decision makers, lack of leadership among women, lack of genuine female representation in elections and traditional power relations. Among those various causes the SOD 2010 has emphasized representation of female members in various disaster management committees. The term 'participation' has been narrowly perceived in SOD where participation indicate inclusion of female member in various DMCs¹⁵⁹ at various administrative jurisdictions at the national and field levels. Yet, compared with the total number of members of committees, the number of women is low. It has also identified by the participants (see Chapter 3,

¹⁵⁹ See sections 3.1.1, 3.2.1, 3.3.1, 3.4.1 and 3.5.1 of SOD 2010.

Section 3.3.4). Moreover, decision making in the household and community remains outside the purview of SOD 2010. The empirical study shows that decision making in the household and community is significant for reducing vulnerability of women in disasters but is ignored by SOD 2010.

Women's participation is included only once, in section 4.2.17.1, where the DWA is assigned the responsibility for ensuring women's participation in preparedness and disaster management activities. Still, how, where and to what extent women's participation will be ensured remains undecided. The empirical data (see Chapter 3, Section 3.3.4.1) reveal that the lack of capacity building as decision makers received the highest emphasis among participants as a cause but is not recognised by SOD 2010. Furthermore, lack of leadership among women, lack of genuine female representation in elections and traditional power relations between men and women need to be considered. Whether increasing women in decision-making bodies will ensure a positive outcome is far from certain as demonstrated in the scholarship (Ginige et al. 2009; Ikeda 2009; Shaw et al. 2013). The patriarchal mind-set, which contributes to discriminatory policies, can originate from men and women.

The organisational dimensions of vulnerability as identified by the empirical data (see Chapter 3, Section 3.3.5) are unfriendly shelter houses, insufficient and disproportionate shelter houses, women's needs not being recognised in relief distribution, inadequate logistic support, equipment and training, and the gap between policy and practice. The causes of such vulnerability include lack of shelter house facilities for women, lack of gender-sensitive support, lack of gender mainstreaming in laws, policies and programs, lack of implementation, monitoring and evaluation, lack of capacity building for organisations and human resources, and lack of coordination (see Chapter 3, Section 3.3.5.1).

Among those, SOD 2010 addresses some issues, such as shelter house facilities for women, gender mainstreaming, and capacity building for organisations and human resources. For example, according to section 4.2.23 of SOD 2010, the MoE is assigned the responsibility for ensuring separate facilities for men and women in the school buildings to be used as shelters during disasters, and in section 4.2.17, the MoWCA is to ensure that newly constructed cyclone shelters create separate facilities for women. Moreover, in section 4.2.12.1 of SOD 2010, the local government division is assigned the responsibilities of maintaining cyclone shelters, fortified earthen mounds, private buildings, schools and safe high land for sheltering people and livestock in cyclone-prone areas, considering special facilities for women as far as possible (Ministry of Food and Disaster Management, 2010).

The SOD 2010 assigns the MoWCA the responsibility to build the capacity of staff working in *Upazilas* and unions to address risk reduction and rehabilitation for women. In addition, the Ministry

of Social Welfare (MoSW) is involved in enhancing the capacity of concerned line departments and NGOs to address recovery and rehabilitation issues in a gender-sensitive manner. Although capacity building is of concern to MoWCA, the major responsibility regarding disaster management lies with the MoDMR. As the Allocation of Business among the Different Ministries and Divisions 2009 assigns the MoDMR the responsibility of disaster management, the MoDMR should prioritise capacity building of staff working at *Upazilas* and unions.

In addition, the SOD 2010 emphasises planning for disaster risk reduction. According to section 4.2.17, the MoWCA is responsible for developing a sectoral risk mitigation and preparedness strategy plan and overseeing that other government bodies have incorporated women's rehabilitation needs and priorities (Ministry of Food and Disaster Management, 2010: 132–133). The MoWCA prepares checklists/indicators to ensure that all relevant development projects and plans have provisions for empowerment of women in the community, budgetary provisions for risk reduction and short-term response programs for immediate mitigation of vulnerability for women and children. Yet, the empirical data reveal that the ministry does not have any program or project to monitor or evaluate the activities of other ministries to regularly ensure the needs of women in disasters. Participant 1.1.5 stated:

The Ministry (MoWCA) was not involved in any disaster management activities. Some initiative was taken by the Comprehensive Disaster Management Program (CDMP) in its second phase. Now, this ministry is occasionally involved in some of the activities of disaster management. The allocation of business does not take women's issues into account. The Department of Women's Affairs developed a gender toolkit for disaster management and some other initiatives were emphasised by the CDMP while it was running¹⁶⁰.

The MoWCA also allocates funding and human resources for rapid assessment of vulnerability of affected women with the help of another department, and coordinates and regularly monitors responses and services for the needs of women and children and other vulnerable groups. However, immediately after disaster, government agencies conduct a quick survey at the *Upazila* level instantly through the SOS¹⁶¹ form to determine damage and loss and send this within one hour, and later a detailed form-D,¹⁶² to the MoDMF through the UNOs and Deputy Commissioners of the affected

¹⁶⁰ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants background and experiences.

¹⁶¹ The SOS form is a formatted form used to collect data on approximate loss and damage and emergency requirements. For more detail, see Appendix 13 in Ministry of Food and Disaster Management (2010).

¹⁶² Form-D is a detailed assessment of loss and damage after disaster. See Appendix 14 in Ministry of Food and Disaster Management (2010).

areas (Ministry of Food and Disaster Management, 2010: 202–205). A review of these forms indicates that there is no option for gender-segregated data collection for loss and damage.

The MoWCA is assigned limited responsibility for coordination of disaster management activities, including to ‘establish close contact with the IMDMCC and DMRD MoFDM and other disaster management committees’ and ‘coordinate and regular monitor responses and services to the needs of women and children and other vulnerable groups’ (Ministry of Food and Disaster Management 2010: 132). But the research shows that gender mainstreaming in disaster requires a holistic approach involving other ministries, government agencies, NGOs, international organisations and the private sector. In case of gender mainstreaming, SOD 2010 confines the responsibility to the MoWCA and DWA. However, the other ministries and divisions remain outside a gender-sensitive approach. Further, issues relating to gender-sensitive implementation, monitoring and evaluation should be emphasized.

4.3.3 National Disaster Management Policy 2015

The National Disaster Management Policy formulated in 2015 marks a significant development in terms of addressing women’s vulnerability in disasters, although it has confined women’s issues to the other vulnerable community, undermining the magnitude of women’s vulnerability in disasters. It includes 10 provisions to address women’s vulnerability, which underline the capacity of women to resist disaster and rebuild the community. This policy emphasises increasing resilience of the vulnerable population and reducing their risk. Disaster management is viewed from a holistic perspective, focusing on increasing professionalism in disaster management and mainstreaming disaster management in all development activities. In line with international and other national policy, the National Disaster Management Policy 2015 includes mainstreaming of women and gender in disaster management activities as a marginal and socially deprived group (2015, pp. 7281–7282). It considers some of the social, economic and physical aspects of women’s vulnerability, focusing on women’s empowerment and trying to ensure participation of women in various levels of the disaster management process.

This policy includes provisions relating to safe motherhood, the mother and child relationship, reproductive health, and the health and security of pregnant mothers and newborns (Ministry of Disaster Management and Relief, 2015). Yet, it ignores other biological dimensions of vulnerability of women: lack of practicing life-saving skills, lack of adequate medical facilities, lack of psychological and mental health support, and lack of self-consciousness. This policy should encourage

the practice of life-saving skills for women to ensure that they can save themselves from cyclone surges and flood water. Section 8.3 of part two of this policy includes provisions relating to health issues in disasters with no reference to women; for example, there are provisions to ensure water and sanitation facilities for the elderly and disabled persons, but the issue of separate facilities for women has been ignored. Moreover, no provision has been included to address mental health issues. More specifically, the most frequently identified contributing factor, lack of self-consciousness, has not been considered in this policy.

Unlike the SOD 2010, this policy highlights one provision of providing opportunities for women to increase their assets, efficiency, productivity and access to production materials. This policy encourages an increase in the inclusion of elderly women, widows, pregnant women and women-headed families in various social safety net programs of the GoB, such as Kabikha¹⁶³, TIAR, VGF and employment-generation activities for the extreme poor, which is already present in existing policies. However, the other issues of food insecurity, material losses of women, early and forced marriage, loss of education and migration are not addressed in this policy; for example, although section 8.6 of part two includes provisions relating to food insecurity, nothing has been included relating to women's food insecurity in disasters.

The National Policy for Disaster Management 2015 recognises a few of the socio-cultural dimensions of vulnerability, focusing on equal access for women to information relating to disasters. In addition, it encourages a better understanding of women and a gender perspective, analysing women's experiences, attachment of women to their children, safe motherhood, women's insecurity and violence experienced by women. Moreover, it emphasises increasing recognition for women's contributions to securing and rebuilding the family and community and reducing the risk of physical and sexual violence against women during and post disaster (Ministry of Disaster Management and Relief, 2015). However, traditional dress code during disasters, patriarchal attitudes, the division of labour and the culture of *Purdhah* need to be considered in this policy to reduce the vulnerability of women. Further, issues relating to awareness raising of society should receive the highest priority in addressing women's vulnerability in disasters, but is not recognised in this policy; for example, the role of mass media is included in section 11 of part two, which includes public awareness raising

¹⁶³ Kabikha or *Kajer Binimoye Khaddo Kormosuchi* is program run by GoB which provide food for work. It is also known as 'Food for Work'. See page 125 and 136

about disasters, yet this section fails to consider awareness raising about women's vulnerability in disasters.

This policy has a focus on women's empowerment, especially ensuring women's participation in DMCs from the village and local level to the national level, ensuring participation of women in all disaster management programs, reducing disaster risk, emphasising women's participation during and after disaster and utilising women's knowledge and experience adequately in the disaster management approach (Ministry of Disaster Management and Relief, 2015). Although the policy focuses on women's empowerment and participation, the empirical data show that women require development of their skills to be active participants in various disaster management bodies and disaster management activities. As has been identified above, women's participation in decision-making bodies requires skills development related to decision making; in particular, reducing influence from male family members needs to be emphasised.

Finally, part three of this policy includes provisions relating to implementation, monitoring and evaluation of disaster management activities that fail to include a gender-sensitive approach. Interestingly, this policy emphasises SOD 2010 as a basic guiding principle for disaster management, which increases the chance of reinforcing the gaps in issues relating to women's vulnerability in disasters. Sections 2, 3, 6 and 7 of part three include the inclusion of the armed forces, NGOs and social groups, regional and international organisations and the private sector. Inclusion of these stakeholders should consider gender aspects of disaster management, especially in the case of inclusion of armed forces and the private sector. In the case of including NGOs, social groups, and regional and international organisations, this policy should involve organisations focusing on gender vulnerability and gender mainstreaming in disasters. Moreover, the empirical data show that in the case of the organisational dimensions of vulnerability, the lack of gender mainstreaming and proper implementation, monitoring and evaluation was the most frequently identified contributing factor. This policy fails to include gender-sensitive implementation, monitoring and evaluation.

4.4 Organisational Mechanism for Disaster Risk Management: Status of Gender Mainstreaming in Bangladesh

The existing organisational mechanism for disaster management is driven by the Allocation of Business among the Different Ministries and Divisions 2009,¹⁶⁴ the Disaster Management Act 2012

¹⁶⁴ The Allocation of Business among the Different Ministries and Divisions 2009 determines the jurisdiction of various ministries and divisions. For more detail, see Government of Bangladesh (2009).

and the SOD 2010. These provide the basic structure and functions of government bodies and various committees at the national and field levels. According to the ‘Allocation of Business among the Different Ministries and Divisions 2009’, the MoDMR is the lead ministry responsible for disaster management and the MoWCA is assigned the duties of women’s and gender issues in Bangladesh. Along with the organisational set up, there are other highly powerful committees formed at various levels to speed up disaster management activities in Bangladesh. The Disaster Management Act 2012, the SOD 2010 and Disaster Management (Structures and Functions of committee) Rules 2015 provide the basic rules for the structure and functions of those committees.

Khan and Rahman (2007: 360) and Sabur (2012: 30) claimed that Bangladesh has developed a workable system of disaster management with the development of the theory and legal framework. Despite the various claims of success, the following discussion reveals that a minimal level of concern is visible in the government organisational set up in terms of including women, especially in the apex bodies. To address a vulnerable subject, Fineman (2008: 2), argued for both a more responsive and responsible state. In doing so, she suggested re-examining how the state has acted towards these institutions in a way that is consistent with its obligation to support an equality regime. This part of this thesis focuses on the extent to which the existing set up is able to ensure equal access for women. Moreover, the theoretical and empirical data demonstrate that women’s vulnerability is a result of pre-existing inequality, discrimination and lack of access to resources. Therefore, women’s vulnerability in disasters requires more attention through a proactive, pre-planned and responsible system of management. The following analysis identifies whether the state is still reacting to the situation rather than emerging as a responsive and responsible system.

4.4.1 The Ministry of Disaster Management and Relief

Although the MoDMR¹⁶⁵ is responsible for disaster management activities, it has no assigned position to oversee issues relating to gender and women. According to ccGAP (2013), the MoDMR is also responsible for the inclusion of gender issues in disaster management activities (Ministry of Environment and Forest, 2013). Interestingly, the MoDMR is not the assigned ministry to oversee issues relating to women. This ministry has a focal point officer responsible for overseeing issues

¹⁶⁵ It has been assigned a wide range of activities, such as the formation and implementation of policies relating to planning, coordination, monitoring and evaluation of all relief programs, formulation of disaster management guidelines, coordination of all disaster-related activities by different agencies of government and emergency relief distribution and rehabilitation of affected people. The Ministry of Food and Disaster Management was divided into the Ministry of Disaster Management and Relief and the Ministry of Food in 2012. The reorganisation of these ministries and departments has taken place several times. The MoF and MoDMR were amalgamated in 2004. For more detail, see <https://modmr.gov.bd/site/page/237930f9-7cb4-4d8b-bd9f-dcbf9113db05>

relating to MoWCA.¹⁶⁶ However, a review of the organogram of MoDMF shows that there is no permanent position assigned in the MoDMF to oversee gender aspects of disaster management¹⁶⁷ to adequately and consistently address gender issues in disaster.

Despite strong commitment on the part of the Government to update the law, policy and rules, the empirical data reveal that there is no initiative taken so far to adapt a gender action plan for disaster management. The ccGAP has not followed up accordingly yet. Participant 1.1.2 from the MoDMR said, ‘As far I know, ccGAP is still waiting for progress. We have to follow up the rest of the process on the gender action plan to cope with the international framework.’¹⁶⁸ However, Participant 1.2.2 assumed that the lack of expertise on gender issues in the MoDMR might be one reason for not being able to proceed with a gender action plan for disaster management.

4.4.1.1 Department of Disaster Management (DDM)

The DDM, reorganised after the enactment of the Disaster Management Act 2012, is a small professional unit at the national level that accomplishes activities on planning, organising public education and arranging training for government officers and other personnel from the national to field levels. It is also entrusted with maintaining effective liaison with government agencies, donors and NGOs to ensure maximum cooperation and coordination in all aspects of disaster management (Habib et al., 2012: 31). However, a review of the organisational set up also indicates that there is no position to oversee the issues of women in the DDM¹⁶⁹.

4.4.1.2 Functions of MoDMR and DDM

The MoDMR and DDM provide various humanitarian assistance and social safety net support to women, yet the empirical data show this has failed to ensure resilience (see chapter 3 section 3.3.2). Figure 4.2 illustrates various forms of humanitarian assistance – GR (Gratuitous Relief) and VGF (Vulnerable Group Feeding) – and social safety net supports – TR (Test Relief), FFW (Food for Work) and EGPP (Employment Generation for the Poor Program) – available to the vulnerable community; a significant part of this vulnerable community is women.

¹⁶⁶ For more detail, see <https://modmr.gov.bd/site/page/ee17985d-20bd-4766-9de2-4d94082c0433/ফোকাল-পয়েন্ট-তালিকা>

¹⁶⁷ For more detail, see https://modmr.portal.gov.bd/sites/default/files/files/modmr.portal.gov.bd/page/26cc4d99_9e09_41bd_9f47_6a13e4eb206a/Organogram_270717.pdf

¹⁶⁸ See Appendix 3.1 for information relating to coding used for participants and Appendix 1.6 for information relating to participants background and experiences.

¹⁶⁹ For detail information about the organizational set up for DDM visit www.ddm.gov.bd

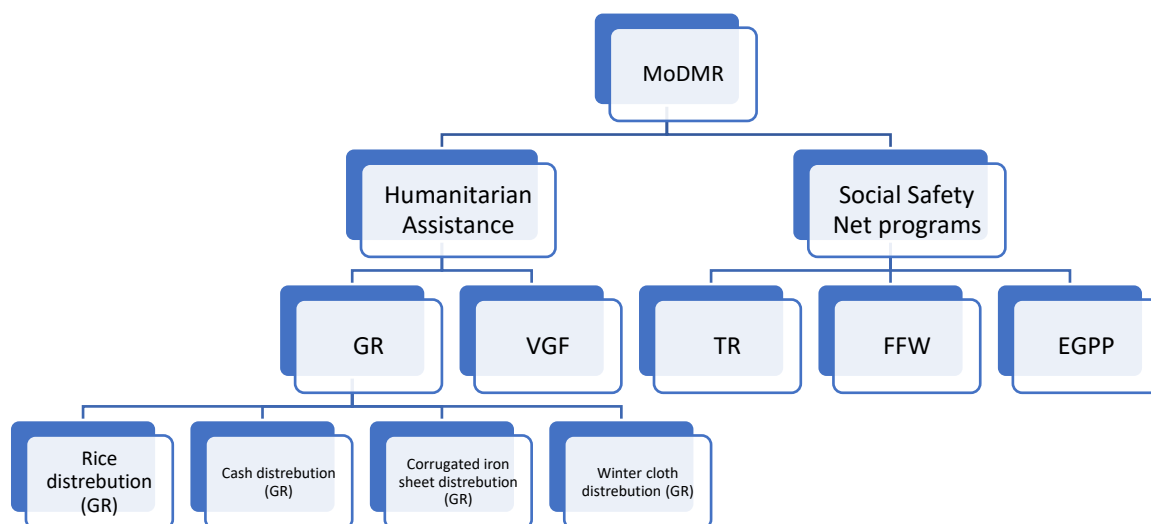


Figure 4.2: Humanitarian and social safety net programs run by MoDMR¹⁷⁰

Humanitarian assistance is provided to various vulnerable groups such as disaster-affected people, divorced and separated women and families dependent only on women's income (Ministry of Disaster Management and Relief, 2016). Two types of humanitarian assistance are available: Gratuitous Relief (GR) and the Vulnerable Group Fund (VGF). Gratuitous relief is distributed into four forms such as rice distribution, cash distribution, corrugated iron sheet distribution and winter cloth distribution.

Gratuitous Relief (GR): There are four types of GR provided by the MoDMR: rice distribution, cash distribution, corrugated iron sheet distribution and winter cloth distribution. The MoDMR distributes 10–30 kilograms of rice to severely disaster-affected people during the recovery process, and cash of 500–50,000 *taka* to disaster-affected people, affected institutions and to build houses. Corrugated iron sheets¹⁷¹ (5–15 bundles) are distributed to disaster-affected people for repairing houses affected by disasters. It is important to note that participants from the community are more interested in receiving support from the Government that could increase their resilience rather than short-term recovery. GR helps people to survive immediately after disasters but fails to ensure long-term recovery and

¹⁷⁰ Adopted from the Operational Manual: Humanitarian Assistance Program (Ministry of Disaster Management and Relief, 2016)

¹⁷¹ Corrugated iron sheets are a building material used to cover the rooftops of houses in rural areas in Bangladesh. Because they are lightweight and easily transportability, they are widely used in other developing countries and military buildings. However, they are very dangerous during cyclones because strong winds blow them easily, resulting in death and injury. Moreover, houses built with corrugated iron sheets are not strong enough to resist cyclones. Now, the GoB is encouraging disaster-resilient houses for the community.

resilience. Moreover, distribution of corrugated iron sheets to repair houses helps them to reconstruct their damaged houses but places them at the previous level of vulnerability. Furthermore, participants from focus group 3.3.1 emphasized that corrugated iron sheet is a major cause of injury during cyclones.

Vulnerable Group Fund (VGF): The VGF provides 10–30 kilograms of rice to disaster-affected people and others (Ministry of Disaster Management and Relief, 2016). In financial year 2017–18, the MoDMR provided 275,499.020 metric tons of rice to 14,115,732 families through the VGF program (Ministry of Disaster Management and Relief, 2018b).

Test Relief (TR): Test relief is provided by the MoDMR to disaster-affected areas for the development of rural infrastructure for disaster risk reduction (Ministry of Disaster Management and Relief, 2018a). This is a major source of income for poor women in the community.

Food for Work (FFW): The major objective of ‘Food for Work’ is to reduce disaster risk through developing rural infrastructure by repairing, building and maintaining roads, culverts, bridges and canals. The food/cash for work program is organised by the MoDMR to repair village infrastructure, especially after natural disasters (Ministry of Disaster Management and Relief, 2013c).

Employment Generation Programme for the Poorest (EGPP): The EGPP is short-term employment-generation program for the poorest people during the two seasonal unemployment periods. During pre-harvest, there is a shortage of employment opportunities in rural Bangladesh, and most daily labourers find it difficult to survive and suffer from seasonal hunger. The program also provides support to disaster-affected people for recovery and reconstruction. Since 2008, via the EGPP, the MoDMR has provided short-term employment opportunities twice a year for 40 days – ‘October to December’ and ‘March to April’ – as a secure and regular source of income for over 700,000 of the poorest people. The EGPP targets one-third of its employment towards women, but in practice, the number of women beneficiaries is over 33% (Kumar, 2014; Ministry of Disaster Management and Relief, 2013a).

A review of the existing programs of the MoDMR show that humanitarian and social safety net programs dominate the disaster management activities of the Government. The major focus of these programs is recovery and reconstruction rather than risk reduction and reducing vulnerability. The nature of the programs fails to address the pre-existing situation in society and the root causes of vulnerability, which result in vulnerability of women in disasters. Without addressing those issues, the existing disaster management approach will not be able to reduce the vulnerability of women.

In addition to these programs, cyclone-resilient housing is another project that includes women as its major recipients. The MoDMR, UNDP and other international partners-initiated reconstruction efforts that support communities with cyclone-resilient housing, with an objective of ‘building back better’. The program prioritises destitute women. After Cyclone Aila in 2009, the GoB, with the help of other donors, provided shelter facilities to 265 families. To help improve gender asset equality, a family’s husband and wife own the shelters jointly (UNDP, 2016a).

However, there is always the question of the extent to which programs reach the vulnerable community. The focus group 3.3.1 and 3.3.2 provided insights into these programs. The participants from 3.3.1 claims, ‘Unfortunately, those who get the benefits are not the vulnerable community. Those who can pay money (bribe) get this support. People who get the houses and safe drinking supply are rich. Most of them don’t live in those houses. They have rented those houses for extra income and people who really need them remain vulnerable.’

The empirical data demonstrate that those programs are not effective in overcoming the vulnerability of women. Focus group interviews and interviews from community volunteers reveal that they provide minimal support to vulnerable women. Participants from focus group 3.3.2 said that women who are working in these employment-generation activities are only able to keep their body and soul together; they fail to reduce their disaster risk and keep them in marginal situations year after year (for more detail, see Chapter 3). Participant 2.2.1 from CPP also provided more detailed information about these programs. He argued that they create dependency on union council members and chairmen and place women in more vulnerable situations. He said, ‘Different government initiatives, such as *Kajer Binimoye Khaddo Kormosuchi* (Food for Work), temporary employment in road reconstruction and repairing works and other disaster-centric short stints are not effective enough. It seems to me that local representatives including union council members and chairmen display pity to people through such short-term employments. It would be best if they could be offered dignified and permanent employment opportunities.’ He added, ‘It rather seems to be a case of sympathy, which has a negative social impact. Moreover, it creates some social liabilities for women in society.’

4.4.2 The Ministry of Women and Children Affairs

According to the Allocation of Business Among Different Ministries and Divisions 2009, the MoWCA is responsible for issues relating to women and children. It is assigned the duty of making agreements and liaisons with international organisations in the field of gender equality and for the advancement of women and children. Surprisingly, the Allocation of Business Among Different

Ministries and Divisions 2009 does not include gender aspects of disaster management (Government of Bangladesh, 2009). Moreover, the list of focal point officers¹⁷² does not include the MoDMR. The MoWCA collects information on gender advancement from all over the country and provides a report to the international organisation for the advancement of women in climate change and disaster.

Moreover, the empirical data demonstrate that the MoWCA is not regularly involved in the disaster management activities of the Government. Participant 1.2.2 said:

The Ministry of Disaster Management and Relief usually joins Asian Ministerial Conferences and other international negotiations. It was only at the last conference in Delhi the Ministry of Women and Children Affairs joined. If there are no representatives from that ministry, especially female representatives on behalf of the country, then who will take a solid stand on women's issues in terms of disaster management!

As a result, it has failed to address women's issues on the international platform and caused a lack of coordination among various activities.

The MoWCA formulated the National Women Development Policy 2011, which includes 10 provisions on women and children in disasters.¹⁷³ The policy focuses on ensuring safety and security of women and female children, rehabilitation of women and children, extending psychosocial support, ensuring food security, health, support for expectant mothers, post-natal and newborn care, and ensured the welfare of distressed women in the community (Ministry of Women and Children Affairs, 2011a). It is almost a reflection of the Disaster Management Act 2012, SOD 2010 and National Policy of Disaster Management 2015, and has similar limitations in the case of addressing women's vulnerability in disasters. During the field visit, it appears that the MoWCA had not taken steps to implement the disaster related issues of the National Women Development Policy 2011. It did not have any project or program relating to disaster. However, recently the MoWCA with UNDP and others have launched a program known as National Resilience Programme (see footnote 156).

Moreover, the 'Vulnerable Group Development' (VGD) program, a nationwide 'safety net program', has been implemented by the MoWCA to support ultra-poor women for socio-economic development, with no coordination with disaster-affected women. The MoWCA supports 750,000 women all over the country. The Government provides a VGD card to selected vulnerable women for 24 months to

¹⁷² For more detail, see <https://mowca.gov.bd/site/page/497d7b28-480b-4481-9fcf-0d3e2de18231/বিভিন্ন-বিষয়ে-ফোকাল-পয়েন্ট-কর্মকর্তার-তালিকা>

¹⁷³ See section 37 of Ministry of Women and Children Affairs (2011a).

provide food support directly through government bodies with a package of training, savings and loan support through NGOs. The program chooses women based on five criteria: women from families experiencing food insecurity, having less than 0.15 acres of land, living in a plight home shed, having no specific source of income, or from women-headed households (Ministry of Women and Children Affairs, 2011b). Although there is scope for addressing disaster-affected women in various parts of the country, no initiative has yet been taken so far.

4.4.3 Disaster Management Committees: Underrepresentation and Low Participation of Women

Apart from the ministries and departments, there are bodies at the national and local levels responsible for coordinating disaster management activities across all of Bangladesh's government agencies (Shaw et al., 2013b: 49–50). These committees play a vital role in the disaster management activities of Bangladesh. However, they have less representation of women to oversee women's issues. Despite disaster's widespread impact on women, they remain underrepresented in positions of power and responsibility on pre-and post-disaster decision-making committees and organisations. The DDM renders all assistance to these committees by facilitating the process. Although a detailed system for disaster management has been put in place with DMCs at different levels, these are still not supported with funds to carry out their responsibilities (Zimmermann et al., 2010: 7).

Interestingly, there is underrepresentation, or no representation, of women among the DMCs at the national level. There are 12 bodies working as a national mechanism for policy guidance and coordination at the national level, and most of these do not have any women representatives from MoWCA or any civil society organisation; for example, the National Disaster Management Council (NDMC), the apex national body on disaster management, the CPP Policy Committee and the CPP Program Implementation Board are committees at the national level to support cyclone management in Bangladesh that do not include any women representative to consider women's issues.

The NDMC, the Inter-Ministerial Disaster Management Coordination Committee (IMDMCC), led by the Minister of Disaster Management and Relief, the National Disaster Management Advisory Committee (NDMAC), headed by a specialist nominated by the prime minister, and a Parliamentary Standing Committee on Disaster Management supervise national policies and programs. The major activities of these bodies are providing policy and management guidance and macro-coordination of activities, particularly relief and rehabilitation (Haque Emdad and Uddin Salim, 2013: 37).

Unfortunately, these committees did not have any representative from the MoWCA or any other woman's organisation until 2015.

The NDMC, IMDMCC and Cabinet Committee on Disaster Management ensure coordination of disaster-related activities at the national level. Very recently, with the commencement of Disaster Management (Structures and functions of committees) Rules 2015, IMDCC included the secretary of MoWCA as a member. Moreover, the same rules include the Director General, DWA in the NDMA committee, a very powerful national body formed in 2009 that consists of members of parliament, heads of government agencies, academics, experts, leading civil society organisations and others (Ministry of Disaster Management and Relief, 2015). Table 4.1 shows the number of women members included in various DMCs in Bangladesh, identifying that the number of women members is higher at the bottom and gradually less at the top which creates a pyramidal representation of women.

Table 4.1: Number of Women Included in Various DMCs¹⁷⁴

	Committee	Number of women members
1.	National Disaster Management Council (NDMC)	-
2.	Inter-Ministerial Disaster Management Coordination Committee (IMDMCC)	Secretary, MoWCA
3.	National Disaster Management Advisory Committee (NDMAC)	Director General, DWA
4.	Cyclone Preparedness Programme Policy Committee	-
5.	Cyclone Preparedness Programme Policy Implementation Board	-
6.	Earthquake Preparedness and Awareness Committee	Director General, DWA
7.	National Platform on Disaster Risk Reduction	Director General, DWA
8.	District Disaster Management Committee (DDMC)	District Women Affairs Officer and a woman representative nominated by the Deputy Commission
9.	<i>Upazila</i> Disaster Management Committee	<i>Upazila</i> Women Affairs Officer and female representation from reserve seats of Union <i>Parishad</i> and <i>Paurashava</i>
10.	<i>Paurashava</i> Disaster Management Committee	Three female members of <i>Paurashava</i>
11.	Union Disaster Management Committee (UDMC)	Three female members of union <i>Parishad</i> and one women representative nominated by chairman of the union <i>Parishad</i>

4.4.3.1 Disaster Management at the Field Level

Compared with the national bodies, the DMCs at the field level have more women representatives. There are three tiers of DMCs responsible for overseeing disaster management activities at the field level. The district, *Upazila* and Union DMCs work as the coordinating bodies at the district, *Upazila* (sub-district) and union levels, respectively (Christensen et al., 2012: 48). The DDM is responsible for rendering all assistance to facilitate this process, and these local-level committees include representatives from almost all relevant interest groups in society and relevant government bodies (Haque Emdad and Uddin Salim, 2013: 37).

¹⁷⁴ Table 4.1 is adapted from Ministry of Food and Disaster Management (2010) and Ministry of Disaster Management and Relief (2015b) for identifying the number of female member in each DMC

However, the empirical data show no evidence of regular meetings at any level of these tiers. Participant 1.2.2 stated:

In order to conduct meetings in different tiers, they need a budgetary allocation. Only in times of disasters when relief funds come do the DMCs hold meetings. That too interestingly takes place as part of the union *Parishad* development meeting. Committee members perhaps speak for a couple of minutes and say that there is no disaster. After a while, the committee ceases to function as much. But a meeting is supposed to take place consistently every month. This is hardly found anywhere in our country. We offered training to members of DMCs in the 10 out of 19 coastal districts. We saw no such meeting anywhere, let alone a resolution.

Thus, the effectiveness of those committees is highly questionable.

4.4.3.2 District Disaster Management Committees (DDMCs)

Considering the total number of DDMC members, the number of women members is very low. Among more than 40 members, there are only two women members – one nominated by the Deputy Commissioner and another is District Women Affairs Officer.¹⁷⁵ This committee is assigned the responsibility of planning disaster management activities at the district level, organising emergency responses and risk reduction, post-disaster relief and rehabilitation programs and other long-term disaster management programs (Ministry of Food and Disaster Management, 2010). Moreover, it is also responsible for coordination and reviewing the disaster management activities at the district level. Although there is a significant body of disaster management at the district level, no study has been done so far to identify the role, involvement and responsibility of these women representatives.

4.4.3.3 Upazila Disaster Management Committees

The *Upazila* Women's Affairs Officer and female representation from reserve seats of union *Parishad* and *Paurashava* are female members or representatives in the *Upazila* DMCs. Considering the total number (more than 31), the number of female members is very low. It is headed by *Upazila Nitbahi* Officer, the chief civil administrator of the sub-district, and members of different government agencies, civil society and international, local and national NGOs. The committee is a very significant body, responsible for all relevant activities relating to disaster management at the *Upazila* level (Ministry of Food and Disaster Management, 2010).

¹⁷⁵ The SOD 2010 includes that there will be two women members selected by the Deputy Commissioner of the district. However, it has been changed in the Disaster Management (Structure and Function of Committees) 2015 where one member selected by Deputy Commissioner. For more detail, see Ministry of Disaster Management and Relief (2015b).

4.4.3.4 Union Disaster Management Committees

There is only one female member nominated by the chairman as the representative of vulnerable women and three female members from union *Parishads* (see table 4.1). This committee is headed by the chairman of the union *Parishad*, the locally elected member of the union, the lowest tier of administration. The major function is to coordinate, review and implement the disaster management activities of the concerned union (Ministry of Food and Disaster Management, 2010). A study conducted by UN Women (2015: 3, 26) showed that female members of UDMCs are not participating in the activities of the committee as the guidelines prescribe. Participation, here, means mere presence in the meetings; most women do not voice their opinions in the proceedings of the meetings. For UN Women (2015: 3), ‘The women who do raise suggestions and opinions explained that their words are seldom heeded, and eventually they stop raising their voices altogether. In addition, researchers in the field have witnessed and reported cases of intimidation from male members towards female members, and noted instances of maladministration in the participation of women members.’ In contrast, male members argued that female members have many responsibilities at home and were not able to attend committee meetings (UN Women, 2015: 3–26). A female union *Parishad* member said that there was no regular meetings; in the case of an emergency, the DMC held a meeting to make preparations for the cyclone. Moreover, a study conducted by Action Aid identified that ‘in some cases women participants spoke very rarely’ (Christensen et al., 2012: 15).

In addition, Panday (2013) showed that women’s involvement in decision-making bodies fails to bring desirable outcomes. While it is acknowledged that representation in decision making forums alone may not address the vulnerability of women, it is one part of the solution. The empirical data reveal the same, identifying that the lack of willingness and ability to make decisions have contributed to this situation. Paxton and Hughes (2014: 128) suggested that participation in the political realm and running for office require civic skills, including the ability to speak in public, run a meeting, read a budget and navigate parliamentary procedures. These skills can be developed during formative years through family and education systems, but are solidified later in life through employment and activity in non-political organisations and churches. However, the data analysis sees these issues from a different viewpoint. As an individual, there are many decision-making issues that arise in everyday life. In the case of Bangladesh, because of cultural norms, the division of labour and social roles, women’s decision-making capacity is confined to certain aspects of daily activities, such as cooking, take care of elders and children and maintaining household activities. Women’s decision making is mostly confined to the domestic realm. Decisions relating to other issues, such as buying property, investment and community issues, are assigned to male members of the family. The long practice of

non-participation in the public sphere makes it difficult for women to make decisions relating to disaster risk management. Thus, decision-making capacity and scope for women in everyday life have contributed to the overall situation before, during and after natural hazards. Moreover, the presence of women in the public sphere is a new experience for both men and women in Bangladesh. Women have to learn to deal with their new roles and responsibilities and men need to know how to respond to the presence of women and accept women's voices. This is a two-way process. Making women more efficient and effective in decision making and participation requires knowledge, skills and practice.

4.4.4 Cyclone Preparedness Program (CPP): Involving Women in Disaster Management

This section analyses the extent to which the CPP is successful in addressing women's vulnerability and incorporating gender mainstreaming as a central feature of its approach. The CPP is a unique program run by volunteers from the community with a vision of reducing loss of lives and resources (Amin, 2012: 10–12). It relies on technical skills and volunteers' commitment for ensuring that coastal people are provided warnings of cyclones to enable them to move to safe places before the cyclone hits. Inclusion of women volunteers in CPP to reach women in coastal areas can be regarded as the most significant progress towards a gender-sensitive approach in community-based disaster management in Bangladesh. It was first initiated in 1995 after the deadly cyclone of 1991. Participant 2.2.1 from CPP said, 'After the 1991 cyclone, we selected two female volunteers per unit in 1995 and included three more female volunteers in 2005. Presently, the CPP unit consists of five female volunteers.' In each unit, there are 10 male and five female community volunteers working on five different kinds of activities (Ministry of Disaster Management and Relief, 2013b: 23). Now, there are 203 officers and 49,365 volunteers, among which 16,455 are female (Ministry of Disaster Management and Relief, 2013b). Participant 2.2.1 from the CPP said that among the 203 officers, there is no women working in the CPP. In the case of the CPP, inclusion of women in higher positions is absent.

Although CPP is the oldest disaster management program in Bangladesh, a review of the various activities demonstrates that CPP itself has not developed fully as an instrument of disaster risk management, which has affected the performance of CPP and its female volunteers. It is a parallel organisational mechanism working with the community that evolved between BDRCS and GoB. Very recently, the CPP has been incorporated in the Government; earlier, it was run via donations from various organisations, which affected its regular activities. The various problems CPP faces were reflected by CPP participants in the interviews. Participant 2.2.1 stated:

As you know, the CPP is now part of the Government. It has started working regularly. Previously, there was no government assistance for organising any big drill. In Kalapara *Upazila*, three to four big drills were organised after 2007, with the support of some well-known NGOs in the country.

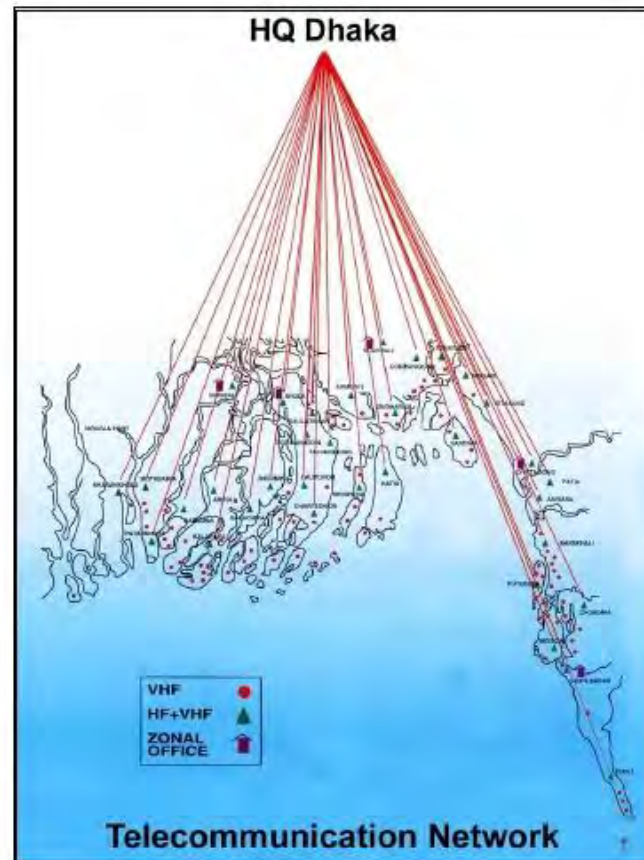
Participant 2.2.2. made a similar statement about the limited financial support and institutional constraints:

Previously, our activities relied on donations from different individuals and organisations. So, there was a glamour to it. The job experience was interesting. Now we are financed by the government's revenue fund, which makes our job permanent. There are issues such as budget constraints in this arrangement.

The limited financial support and institutional constraints place female volunteers' ability to perform their duties effectively at risk.

The objective of the inclusion of female volunteers is to reduce the loss of lives of women in cyclones. Interestingly, section 4.2.2.5 of SOD 2010 includes provisions relating to CPP with no reference to women. The SOD 2010 provides the basic function of CPP, which is emergency response activities divided into four stages: normal times, alert stage, warning stage and disaster stage and rehabilitation stage. It is important to note that the CPP has developed as a mechanism for emergency response, although the magnitude of its female workforce could serve to reduce the vulnerability of the community, especially that of women.

Map 4.3: CPP Telecommunication Network for Early Warning and Command Areas¹⁷⁶ (Ministry of Disaster Management and Relief, 2013b)



The CPP¹⁷⁷ creates massive awareness among communities about risks and enhances their capacities to be prepared and respond to disasters (Habiba et al., 2013: 266). Over the last 44 years, the CPP has made significant progress and extended to 13 coastal districts, which include 37 *Upazilas*, 322 unions and 3,291 units (Ministry of Disaster Management and Relief 2013b: 7). Its activities include providing early warnings, search and rescue, evacuation, sheltering, first aid, relief distribution and rehabilitation activities in the community (Department of Disaster Management, 2013). The major components of the CPP are set out below.

¹⁷⁶ The CPP operates an extensive telecommunication network with HF (high frequency) and VHF (very high frequency) radio set that directly link headquarter of CPP in Dhaka. There are seven zonal office in Cox's bazar, Chittagong, Noakhali, Bhola, Barishal, Barguna and Khulna. See more detail Ministry of Disaster Management and Relief (2013b).

¹⁷⁷ CPP is considered a model program by many countries and won the Smith Tumsaroch Award 1998 for outstanding performance in the disaster management field (Ministry of Disaster Management and Relief, 2013b).

4.4.4.1.1 Signal Dissemination System: To What Extent are Female Volunteers Involved?

The CPP has a very well-developed signal dissemination system, which provides an early warning for 35 million people in 19 coastal districts (Zimmermann et al., 2010). There is one women community volunteer in each unit for signal dissemination (see figure 4.4) who visits households to warn people; these women's previous reputations strengthen trust in the early warning system (Habib et al., 2012: 44). This volunteer network assists to connect the national government and local communities (Department of Disaster Management, 2013: 7) and is appreciated worldwide for its outstanding performance (Ministry of Disaster Management and Relief, 2013b: 7).

The empirical data show that CPP volunteers face various problems in accomplishing their jobs. Participant 3.2.3 said that they stressed women, children, pregnant women and old people. He added, 'We provide priority to those people who live in the most vulnerable areas and try to bring them first to the cyclone shelter'. The empirical data also show that they have minimal equipment support to accomplish their duties and lack security, which makes the duties of female volunteers more difficult. Participant 3.2.2, a CPP volunteer, said, 'Women don't have equipment such as torches to carry with them when they go out in the dark'. Participant 2.2.2, a CPP staff, added that lack of security to perform various responsibilities is a barrier for female volunteers. Moreover, female CPP volunteers have sacrificed their lives during previous cyclones (Ministry of Disaster Management and Relief 2018c).

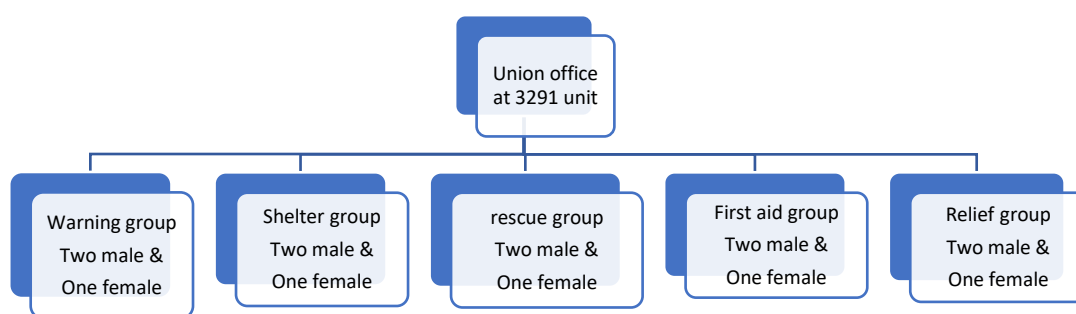


Figure 4.4: Number of female volunteers in each CPP unit¹⁷⁸

¹⁷⁸ Figure 4.4 is adapted from Ministry of Disaster Management and Relief (2013b).

4.4.4.1.2 Evacuation: Bringing Women to Cyclone Shelters

Considering the socio-cultural and physical aspects, women, the elderly, pregnant women, children and people with disabilities receive priority from community volunteers and others involved in evacuations. However, a study claimed that rescue is carried out haphazardly in the community and preserving women's dignity becomes secondary at that time (OXFAM and Nirapad, 2011: 30). This study also argued that women are dependent on male members of the family to move to shelter houses. Because of their lack of social mobility, women are less aware of cyclone warnings and some do not know the location of shelter houses. In some cases, women are not allowed to go alone without the presence or permission of the husband. In addition, care for dependents and household assets drive them to stay home (OXFAM and Nirapad, 2011: 30). The participants from CPP claimed that they are gender sensitive in their evaluation program, following the instructions of the Disaster Management Act 2012. Participant 2.2.1 from the CPP stated, 'Volunteer teams working under CPP responsible for taking people to shelter houses prioritise women, children and the elderly during their rescue campaigns. The CPP volunteers are also involved in ensuring women's security, social security and even they take care of family problems.' However, Participant 3.2.4 said that female volunteers face problems with security while performing their duties.

4.4.4.1.3 Sheltering: How Effectively Are Women Discharging Their Duties?

In each unit, there is a female volunteer working with other CPP volunteers to bring women to shelter houses. Participant 2.2.1 from the CPP staff member said, 'We provide all kinds of support to people to bring them to the cyclone shelters. Especially, female volunteers are involved in bringing women, pregnant women and old women to shelter houses.' Participant 2.2.2 from CPP staff member said that women are 'very sincere and effective in discharging these duties'.

4.4.4.1.4 First Aid: Are They Capable of Performing Their Duties?

Immediately after a cyclone, volunteers trained in first aid start searching for injured people and administer first aid, taking care of people who are suffering from bleeding, broken bones, fainting and drowning (Ministry of Disaster Management and Relief, 2013b). Because of the lack of strong road communication, limited resources and health workers, attention cannot be provided to women with special needs (OXFAM and Nirapad, 2011: 34). The empirical data from the field reveal that five days training on first aid and midwifery is given only to a few volunteers and at a small scale. Eventually, they forget this training, as there is insufficient follow up. Participant 2.2.2 stated that medical facilities are not available in some remote places. During cyclones, pregnant women require

support for delivery; the women volunteers could be provided with training to support them. Participant 2.2.1 recalled one of his experiences as follows:

In Saint Martin Island, I saw a pregnant woman being carried by a group of 10–12 men and rushed to a speedboat. We thought she would die. Later, we came to learn that she was first taken to Teknaf and then to Cox’s Bazar in an ambulance. There she gave birth to a child and was perfectly safe. CPP has three units and 45 volunteers in Saint Martin. Of them, women are 15. If five of them were given training, they could offer medical services not only during disasters but also in normal times when crisis moments come up.

4.4.4.1.5 Relief and Rehabilitation

Post-disaster activities of the Government consist of relief distribution, rehabilitation of affected people and support for health and sanitation management. Relief activities are highly donor dependent in Bangladesh and priority is given to very poor, female-headed households, divorced and abandoned women, widows and physically challenged people (OXFAM and Nirapad, 2011: 33). However, the CPP has very limited responsibility and only carries out the orders of other government agencies. Participant 2.2.1 said that they did not participate in decision-making activities regarding planning or distributing relief or rehabilitation materials.

Rehabilitation programs basically involve economic activities. Women’s social and household roles are not measured in economic terms. As women’s activities are not considered in rehabilitation programs, they face deprivation. Women contribute to the household economy by cultivating vegetables, rearing poultry and managing micro savings. Disasters have a direct effect on all assets, which is not taken into account while preparing demands (OXFAM and Nirapad, 2011: 32). As a result, women’s special needs remain unknown and not accounted for (OXFAM and Nirapad, 2011: 31–32). As mentioned earlier (see chapter 3 section 3.3.2 and 3.3.5), most of the time, relief materials include rice, clothes and equipment to build a house, which does not consider women’s needs. The focus group 3.3.2 indicated that, ‘We don’t need food as relief. We require a strong house to live in and a good-quality cow to make a decent living. We need income-generating activities for survival.’

4.4.4.1.6 Activities in Normal Periods: To What Extent Are Female Volunteers Involved?

The CPP provides various awareness-raising activities, including through contact with volunteers, cyclone simulation drills and demonstrations, film shows, publicity campaigns, distributing leaflets, staging dramas, folk songs and arranging rallies around the year (Ministry of Disaster Management and Relief, 2013b). Participant 2.2.1 claimed, ‘The CPP tries to provide enough focus on women and

participation of women. Moreover, it is going to increase its women volunteers to 50%.' Unfortunately, female volunteers face various problems in various activities. Participant 2.2.2 stated, 'In the case of implementation, women can not participant for social and religion reasons. In some cases, women don't feel safe when they have to go out for awareness-raising programs.'

4.5 Conclusion

Though Bangladesh has developed its disaster management system over the last 50 years, the inclusion of women only started after the cyclone of 1991. The process began with the recruitment of female volunteers in CPP in 1995 to reduce the loss of lives of women and children. As a positive note, within this period, one-third female volunteers have been recruited to CPP, some DMCs have introduced women representatives, and the Disaster Management Act 2012, SOD 2010 and the Disaster Management Policy 2015 have recognised some women's issues in disasters. Interestingly, the Disaster Management Act 2012 and Disaster Management Policy 2015 place women with other vulnerable groups, undermining and ignoring women's capacity for risk reduction and resilience.

The major development that has taken place within this period is the inclusion of women in various disaster management bodies to ensure participation of women. This thesis identifies that rather than ensuring participation in the true sense, the existing system of disaster management has included women in various bodies disproportionately. The thesis reconfirms that there is underrepresentation and low participation in various organisations and coordinating bodies. Moreover, this thesis identifies that the rate of female representation gradually becomes lower at the higher levels of bodies in the disaster management system. The inclusion of women is highest in the periphery of the CPP, where women have no authority to influence decision making, policy formulation or planning.

Further, this thesis identifies that the magnitude and various dimensions of women's vulnerability have not been adequately reflected in the existing regulatory framework and institutional mechanism. In essence, there has been a failure to identify the locus of gender mainstreaming. Few areas take into account the various dimensions of vulnerability of women. Biological, economic, socio-cultural, political and organisational dimensions require not only to be identified but also for the relevant bodies and stakeholders to be assigned and involved in this process of risk reduction. The chapter on recommendations incorporates the relevant bodies addressing these dimensions of vulnerability. Further, the most frequently identified factors in women's vulnerability have not been considered by the existing system. The lack of self-consciousness of women, lack of access to resources and public domains, patriarchal attitudes, lack of decision-making skills and gender-sensitive implementation,

monitoring and evaluation must be incorporated in the formulation of laws, orders, policies and programs. Furthermore, the MoWCA should take the leading role implementing the disaster related provisions of the National Women Development Policy 2011.

This chapter identified that the existing disaster management system, especially the CPP, still focuses on response, recovery and reconstruction rather than risk reduction. Although the CPP is the major body working on cyclones in coastal districts, it has less focus on risk reduction. The major focus of CPP, now, includes early warning and evacuation, where it has achieved a tremendous success. Conversely, the loss of economic resources and socio-cultural impacts of disaster on women have been gradually increasing. This thesis reconfirms that gender vulnerability is imbedded as an existing pre-condition of the social system. This requires a continuous and ongoing comprehensive approach, rather than response, recovery and reconstruction. Disaster management activities, especially under the CPP, must address these pre-existing vulnerabilities of women to ensure a more fruitful outcome.

Chapter 5: International Initiatives and Women's Vulnerability in Disasters

5.1 Introduction

The international community assists the government or local community to strengthen capacity, and as necessary, supplements their efforts in disaster risk management (Pujiono, 2014). Women's vulnerability in disaster is a new concept in international treaties. Gender has been considered a significant aspect of disaster risk reduction since the 1990s, although no specific development occurred in the international arena until 2000 (Ferris et al., 2013: 73). The fundamental international legal framework provides the basis for gender mainstreaming in the global arena of disaster management. Moreover, reviewing the progress of international treaties reveals that issues relating to gender have been included recently as a result of the devastating impact of major catastrophes such as Hurricane Andrew in 1992, the Chicago heatwave of 1995, the Bangladesh cyclone of 1991, the Kobe earthquake of 1995, Hurricane Mitch in 1998, Hurricane Katrina in 2005, the Indian Ocean Tsunami in 2004, the Black Saturday bushfire in 2009 and the Tohoku earthquake and Tsunami Fukushima in 2011, which indicated a differential impact of disasters on women. The series of disasters stimulated various international agencies, such as UNISDR, UNDP, UNIFEM, the UN Commission on the Status of Women and regional organisations to consider gender in disaster management and use gender mainstreaming as an effective tool for reducing disaster risk. Moreover, some civil society organisations such as the gender disaster network have contributed to advocacy, awareness raising and technical support for the inclusion of gender-sensitive disaster risk management (UNISDR et al., 2009: 4).

Eburn (2013: 635–639) argued that 'there is no single binding, universal international convention setting out the rights or obligations of states when responding to disasters, or affirming the right of affected populations to receive disaster relief, either from their own government or from international relief providers'. Still, the author added that the general principles of human rights law, specific conventions that facilitate particular types of disaster relief, disaster relief in response to particular hazards and regional relief arrangements and international humanitarian law may have consequential impacts on the rights of disaster victims. In the case of addressing women's vulnerability, CEDAW has played a significant role, providing the underpinning principle for gender equality in disaster risk management.

The first part of this chapter includes a brief exploration of how the concept of gender is evolving in the global and regional arena.¹⁷⁹ The second part provides an analysis of major international declarations and conventions that shape the principle of equality in global thought and the non-discriminatory approach determining the future course of actions of governments. The third part analyses how world conferences on disaster management consider women in frameworks of action and regional efforts shape the implementation progress.

5.2 Global Progress on Gender Mainstreaming in Disaster Risk Management: Concepts and Theories

Global progress on gender and disaster risk management can be divided by three decades: 1990s, 2000s and 2010s. As has already been mentioned, the first decade showed very slow progress in inclusion of women and gender aspects in the global arena. A review of existing literature revealed that it was the early stage of development of the concept of gender in disaster management, and the concept of gender or women's issues were not included in international conferences on DRM. UNISDR et al. (2009: 4) argued that 'gender issues have slowly become visible on the global DRR agenda after decades of marginalization in inter-governmental processes'. The first world conference for natural disaster¹⁸⁰ aimed to focus on prevention, mitigation and preparedness (United Nations, 1994), with no reference to women. A review of the conference proceedings and outcomes reveals that concern for women was not visible in this action plan. The Yokohama strategy and action plan for a safer world failed to consider women and act as a gender-neutral framework for disasters.

Bradshaw (2014: 55) said that 'the last two decades have seen an increased interest in ensuring a gender perspective in post-disaster response efforts, and more recently there have been initiatives to mainstream gender into disaster risk reduction (DRR) initiatives'. During the 2000s, significant events underlined the global development of a gender perspective in disaster risk management. In 2001, an Expert Group Meeting held in Ankara, Turkey was organised by the UN Division for the Advancement of Women, in collaboration with the Environmental Management and the Mitigation of Natural Disasters: A Gender Perspective organised by UN Division for the Advancement of Women and UNISDR. It highlighted women's resilience and recommended the inclusion of gender-sensitive environmental management and DRR in the agenda of the 2002 World Summit on Sustainable

¹⁷⁹ It is important to note that the previous chapters provide a brief discussion on the development of the concept of gender and disaster management in Bangladesh. Here, it provides evidence on how the concept has emerged in the international domain as a result of major catastrophes.

¹⁸⁰ The first World Conference for Disaster Management ran from 23–27 May 1994 in Yokohama, Japan with an aim to focus on prevention, mitigation and preparedness rather than disaster response. For more detail, see United Nations (1994).

Development. In 2002, the UN Commission on the Status of Women adopted a policy recommendation acknowledging women's role in disaster reduction, response and recovery. It also called for government to strengthen women's capacity and participation (UNISDR et al., 2009: 4–9).

The most significant development took place at the second world conference¹⁸¹ on disaster risk in 2005 in Japan, which resulted in the HFA (UNISDR, 2005), where the concept of gender was included for the first time. According to Ferris et al. (2013), after this conference, the concept of gender mainstreaming in disaster risk reduction gained momentum, incorporated in both general considerations and cross-cutting issues (UNISDR, 2005). Its general consideration stated that a gender perspective should be 'integrated into all disaster risk management policies, plans and decision-making processes, including those related to risk assessment, early warning, information management, and education and training' (UNISDR, 2005: 4). Enarson (2012: 178) views gender equality as central to the vision and actions of disaster risk reduction as articulated by leaders of the UNISDR. Although it has been regarded as the 'most explicit reference to gender of any other international policy frameworks for DRR' (UNISDR et al., 2009: 10), it also has drawbacks. Bradshaw (2014: 55) argued that it shows a 'lack of real commitment to adopting a gender perspective by the international agencies responsible for DRR' and highlighted that the document mentions gender only twice: 'once when discussing early-warning systems' and once when discussing the need to 'ensure equal access to appropriate training and educational opportunities'. Moreover, Ferris et al. (2013) argued that incorporating gender into disaster risk management initiatives needs to consider a rights-based approach at all levels of governance. Further, Mukuna (2015: 204) highlighted the lack of adequate financial investments and tangible commitments to pursue gender-sensitive disaster risk reduction at the operational level.

In 2008, the Third Global Congress of Women in Politics and Governance adapted the Manila Declaration for Global Action on Gender, Climate Change and Disaster Risk Reduction – another milestone of progress. Finally, in the International Conference on Gender and Disaster Risk Reduction taking place in Beijing in 2009, a comprehensive gender mainstreaming program was considered (UNISDR et al., 2009: 4–9). The most recent and significant development in gender and disaster management was the Third World Conference on Disaster Risk Reduction in Sendai in 2015 (see chapter 5 Section 5.3.5).

¹⁸¹ The Second World Conference on Disaster Reduction held in Kobe, Japan in January 2005 came out with a framework known as the Hyogo Framework for Action (HFA) 2005–2015. For more information, see <https://www.unisdr.org/we/coordinate/hfa>

The three world conferences on disaster risk reduction were very significant in shaping the concept and developing strategies on disaster risk management in the global arena, as they brought all member states of UN together to develop a uniform framework of action to address disaster risk. In addition, the member countries, including Bangladesh, were obliged to send a report on the progress of their actions on disaster risk reduction. Apart from these conferences, there are other basic declarations and conventions that form the concept of gender from the global perspective and include women in various legal frameworks. The following chapter examines how major steps of international initiatives outline gender in disaster management.

5.3 International Legal Frameworks that Shape the Concepts of Women's Vulnerability in DRM

There are multiple basic global agreements that shape the concept of gender in the international arena.¹⁸² These international frameworks are based on the principle of equality and a non-discriminatory approach in their actions, which reflects the liberal feminist perception of formal equality of treatment between men and women.¹⁸³ The UDHR, followed by the ICCPR 1966 and the ICESCR 1966¹⁸⁴ affirm the equal rights of men and women; together with the Convention on the Elimination of All Forms of Discrimination against Women, these are commonly referred to as the international legal framework for the equal rights of women. Accordingly, 'state parties agree to incorporate the principle of equality of men and women in their national constitutions and/or other appropriate legislation, and to ensure, through law and other appropriate means, the practical realization of this principle' (Mukuna, 2015: 214). Moreover, the Beijing Platform for Action 1995 recognised that 'many women are also particularly affected by environmental disasters, serious and infectious diseases, and various forms of violence against women' (United Nations, 1995: 107), and called on governments to implement various actions to guard against and address these issues. Ferris et al. (2013) considered these the 'foundations of gender mainstreaming in DRR'.

¹⁸² Scholars claimed that feminist perspectives have contributed significantly to the development of the idea of human rights. For more detail, see McBeth et al. (2017: 528).

¹⁸³ Liberal feminism seeks to achieve formal equality of treatment between men and women through gender-neutral rules, focusing on achieving opportunities that are equal to men's by using laws and the legal system. But the formal equality of liberal feminism assumes that women's equal access to the basic institutions of society will result in their achieving equal status, and does not take into account actual differences between the situations of men and women: the fact that, for example, the 'right to hold and use property is irrelevant if women have no economic opportunities to acquire it in the first place'. For more detailed, see McBeth et al. (2017: 529) and Chapter 2, Section 2.2.

¹⁸⁴ Saksena (2007) described that these three (UDHR, ICCPR, ICESCR) highlight the principle of non-discrimination and equal protection.

5.3.1 Universal Declaration of Human Rights (UDHR)

The principle of formal equality dominates the UDHR, which resulted from the atrocities of the second world war. A group of women contributed to the drafting of women's rights in the UDHR.¹⁸⁵ The UDHR lays the basic foundations of equal rights and a non-discriminatory approach at the international level. Although 'a unilateral declaration by the UN General Assembly does not create binding obligations on UN member states' (McBeth et al., 2017: 181), it has had a significant indirect impact. In the preamble, the declaration reaffirms the equal rights of men and women, and Article 2¹⁸⁶ provides the basis of a non-discriminatory approach based on race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth, or other status. Even though the UDHR does not include the term 'vulnerability', it tried to address human vulnerability by ensuring equal rights in every sphere, including providing special protection in vulnerable situations; for example, Article 25 addresses vulnerability of human life both as a result of natural process of the life cycle, such as old age, childhood and motherhood, and a result of special circumstances, such as the event of unemployment, sickness or disability, as highlighted by Fineman (2008) in her article on 'the vulnerable subject'. Although no provision has been provided on disasters, either man-made or natural, Article 25(1) includes the right to a standard living in the case of circumstances beyond control.

Article 25(2) states, 'Motherhood and childhood are entitled to special care and assistance', which reflects the concept of 'affirmative action' and 'different' treatment in special circumstances for a vulnerable subject. It is also a milestone for substantive equality and considers some biological dimensions of women's vulnerability.

5.3.2 International Covenant on Civil and Political Rights (ICCPR) 1966

The context of developing the twin covenant was different than the present global situation; thus, the ICCPR emphasises the civil and political rights of people as a group and individuals as humans. It also reaffirms the equality principle and a non-discriminatory approach of state parties in action. Articles 2, 3 and 26 of the ICCPR indicates that states should follow a non-discriminatory approach to all individuals regardless of differences based on race, colour, sex and language, among others, in terms of showing respect and ensuring rights and equal protection (International Covenant on Civil and Political Rights, 1966). Articles 2 and 26 emphasise a non-discriminatory approach to all

¹⁸⁵ For more detail, see <http://www.un.org/en/events/humanrightsday/women-who-shaped-the-universal-declaration.shtml>

¹⁸⁶ For more detail, see United Nations (1948).

regardless of differences, whereas Article 3 focuses equal rights between men and women, stating, ‘The State Parties to the present Covenant undertake to ensure the equal right of men and women to the enjoyment of all civil and political rights set forth in the present Covenant’ (International Covenant on Civil and Political Rights, 1966). However, no specification was available on how this non-discriminatory approach would apply to gender or in a disaster situation.

5.3.3 International Covenant on Economic, Social and Cultural Rights (ICESCR) 1966

The ICESCR progresses a step further than the previous frameworks in terms of considering women’s issues. The third Article of ICESCR obliges states to ensure the equal rights of women to enjoy all economic, social and cultural rights. The ICESCR explains in its article what it means by ensuring economic, social and cultural rights and how state parties can ensure them. Article 11 requires that the state parties recognise the ‘the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions’, which is applicable to both men and women. Though it does not include disaster situations, it provides the basic requirement to overcome vulnerability for the community. The ICESCR should include housing conditions to protect people from various risks and food support in crisis situations. The right to adequate physical and mental health is a significant right included in Article 12. Article 13 notes the right to primary education, free and compulsory for all, as well as vocational, technical and secondary education, generally available and accessible to all (ICESCR 1966). This covenant identifies the social, economic and cultural rights of women and men in society. However, it fails to consider how state parties consider the economic, social and cultural rights of individuals during disasters or emergency situations and their different impact on women, and how different economic, social and cultural consequences affect women’s suffering during natural hazards.

5.3.4 Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW)

Among the various treaties’ human rights, CEDAW¹⁸⁷ has a distinctive feminist dimension, which promotes the conventional liberal approach reflecting previous human rights treaties and recognises the formal liberal approach between men and women (McBeth et al., 2017). While CEDAW focuses on the prohibition of discrimination based on sex, it fails to articulate the consequence of specific

¹⁸⁷ The UN General Assembly adopted CEDAW in 1979, the result of 30 years of work of the UN Commission on the Status of Women to eliminate discrimination against women and reaffirm the fundamental human rights with a goal of ensuring equal rights of men and women (United Nations, 1979). Among the international human rights treaties, the convention takes an important place in bringing the female half of humanity into the focus of human rights concerns. It spells out the meaning of equality and how it can be achieved. In so doing, the convention establishes an international bill of rights for women as well as an agenda for action by countries to assure the enjoyment of those rights

situations affecting women. Both the empirical data and secondary sources pointed out that the pre-existing disadvantaged situation of women, categorised from biological, economic, political, socio-cultural and organisational perspectives, places women in a vulnerable state and prevents them from reaching opportunities that may otherwise be available. As has been mentioned in the previous chapter (see page 60, 62, 114), women's pre-existing vulnerability increases during disasters, and requires international conventions to address these issues with special attention. However, the principle of formal equality cannot ensure the desirable outcome.

Bangladesh became a signatory to CEDAW in 1984 (Ministry of Women and Children Affairs, 2008); however, it reserved¹⁸⁸ Article 2 (De Miranda, 2016), which pertains to ensuring equal rights for women in Bangladesh. The CEDAW committee receives a report from the government and NGOs on the progress of implementation of CEDAW, which places a form of accountability on the government and empowers the NGOs and women's right organisations to argue for women's rights.

Although the convention does not categorise the various dimensions of discrimination, it addresses five dimensions of vulnerability; for example, Article 11(2) and Article 12 include some biological dimensions addressing pregnancy and health care facilities for women. However, the focus of health care facilities is limited to illumination of discrimination against women by ensuring equal access. The findings from the field visit reveal that access to medical facilities is not sufficient to address the biological dimension of vulnerability. Women need to increase their self-consciousness to enjoy the full benefits of health facilities. Moreover, women's mental health and other reproductive problems are ignored in this convention. Women's specific needs resulting from disaster vulnerability are also not considered in this convention.

It also underlines the socio-cultural dimension of discrimination; for example, Article 5(a), Article 6 and Article 16 address socio-cultural aspects of discrimination. Article 5(a) addresses the social and cultural patterns of conduct of men and women, focusing on the 'idea of the inferiority or the superiority of either of the sexes or on stereotyped roles for men and women'; for example, Article 10 calls on state parties to take measure to stop female dropout rates, which was supposed to stop the dropout of girl children after disasters. The existing disaster management approach does not include any provision regarding the dropping out of girl children after disasters. The implicit nature of this provision excluding the specific context eventually led to ignoring the issue of dropping out of girl

¹⁸⁸ Although Bangladesh entered CEDAW in 1984, it had reservations for Articles 13(a), 18, 16(1) (c) and (f), 19 and Article 2. Gradually, the government has withdrawn its reservations, though it still has reservations on Article 2, which reflect marriage, divorce, guardianship and inheritance. Because of the sharia law for Muslims and preserving Hindu law, this article has maintained its reservation. For more detail, see Freeman (2009: 48) and De Miranda (2016: 323).

children after disasters. The GoB should take measures to prevent this unexpected dropping out after cyclones or other natural disasters.

The convention also highlights the political rights of women through ensuring the right to vote and participation and representation in various policy-making bodies. The GoB has taken measures to ensure participation of women in various decision-making bodies, although not proportionately.¹⁸⁹ The empirical evidence shows that women's capacity as decision makers requires more attention to bring an expected positive outcome from the representation and participation women in decision-making bodies. Therefore, international treaties should emphasise the issue of capacity building of women in various decision-making bodies.

The convention strongly emphasises the economic dimension of vulnerability. Articles 10, 11, 13 and 14 include provisions relating to economic discrimination experienced by women; for example, Article 13(2) argues for considering appropriate measures to ensure equal rights for women in terms of economic and social benefits, focusing on bank loans, mortgages and other forms of financial credit. However, it only partially addresses women's economic vulnerability in the case of rights to bank loans, mortgages and other forms of financial credit. Interestingly, the empirical data also reveal that the right to hold bank loans, mortgages and other forms of financial credit does not ensure equality of men and women, and does not have a significant impact on discrimination against women (see page 83) unless women's access to land and other immoveable property has been achieved.

Article 14 of the convention includes provisions relating to specific problems faced by rural women as well as recognising the role of rural women in the economic survival of their families. It ensures women's participation in and benefit from rural development, especially development planning, access to adequate health care facilities and social security programs, training and education, organising self-help groups and cooperatives to obtain equal access to economic opportunities through employment or self-employment, participating in all community activities, access to agricultural credit and loans, marketing facilities, appropriate technology and equal treatment in land and agrarian reform and land resettlement schemes, and enjoying adequate living conditions. Though this provision includes significant issues relating to existing vulnerability of women in the rural community, it ignores the disaster context, which has a heavy impact on rural women in developing countries. International treaties should consider the disaster context for ensuring equal opportunities between men and women. Moreover, state parties or other development practitioners should work more closely

¹⁸⁹ See Chapter 4 for detailed information on women's representation on various disaster management bodies. For more detail on women's political participation in Bangladesh, see Panday (2013).

to address the issues of various dimensions of vulnerability of women during disasters. Although some might say that it was too early for UN bodies to consider women's vulnerability during natural disasters, the vulnerability of women in man-made disasters or war is also ignored in this convention.

Saksena (2007: 485) argued that 'like other human rights instruments, it is worded in an abstract manner so that it can apply to diverse societies and situations, and so that its interpretation can evolve to meet changing circumstances'. However, the abstract manner of this convention creates opportunities for ignoring women-specific needs in various circumstances; in particular, the empirical data show that no step has been taken by the GoB to address the dropping out of girl children after disasters, and no specific relief materials are distributed in the regular relief distribution. Saksena (2007: 485) also argued that 'although particular issues are not mentioned explicitly, that does not preclude them from being covered implicitly'. The implicit nature of this convention might be suited to academic analysis, but it fails to address the real-life situation, where implementation is guided by more explicit concerns. Further, the existing social and cultural practices place women in a position where it becomes difficult for them to avail themselves of opportunities out of their reach.

5.3.5 Sendai Framework for Disaster Risk Reduction 2015–2030

Relative to the two previous world conferences, the Sendai Framework for Disaster Risk Reduction (SFDRR) 2015–2030 is a step forward in ensuring gender-responsiveness in disasters. Both the SFDRR and the HFA consider the disproportionate impact of disasters, which further strengthens the principle of substantive equality in the global arena. Following the implementation of HFA, the GoB has included women representatives in various DMCs. Although there has been no significant progress in decision making, the inclusion of women in local disaster management governance represents substantial progress towards in gender mainstreaming in Bangladesh (see Chapter 4, Section 4.4.3).

The contents of SFDRR 2015–2030 can be divided into four basic parts: guiding principles, priorities for action, role of stakeholders, and international cooperation and global partnerships. The encouraging aspect of SFDRR 2015–2030 is that it incorporates gender as its guiding principle, stating, 'Disaster risk reduction requires an all-of-society engagement and partnership. It also requires empowerment and inclusive, accessible, and non-discriminatory participation, paying special attention to people disproportionately affected by disasters, especially the poorest. It also stated that a gender, age, disability and cultural perspective should be integrated in all policies and practices, and women and youth leadership should be promoted' (UNISDR, 2015a: 10).

The HFA first considers women's engagement in designing and implementing policies, plans and standards, whereas SFDRR 2015–2030 has broadened the horizon to engage all-of-society with a special focus on people disproportionately affected by disasters. Moreover, from the experiences of implementing HFA, SFDRR adapted four areas to emphasise its actions: understanding disaster risk, strengthening DRG to manage disaster risk, investing in disaster risk reduction for resilience, and enhancing disaster preparedness for effective response and to 'build back better'¹⁹⁰ in recovery, rehabilitation and reconstruction. Among the four priorities for actions, gender and women's issues are only included in the fourth priority for action, focusing on 'empowering women and persons with disabilities to publicly lead and promote gender equitable and universally accessible response, recovery, rehabilitation and reconstruction approaches' (UNISDR, 2015a: 21). This thesis demands that the framework demonstrate a clear commitment by introducing gender mainstreaming throughout the document.

Although the framework highlights specific aspects of gender-sensitive disaster risk reduction, the multi-dimensional aspects of gender vulnerability need to be incorporated in this framework explicitly. The multi-dimensional aspects of hazards and vulnerability are included in the definitions of those terms in the HFA,¹⁹¹ but no further development has taken place in line with these. The SFDRR 2015–2030 considers various dimensions of hazard's impact and vulnerability, such as physical, social, economic and environmental factors. It also focuses on various strategies based on 'economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience' (UNISDR, 2005: 12). Despite the concept of vulnerability being emphasised with an intention of considering various dimensions of vulnerability in the formulation of policy and practice, a gender perspective on disaster vulnerability is not present.

As the empirical data revealed that disaster vulnerability is a manifestation of a fragility of biological, economic, socio-cultural, political, and organisational systems, this thesis examines the extent to which these dimensions have been considered and argues for the inclusion of these dimensions of vulnerability in the case of considering gender. Moreover, the major findings from the empirical data identify that the various dimensions and their causes need to be focused on in law, policy and practices

¹⁹⁰ Build back better means 'the use of the recovery, rehabilitation and reconstruction phases after a disaster to increase the resilience of nations and communities through integrating disaster risk reduction measures into the restoration of physical infrastructure and societal systems, and into the revitalization of livelihoods, economies and the environment'. For more detail, see UNISDR (2016: 41) and UNISDR (2017a).

¹⁹¹ The HFA adopted the definition of the UNISDR; see UNISDR (2005: 28).

to address women's vulnerability in disasters. Without including those dimensions of vulnerability, the disproportionate impact of disasters on women cannot be resolved. The major finding of this thesis is that policy makers and development practitioners should include consciousness raising about women themselves, access to resources and public places, strengthening women's capacity as decision makers, and a strong gender-based monitoring and evaluation system.

This framework considers implicitly a few biological vulnerabilities of women as people disproportionately affected by disasters; for example, section 30(j) of SFDRR argues for providing access to health care including maternal, sexual and reproductive health, food security and nutrition.¹⁹² Although, section 33(o) includes provisions to enhance recovery schemes with psychological support and mental health services for all people (with no special emphasis on women), the Asia Regional Plan for Implementation of the SFDRR 2015–2030¹⁹³ highlights post-trauma programs for women (by 2018). The empirical data reveal that biological aspects of women's vulnerability are extensive and require a more comprehensive approach. In the case of reducing the mortality rate, injuries and infectious diseases, the participants focused on practicing life-saving skills and adequate medical facilities in Bangladesh. The most frequently identified issue raised by the participants was 'raising self-consciousness among women', which needs to be included in all health-related approaches to DRR in the international arena.

Section 36(i) considers economic dimensions of vulnerability, emphasising adequate capacity building to 'empower women for preparedness as well as to build their capacity to secure alternate means of livelihood in post-disaster situations'. The Asia Regional Plan for Implementation of the SFDRR includes strengthening leadership of women to develop local disaster recovery plans, emphasising resilient livelihoods, by 2020. However, the empirical data reveal that 'capacity building to provide alternate means of livelihood' alone cannot reduce economic dimensions of women's vulnerability in Bangladesh; aspects such as lack of skills for income generation, micro-credit obligations, insufficient relief support, access to economic resources and the public domain (complex supply chain) need to be considered in designing disaster risk reduction approaches.

In the case of developing countries, socio-cultural aspects have a significant impact on the disproportionate impact of disaster on women. The empirical data show that socio-cultural aspects of

¹⁹² For more detail, see section 30(j) on the third priority for action of the SFDRR 2015–2030. In the case of investing in disaster risk reduction for resilience, it encourages public and private investment through non-structural measures.

¹⁹³ At the 6th Asian Ministerial Conference for Disaster Risk Reduction (AMCDRR) in June 2014 after the Third UN World Conference on Disaster Risk Reduction (3WCDDRR), Asian countries and stakeholders agreed to develop an Asia Regional Plan for Implementation of the SFDRR to facilitate cooperation and collaboration for building risk resilience in Asia.

women's vulnerability contribute to this disproportionate impact of disaster in Bangladesh. Among various socio-cultural aspects of vulnerability, the SFDRR includes education on disaster risk reduction and gender-based violence. The Asia Regional Plan for Implementation of the SFDRR includes promoting and supporting prevention and responses to gender-based violence at national and local levels by 2018 (AMCDRR, 2016a: 6). The empirical data identified causes of women's vulnerability as including lack of a women-friendly environment, lack of education, lack of gender-sensitive training through social institutions, patriarchal attitudes and lack of sense of community among women. Although the SFDRR includes culture in its guiding principles, socio-cultural dimensions such as gender roles, division of labour and patriarchy are not emphasised. In the case of ensuring a women-friendly environment, policy makers and development practitioners have emphasised the security of shelter houses. The realm of shelter house requires attention from policy makers. Moreover, section 30(j) of SFDRR underlines the design and implementation of inclusive policies and social safety net mechanisms, including education, to assist people disproportionately affected by disasters. In doing so, it encourages public and private investment through structural and non-structural measures (UNISDR, 2015a). It is important to note that gender issues possess special features that distinguish women from other populations of disproportionate victims of disasters.

The guiding principle and section 36(i) includes aspects of the political dimension; for example, a focus on participation of women and women's leadership. It recognises women as significant stakeholders in disaster risk management and encourages women's participation as stakeholders in managing, designing, resourcing and implementing gender-sensitive disaster risk reduction policies, plans and programs. The Asia Regional Plan for SFDRR set a deadline to 'ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in disaster risk reduction' by 2020 (AMCDRR, 2016a: 10). Apart from these issues, the empirical data identified that the lack of capacity as decision makers and lack of genuine female representation in elections need to be emphasised. Among these two issues, increasing women's capacity as decision makers was the most frequently mentioned cause among the participants. This requires a strategy to develop women's capacity in the case of decision making in disasters and disaster risk reduction. Moreover, genuine representation in local elections has to be ensured for women's leadership and full participation, which is not yet ensured in Bangladesh.

Finally, the empirical data reveal that identifying the pre-existing fragility of organisations is required; this thesis argues that this requires an extensive focus on existing mechanisms to identify gender-insensitive policies and practice, which further reinforce the gender gap, and suggestions to address them. For example, building public infrastructure for disaster resilience (i.e. shelter houses) should

consider gender-specific needs, as the empirical data suggested that women's specific needs were not previously considered in construction of shelter houses in coastal areas in Bangladesh. This eventually discouraged women from going to shelter houses before disasters. Moreover, the empirical data showed that women require specific support to take shelter during early warnings, to bring pregnant and sick women to shelter houses, and separate spaces and facilities in shelter houses.

In addition, the SFDRR highlights promoting and supporting gender-sensitive and gender-responsive DRR policies and practice. The SFDRR and Asian Regional Action Plans focus on all-inclusive policies to promote gender equality in response, recovery, rehabilitation and reconstruction; for example, section 19(g) of SFDRR suggests gathering sex-segregated data and section 32 incorporates empowering women to publicly lead and promote gender-equitable and universally accessible response, recovery, rehabilitation and reconstruction approaches. In addition to this, the Asian Regional Plan for implementing SFDRR focuses on preparing and updating disaster preparedness and contingency plans at local, national and regional levels with a multi-stakeholder and multi-sectoral approach, ensuring comprehensive and accessible services and referral mechanisms to promote specific needs of women by 2018. Further, section 33(b) emphasises including gender issues in development, maintenance and strengthening of hazard forecasting, early warning systems, disaster risk and emergency communications mechanisms, social technologies and hazard-monitoring telecommunications systems through a participatory process. In the case of Bangladesh, the early warning system has shown much progress, including the participation of women in CPP. Still, the empirical data reveal that the lack of gender-sensitive implementation, monitoring and evaluation, and lack of capacity building for organisations and human resources for a gender-sensitive response, and lack of coordination are essential element which need to be emphasized.

The HFA and SFDRR also highlight state responsibility to address vulnerability and extend the concept of shared responsibility by involving relevant stakeholders in addressing disaster. Section 35 of SFDRR states that 'In particular, non-State stakeholders play an important role as enablers in providing support to States, in accordance with national policies, laws and regulations, in the implementation of the present Framework at local, national, regional and global levels. Their commitment, goodwill, knowledge, experience and resources will be required (UNISDR 2015: 23)' The GoB has incorporated various government bodies into its disaster management activities; for example, the SOD 1997¹⁹⁴ incorporated various government bodies and stressed the significance of

¹⁹⁴ For more detail, see Ministry of Disaster Management and Relief (1997: 199).

coordination and cooperation between NGOs, voluntary agencies and all concerned government and private organisations.

Additionally, considering the magnitude of gender aspects of vulnerability, the SFDRR 2015–2030 fails to provide sufficient attention on women as a disproportionately affected population. Though women constitute half of the world population, women are considered with disabled groups, the elderly and children, which undermines their capacity for resilience and to survive and rebuild; for example, the SFDRR 2015–2030 suggests 16 strategies to ensure this priority for action at the local and national levels, among which only one includes gender (section 33(b) of the SFDRR).

On the other hand, regional initiatives for implementing SFDRR have shown slow but significant progress. UNISDR et al. (2009: 11) claim that a gender perspective in disaster impacts has attracted much attention because of pressure from disaster response management agencies and the institutional machinery of disaster management at the regional level.¹⁹⁵ Following the Sendai conference, the Asian Ministerial Conference on Disaster Risk Reduction¹⁹⁶ was held in Delhi in 2016, the outcome of which is known as the ‘New Delhi Declaration’. The declaration called all governments and stakeholders to ensure 12 courses of action, of which section 5 includes encouraging ‘meaningful participation and support representation of women, children and youth, and persons with disabilities in leadership role for disaster risk reduction’ (AMCDRR, 2016b: 2). However, other areas of women’s vulnerabilities are not considered.

5.3.5.1 Implementation of SFDRR in Bangladesh

Although the SFDRR recognises that the state has the primary responsibility to reduce disaster risk, it does not have any binding obligation. Originally, the SFDRR was regarded as a non-binding ‘soft law’, as it was adopted as a UN General Assembly resolution, ‘which generally does not give rise to legally binding obligations to states, the adoption of this document clearly evidences states’ shared vision in terms of future steps towards real progress on DRR’ (Aronsson-Storrier and da Costa, 2017:

¹⁹⁵ Four regions – Africa, the Arab states, the Americas, Asia Pacific and Europe – are working for disaster risk reduction from a gender perspective. In Asia, Duryog Nivaran (Network for Disaster Mitigation in South Asia) and Practical Action South Asia (Intermediate Technology Development Group South Asia), the International Centre for Integrated Mountain Development and the Asia Pacific Forum on Women, Law and Development are contributing to gender issues in disaster management. Some developments have produced information, guidelines and capacity building. For more detail, see UNISDR et al. (2009: 163).

¹⁹⁶ The AMCDRR is a biennial conference organised by governments in the Asia Pacific region since 2005. In 2017, the conference was held in Delhi, and came up with a regional plan known as the New Delhi Declaration for Implementation of SFDRR. It was followed by the Asian Ministerial Conference Mongolia 2018, which developed an action plan for two years. The Mongolian conference included ‘Gender and inclusiveness in disaster risk reduction’ among its three policy directions. For more detail, see AMCDRR (2016b: 3) and AMCDRR (2016a: 13).

505). However, state parties are required to send a report to the UNISDR on progress on implementation of the SFDRR.

The SFDRR 2015–2030 has a significant impact on the disaster risk reduction approach in Bangladesh; for example, the National Plan for Disaster Management 2016–2020 was prepared in alignment with the SFDRR and focuses on its four priorities (Ministry of Disaster Management and Relief, 2017). Moreover, Participant 1.1.2 from the MoDMR said that the ministry developed its action plan based on SFDRR and the action plans regarding the SDGs are also based on the SFDRR. The Government has already achieved some of its SFDRR targets, such as understanding the disaster warning and institutionalisation of the armed forces division and fire service (see Chapter 4 section 4.3 and 4.4). Moreover, the MoDMR is in the process of updating the SOD based on the SFDRR.

In addition, the Government has already shifted its paradigm from relief distribution to disaster risk reduction. However, in the case of gender-sensitive policies and programs, not much has been done yet; for example, the report submitted by the GoB is based on data that only include basic information on the sex-segregated impacts on disaster. Further, the SFDRR has developed its own monitoring¹⁹⁷ mechanism, which also allows for reporting against common indicators for key SDGs, notably on poverty eradication, resilient cities and climate action (United Nations, 2018). There is no separate reporting indicating the approaches taken to address people disproportionately affected by disasters or women. Bangladesh needs to develop its framework of action to address the disaster vulnerability of women. Although the SFDRR considers gender a guiding principle, the implementation of SFDRR, its regional plans and government interventions need to prioritise actions to make significant progress on gender-sensitive disaster risk reduction.

5.4 Conclusion

Gender issues have gradually become evident in the global disaster risk reduction agenda after decades of marginalisation. Notable progress has been made since 2000, with the introduction of gender aspects in the HFA. Although UNISDR and other international bodies acknowledge gender as an important aspect of disaster risk management, there is very little concrete mainstreaming in its disaster management framework of action. Inclusion of gender and women's issues in the international disaster management framework is in its embryonic stage. In addition, there is no binding obligation on the

¹⁹⁷ With the Sendai Monitor System formally launched on 1 March this year, throughout 2018 and 2019, UN member states will be able to use the mechanism to report on their progress in achieving the seven targets of the SFDRR. The Bangladesh government has reported its progress on SFDRR in 2017. For more detail, see https://www.preventionweb.net/files/53149_bangladeshbgd.pdf

part of the state to implement international disaster frameworks of actions. However, this chapter identified that the SFDRR has had a significant impact on disaster management activities of Bangladesh, especially in the case of updating the SOD, the National Plan for Disaster Management 2016–2020 and action plans for the SDGs.

Although the SFDRR is considered a milestone in including gender-sensitive disaster management, it emphasises people disproportionately affected by disaster, ignoring women's context-specific experiences. Moreover, women have distinct criteria that separate them from other populations disproportionately affected by disasters. Women's coping efforts and response to disasters are severely challenged by their self-perception and capability, gendered division of labour, gender roles and gender relationships; without addressing this issue, successful implementation of Sendai is not possible.

The existing underlying causes of women's vulnerability need to be addressed in the international regulatory framework. Vulnerability is also a condition that places the subject in a position that prevents them from availing themselves of existing opportunities. Moreover, vulnerability creates a gap that requires filling via the efforts of all stakeholders involved. However, reviewing the international regulatory framework revealed that the UN agency is very cautious about including women issues in its international framework of action; it is more inclined to discuss this in an implicit manner, which recreates the vulnerability by providing the scope to ignore gender in follow-up actions.

Chapter 6: Best Practice, Findings and Recommendations

6.1 Introduction

As discussed in Chapter 1, the impact of natural hazards has severe consequences for the coastal community of Bangladesh, especially women, and the Government has started taking the initiative to overcome the vulnerability of women. Though Bangladesh has passed legislation and introduced several initiatives, the focus has been on providing one-off assistance to ‘vulnerable groups’ rather than addressing the causes of the vulnerabilities – namely, the social systems, community structures and power relations that affect women’s agency. As identified in Chapter 4, disaster risk reduction in Bangladesh is at a nascent stage, with disjointed policies and legislation that do not sufficiently consider the impact of disasters on vulnerable communities – specifically, women. This research recommends promoting resilience for women living in the areas of highest risk of climate change and disasters. This chapter sets out six key areas of recommendation, based on the theoretical analysis undertaken in Chapter 2, the field data analysis contained in Chapter 3, and the regulatory framework outlines in Chapters 4 and 5. These recommendations are informed by the scholarly literature, best practice models and empirical evidence collated for this project.

Empirical data were collected to identify the impacts of cyclones on women, their causes and also views on the most suitable interventions. The best practice strategies developed globally also provide innovative sources of effective interventions for addressing women’s vulnerability during disasters. Evidence suggests an important role for the Government and other development practitioners in addressing the vulnerabilities of women and the impact of disaster on women. These interventions inform the discussion and proposed recommendations.

The empirical data, as identified in Chapter 3, were used to categorise women’s vulnerability into five different dimensions and identify their causes and actions required to reduce women’s vulnerability. Analysing the existing regulating framework, as identified in chapter 4, the Government interventions have not addressed the root causes of vulnerability. For example, interview data showed that the Government should focus on providing more access to resources and public places, whereas the Government is focusing on short term income-generating activities and relief distribution.

This chapter is divided into three major parts. The first part explores the importance of the state in addressing the vulnerability of women in Bangladesh by using the theoretical discussion developed in Chapter 2. The second part recommends strategies for addressing women’s vulnerability by

drawing evidence from empirical data and critical analysis of existing laws, orders, policies and programs of the GoB to address natural hazards. Finally, the third part summarises the recommendations to provide an overview of the strategies suggested to increase resilience of women in Bangladesh.

6.2 The Role of the State in Addressing Women's Vulnerability

As discussed in Chapter 2, the theoretical framework developed based on Fineman's vulnerability analysis, Nussbaum's capability approach, disaster vulnerability theory and the concept of a multi-disciplinary and holistic approach forms the foundation of the analysis and recommendations in this thesis. As Fineman's vulnerability analysis proposes that the state should give equal regard to the shared vulnerability of all individuals, this requires the state to pay attention to the design of laws and policies on disaster risk management as well as addressing aspects of societal discrimination and existing differences that place any individual, group or system in a vulnerable position. The focus of this theory is on outcomes rather than processes. This theory emphasises the state's role to ensure that institutions and structures within its control do not inappropriately benefit or disadvantage certain members of society (Fineman, 2008: 20). In doing so, this research considers the three main issues discussed in Section 2.2.2 in Chapter 2.¹⁹⁸

Nussbaum argues for a deeper meaning of human life, highlighting the all-encompassing value of quality of human life, which include 10 basic criteria. This entails going beyond having rights on paper and requires support through material and institutional resources, including legal and social acceptance of the legitimacy of women's claims. The fundamental idea of this approach is women's capabilities, reflected in what people are capable of doing or becoming (ability and potentiality); the role of all states involves providing the basic minimum to citizens (see page 51). Determining the role of the state, the disaster vulnerability theory stands on the same page, arguing that vulnerable communities are likely to 'be a low priority for government interventions intended to deal with hazard mitigation' (Wisner et al., 2004: 53).

The empirical data, as analysed in Chapter 3, identified the locus and focus of women's vulnerability in natural hazards, with a special emphasis on cyclones in Bangladesh. Based on the empirical

¹⁹⁸ Fineman (2008) considers three main issues as relevant to vulnerability analysis: a) how the state has responded to, shaped, enabled or curtailed its institutions from recognising vulnerability, b) how the state has acted towards these institutions in a way that is consistent with its obligation to support an equality regime, and c) how the state has developed the range of assets (physical, human and social) that those who are vulnerable need to provide resilience. For more detailed information, see Chapter 2.

findings, the existing laws, orders, policies, programs and international treaties were evaluated in Chapters 4 and 5, which discussed the manner in which the Bangladesh government and international community are recognising, responding to and developing women's resilience to disasters. Chapter 4 identified that rather than risk reduction, emphasis is on early warning, recovery and reconstruction. Addressing women's vulnerability would require a focus on pre-existing discrimination, inequality and social exclusion, which would require a major shift towards a gender-sensitive approach.

This thesis recommends that the Bangladesh government play a role in addressing women's vulnerability in disasters in the following ways.

6.2.1 Collate Further Information on Women's Vulnerabilities

There is an urgent need to provide evidence on the gender-differentiated impact of disasters in Bangladesh, to render the set interventions gender sensitive. As discussed in Chapter 4, data recording involving sex-segregated mortality in disasters and other aspects remains outside consideration (see page 130). UN reports such as UNISDR (2015a), UNISDR et al. (2009), UNISDR (2017b), UNDP (2016b), and UN (2015) have highlighted the importance of gender-segregated data. As discussed above, disaster-related statistics have failed to provide sufficient gender-differentiated data; thus, there should be a data bank for both qualitative and quantitative data for policy makers. Understanding the patterns of vulnerability requires considering women's experiences, which will assist policy makers to identify where assets may need to be targeted.

6.2.2 Reorganise Regulatory Framework Considering Women's Vulnerabilities

This thesis emphasises that the disaster-related regulatory framework should respond to women's vulnerability. Various dimensions of women's vulnerability need to be mainstreamed into the Disaster Management Act, SOD, Disaster Management Policy and CPP. The empirical data and review of existing regulatory framework demonstrated that although attempts have been made to incorporate women's vulnerability into disaster management, they are disjointed, fragmented and not comprehensive. This thesis argues that women's disaster vulnerability is the amplification of existing vulnerability of women; that is, the prevailing gender inequality or discrimination. Thus, it focuses on addressing disaster risk management through ensuring gender equality and addressing the vulnerable subject by creating and enhancing various assets and redistributing opportunities among women and others.

6.2.3 Working with Other Organisations to Develop Best Practices

The Government, along with non-profit organisations and other development agencies, should contribute by developing a system to redistribute assets (physical, human and social). Like all other developing nations, the GoB has partnerships with many UN agencies, international NGOs and inter-governmental organisations; for example, the MoDMF worked with IFRC to develop the CPP and has also a partnership with SAARC Disaster Management Centre, the Asian Disaster Reduction Center and UNISDR. This thesis emphasises the importance of building a platform in partnership with relevant regional and international organisations in specific areas that have not been developed yet and extending and strengthening existing relationships with these organisations by incorporating best practices from within and outside the country. In terms of gender expertise, the UN agencies and other international and regional organisations could be sources for the government, providing training on capacity building, social transformation and changing attitudes; for example, in the case of healthcare, the government organisations and NGOs are working together to ensure better health. According to the Lancet,¹⁹⁹ the empowerment of women and the reach of NGOs have contributed to Bangladesh's notable success in under-fives' immunisation coverage and tuberculosis control. Thomalla et al. (2005) emphasise the role of civil society in addressing poverty alleviation and disaster risk reduction and identify a 'disconnect' between the GoB and NGOs in terms of sharing information. This thesis underlines the significance of connecting various stakeholders in the approach of disaster risk management and suggests remedies through training on awareness raising and consciousness building, introducing skills-based health education, ensuring access to market places, training on changing attitudes, behaviour and practice, and using one-to-one coaching for top executives (see section 6.3).

6.2.4 Form Partnerships with Businesses to Develop Women's Resilience

This thesis suggests that calling on business groups to become involved in disaster risk reduction is essential to developing a sustainable approach to women's vulnerability. Specifically, in terms of financial resources generation or alternative livelihood options, private sector cooperation can be an effective tool for creating resilience for women, as discussed in Chapter 3. Inclusion of the private sector and developing public-private partnerships have been suggested by many, especially in the case of climate change adaptation²⁰⁰ and disaster management;²⁰¹ however, they mostly emphasise the significance of including the private sector in disaster risk management. This thesis suggests

¹⁹⁹ For more detail, see <https://www.theguardian.com/global-development/2013/nov/21/bangladesh-healthcare-poverty-lancet-study>

²⁰⁰ For more detail, see Bowyer et al. (2015) and Bleau et al. (2015).

²⁰¹ For more information, see McEntire (2006) and Shaw et al. (2013b).

strategies for incorporation of business groups and the private sector through micro-insurance, creating a supply chain for women's alternative livelihood and mass communication for the community.

6.2.5 Emphasise the Importance of Implementation, Monitoring and Evaluation to Develop Operational Mechanisms

As the empirical evidence discussed in Chapters 3 and 4 revealed large gaps in policy and practice, this thesis emphasises developing operational mechanisms to address the issue of successful implementation, monitoring and evaluation of existing laws, orders, policies and programs. Scholars (Shabib and Khan, 2014; Thomalla et al., 2005) focus on the significance of operational issues in mainstreaming. There is a need for disaster programs to have inbuilt systems for assessing the effectiveness of implementation and to monitor progress to constantly review and improve the design of the disaster management system. This thesis recommends the establishment of a post of ombudsman, a monitoring and evaluation body, an organisational set up for management and coordination, and synchronisation of policy and programs.

6.2.6 Coordinate the Responses of Government Departments at All Levels

With respect to disaster risk management, this study recommends developing the coordinated response of Government bodies in various ministries and departments at various levels (national, local and community). Although there are some coordinating bodies working at various levels, they have failed to ensure regular coordination. The current approach of MoDMR and DDM is mostly a siloed approach, as discussed in Chapter 4, which keeps responsive strategies in siloes. Coordination has been achieved on occasion. A coordinated approach would avoid repetition of activities, waste of funds and focus on addressing the urgent needs of women. Strong coordination has been identified between the central authority and first responders during early warnings in cyclones; however, coordination is absent in the case of planning²⁰², preparedness and mitigation. An effective mechanism of coordination is a focus in this part to consider women's experiences in disaster risk management and to build capacity for women to allow them to be more resilient.

²⁰² See Chapter 3, Section 3.3.5 for more information.

6.3 Strategies for Addressing Women's Vulnerability

6.3.1 Strategies for Reducing Biological Dimensions of Women's Vulnerability

As the empirical data revealed, biological dimensions of women's vulnerability do not result solely from biological causes; social norms and self-perception have contributed to the progression of vulnerability. Among various causes, women's lack of self-consciousness was the most frequently discussed cause of the biological dimension of vulnerability, and has resulted in less willingness to go to shelter houses, health-related complications, a traditional dress code, lack of practice of life-saving skills²⁰³ and more concern about belongings than their own lives – policy makers should focus on developing an effective tool to increase women's self-consciousness to address vulnerability in natural hazards. As Chapters 3 and 4 suggested that the existing policy and programs of Government have failed to significantly change the biological dimensions of vulnerability of women in coastal districts in Bangladesh, a more effective device for women facing natural disasters is required. The aim of these strategies should not only be confined to increasing self-consciousness among women but also to overcome overall physical, psychological and health-related complications of women as well as their dependents, thereby increasing resilience through building human assets, which will evolve their abilities to perform in a disaster situation. Nussbaum (2000) argued that women are treated not as an end in herself and consider not worth in her own right and this research argued that this is causing disaster vulnerability. This demands transformation of women's patterns of thinking about themselves, such as how they perceive themselves and their position, contribution and influence on the family, community and society. This transformation requires both short-term and long-term comprehensive strategies. In the short term, strategies such as training on awareness raising and consciousness building would address specific problems such as the significance of self as a person, and gynaecological and infectious diseases; for the long term, ongoing education strategies could be used to a tool for social transformation.

The MoWCA should be assigned the overall responsibility for this by organising and coordinating activities relating to women's self-consciousness building and a health-related gender awareness program. Moreover, based on their relevance, the MoHFW, the MoE and the MoPME should work together to run awareness-raising programs for women. There are many programs and projects run by various UN agencies, international organisations and others that could be replicated or adapted to

²⁰³ During childhood, both male and female children learn to swim and climb and are involved in many physical activities in villages. Because of lack of practice, women cannot successfully use those skills to save their lives as men can; see Chapter 3, Section 3.3.1.1.

addresses these vulnerabilities. This sees a role for the Government partnering with donor organisations and NGOs to identify best practices that could be considered part of its response to build awareness among vulnerable women from the community, and girls and boys in schools.

6.3.1.1 Training on Awareness Raising and Consciousness Building

Training on awareness raising and consciousness building, among the five basic types of training²⁰⁴ strategies set out by UN Women, is suitable for women in coastal communities. The objective of such a training program is to involve women in becoming ‘aware’ and ‘conscious’ about inequality, patriarchy (UN Women, 2016: 15) and their impact on disaster vulnerability. This training would help women to become self-conscious and sensitise them to be more aware of themselves, enable and encourage them to learn and practice life-saving skills to save their own lives and the lives of others, and make them more conscious of gynaecological and menstrual management to reduce risk of reproductive health-related complications and water-borne and infectious diseases in disaster to overcome endemic diseases. Moreover, these programs could help provide information about referral services for mental health complications.

UN Women could partner in the provision of technical and expert knowledge to the MoWCA for developing such a program. Additionally, the BHE under the MoHFW²⁰⁵ has expertise on health education, and could provide information to the public through school-based education programs, village model programs, and dissemination of posters, flip charts, leaflets, TV spots and newspaper advertisements. With support from BHE’s experience and UN Women, the MoWCA could develop such training, and with support from MoHFW, develop a toolkit for preparing women and girls for disasters. Moreover, with the help of MoDMR, the CPP and local NGOs working in coastal districts could be a part of this training module.

In addition, this thesis recommends involving the existing ‘communication with community (CwC)’²⁰⁶ program, which involves measures such as use of community radio programs, to provide

²⁰⁴ UN Women has identified five types of training suitable for gender equality, based on the nature and objectives of those training on gender equality: awareness raising and consciousness building, knowledge enhancement, skills training, changes in attitudes, behaviours and practices, and mobilisation for social transformation. This typology evolved from the experiences and reflections of the UN Women Training Centre, including several research projects, such as the review of how training for gender equality has evolved since the Beijing Platform of Action, Annual Work Plan Reviews from a training perspective and reports of the Expert Group Meeting on Training for Gender Equality.

²⁰⁶ Communication with community is a multi-stakeholder platform created in July 2015 in collaboration with the DDM, UN agencies, BBC Media Actions, BDRCS, IFRC and various national and international organisations, and subsequently titled SHONJOG. Its aim is to develop a common volunteers’ guidelines with a view to ensuring needs assessment, effective response and recovery through two-way communication with the affected populations and volunteers in post-disaster situations.

training on awareness raising and consciousness building. Although the CwC is designed for response and recovery programs in post-disaster situations, it can be effectively used for disaster mitigation. Moreover, outreach health workers and community volunteers can play an important role by increasing women's knowledge about their health and wellbeing. Strategies such as seminars, workshops, media coverage and posters should be used to raise self-awareness about women's health and safety. Women and adolescent girls should be provided with information about the health risks they face during disasters and encouraged to plan and prepare for themselves and their dependents to maximise their resilience in advance.

6.3.1.2 Skills-based Health Education

Introducing skills-based health education for both female and male students at primary and high schools is a strategy that would build the human and social assets of boys and girls, leading to a generational change in discriminatory attitudes evident in everyday life. 'Skills-based health education' is a type of life skills education that encourages individuals to make decisions and take positive actions to transform behaviour and environments to promote health and safety and prevent diseases (UNICEF, 2003). UNICEF (2003: 1) defines life skills education as 'a structured program of needs- and outcomes-based participatory learning that aims to increase positive and adaptive behavior by assisting individuals to develop and practice psycho-social skills that minimize risk factors and maximize protective factors'. Life skills education is widely used across genders and ethnicities in HIV and AIDS prevention, disaster and emergency care and support, health education, human rights and social issues, violence prevention, peace building and education for development. It could be applied to disaster-affected people, especially women, to take greater responsibility for their own lives and health to practice healthy behaviours in Bangladesh. This program can be used to encourage them to practice swimming and running even after their childhood as the empirical data had shown that women do not practice those skills when they grow up due to restriction in social mobility (see section 3.3.1.5.2).

The MoWCA together with the MoPME, the MoE and MoHFW, could establish a platform to incorporate such education program in schools. With technical support from UNICEF, the MoE and MoPME could adapt these strategies to include life skills-based education for a gender-sensitive disaster risk reduction approach to overcome vulnerability relating to sanitation and hygiene (see chapter 3 section 3.3.1.5.3), pregnancy-related complications (see chapter 3 section 3.3.1.3), infectious diseases and lack of self-consciousness (see chapter 3 section 3.3.1.5.6). The MoHFW and

MoE, with support from the WHO,²⁰⁷ could develop a curriculum for students, guidelines for teachers and a manual for training trainers for such education program. The MoWCA, with expert support from UNICEF, could organise training programs for training trainers and teachers from schools. Moreover, the MoWCA, MoE and MoPME would ensure implementation, monitoring and evaluation of such program.

UNICEF and UNISCO are working with different government bodies to develop ‘life skills education’ as a tool for self-awareness and problem solving of a specific goal or goals in Maldives, Thailand, Indonesia, Tajikistan, Somalia and other countries. Through life skills-based education in schools, adolescent in Maldives are more aware of drug and child abuse; children in Indonesia are now learning about tsunamis and what to do before, during and after a tsunami hits; and girls in Tajikistan are back in school as they can learn practical domestic skills, and learn about HIV/AIDS prevention, conflict resolution and negotiation. These programs²⁰⁸ have shown success in awareness raising about potential pandemics and preparing for natural disasters (UNICEF, 2006, 2008, 2010, 2013, 2015). However, replicating those programs would not helpful for cyclone-affected women in Bangladesh because the nature of disasters, socio-cultural background and purpose are different from those countries. The MoE and MoPME, with help of National Curriculum and Text Book Board (NCTB), could evolve similar programs through curricular development, classroom exercises and extra-curricular activities such as debating, essay writing and publications in schools.

With support from CDMP and DDM, disaster management is included in the school curriculum from classes 5 to 12, and disaster management message and awareness programs are included in school curricula up to grade 12 (Asian Disaster Preparedness Center, 2008). Yet, the inclusion of disaster health hazards and a gender perspective to address women’s needs during and after disasters is still absent. Based on age, the students at primary schools could be given education on nutrition, hygiene, sanitation and significance of life skills, while students at high schools could be provided with education on adolescent lifestyle, menstrual management, reproductive health, mental health and infectious diseases during and after disaster. This would support school-girls to develop a mind set to

²⁰⁷ WHO collaborates with many partners in emergency and disaster risk management, including governments at national, sub-national and local levels, international organisations, multilateral and bilateral agencies, civil society and NGOs, research institutions and universities. It has collaborated with the GoB on health-related issues.

²⁰⁸ UNICEF is using education as an instrument for awareness raising and social change. Life skills education, which emphasises ‘skills in self-awareness, problem-solving, interpersonal relations, leadership, decision-making, effective communication and coping with difficult situation’ at the grassroots level to develop students, is becoming popular in various parts of the world. In fact, education is now regarded as a ‘social vaccine’ against the spread of the epidemic. Work is currently underway to review and overhaul life skills-based education as a means of promoting a more effective prevention program, addressing both specific determinants of behaviour and underlying social, economic and cultural drivers. For more detail, see UNICEF (2010, 2013).

develop self-consciousness and become influential communicators about disaster health risks, which would eventually be transmitted to the home. In doing so, it would build human and social assets; MoWCA, MoE, MoPME and NCTB could work as asset-conferring organisations.

6.3.1.3 Ensure Medical Facilities for Coastal Districts

The empirical data identified that there is a lack of medical facilities for the coastal community, especially for women and pregnant. This requires special attention from the Government and other agencies involved in the disaster risk reduction to ensure a more gender-sensitive medical system on the coast. Moreover, issues relating to mental health require more attention from the MoHFW and DGHO (see page 124). Local NGOs, the private sector and the international community could extend their support to the MoHFW to support the community, especially women suffering from disaster impacts. Furthermore, more attention should be given on supporting pregnant women with required medical facilities and delivery support in the shelter houses. A trained CPP volunteers can support a pregnant woman during cyclones.

6.3.2 Strategies for Reducing Economic Dimensions of Women's Vulnerability

As identified in Chapter 3, women's lack of access to various public domains, such as marketplaces, toilets, parenting facilities, and to resources such as transport, bank loans, training facilities and employment options heavily contribute to their disaster vulnerability, particularly after cyclones. The Government, development practitioners and private organisations should adopt policies, programs, strategies and market mechanisms to create physical, human and social assets to increase women's access to those facilities – this would be very significant for overcoming food insecurity, migration, early marriage and dropping out, and protect them from dangerous sources of employment after natural hazards. Moreover, these organisations could work as 'asset-conferring' organisations, and the Government could develop the framework to place other organisations, groups and individuals within the domain of state responsibility to ensure that the distribution of all assets is equitable and fair.

As the empirical data demonstrate that the coastal districts are vulnerable to salinity, which reduces the options for traditional livelihoods for men and especially for women (see chapter 3 section 3.3.2.1), the programs that the Government developed to support women in extreme poverty to cope with disasters showed no significant progress for risk reduction (see chapter 4 section 4.4.1.2); thus, the research suggests combining the existing skills of women with market opportunities for vulnerable coastal women to increase livelihood options through creating physical and social assets for women. Women have traditional knowledge, skills and expertise that can be used as a source of non-traditional

livelihood, and contribute to making them resilient after disasters and prepare for mitigating future disasters.

There are many best practices around the world from both governments, NGOs and business organisations that could be replicated or adapted to provide access and marketise vulnerable women's products, so they become financially self-reliant. From these best practices, this thesis recommends ideas that could help include women in the social system as potential entrepreneurs, to efficiently use their skills and labour and successfully plan for disaster risk reduction. The Government should focus on the following measures to ensure access for women and develop mechanisms to address the cycle of vulnerability and develop a counter cycle of resilience and recovery by incorporating the government, NGOs and the private sector in this process.

6.3.2.1 Ensure Access to Marketplaces

Providing women's access to marketplaces is widely considered by donor agencies and NGOs in different countries around the world. UN Women with the help of UNDP has launched a project titled Markets for Change,²⁰⁹ which has been ongoing for six years from 2014 in Solomon Islands, Vanuatu and Fiji. Seven different types of activities²¹⁰ have been included by this project for gender-equitable economic and socio-cultural empowerment of market vendors within a market environment through providing improved socio-economic security and responsive governance structures and systems. Major activities include supporting expansion of micro-finance initiatives around marketplaces, assessing the role of moneylenders and rates, and considering ways to reduce the cost of finance; access to credit and savings schemes and use of mobile phones for banking; infrastructural support and linking female vendors to preventive services to reduce risk of violence; training and mentoring for reinforcing communication between market management associations, and associations and councils; introducing innovative and clear revenue systems and reinvesting these in infrastructure

²⁰⁹ The Markets for Change (M4C) project is an endeavour of UN Women aimed at ensuring that marketplaces are safe, inclusive and non-discriminatory environments, promoting gender equality and women's empowerment. The project aims to ensure women's economic empowerment by providing inclusive, effective and representative marketplaces for elimination of gender-based discrimination and violence, improving economic security of market vendors, gender-responsive local government and market management and gender-responsive physical infrastructure and operative systems at marketplaces in the Asia Pacific region. Market vendors are predominantly women, and marketplaces offer important venues to effect women's social and economic change. In targeting female market vendors at marketplaces, this project seeks to contribute to the broader Pacific Women's Economic Empowerment, resulting in secure, productive and sustainable work opportunities for women. This project assumes that marketplace improvements in physical infrastructure and governance can improve the economic and social lives of women market vendors.

²¹⁰ For more detail, see Department of Foreign Affairs and Trade (2013: 89).

development; developing gender-responsive laws; and developing infrastructure to incorporate disaster risk issues in markets.

A similar kind of project could be adopted to support women in the coastal districts in Bangladesh to have access in marketplaces where they can supply their homegrown products and create employment opportunities for themselves after natural hazards and at other times of the year. The concept of developing physical infrastructure for disaster risk reduction could be introduced in coastal districts to provide multi-purpose shelter houses cum markets in the *Upazila* headquarters or other convenient places. A reserved place for women vendors could be provided in those newly constructed marketplaces or in existing marketplaces, which could work as physical assets to develop resilience for women. The Government could build infrastructure or provide spaces in existing facilities for women where they could have their own space to produce products to buy and sell free of taxes. Moreover, facilities such as separate toilets for women, bathing areas for women who come from a long distance, hygiene areas for menstrual support and parenting facilities for mothers with small children could be provided in those marketplaces. Providing a place that is free from violence and security risks needs to be ensured by the market management committee. A circular could be issued by the Ministry of Land to provide such space for women in hats and bazars maintained by local governments.

Though Markets for Change is considered a successful project for women's economic empowerment and disaster risk reduction, replicating this project might not be helpful for women in the coastal districts as the number of women vendors in the marketplace is very low, whereas 'between 75 to 90% of market vendors in the Pacific region are women' (UN Women, 2018a). Additionally, because of socio-cultural practices (conservative coastal community), attracting a large number of women to marketplaces as vendors (see Chapter 3 section 3.3.2.8.5 and 3.3.3.2.5) would be a difficult task. Therefore, introducing an association for female vendors, representing women in the market management committee, would not be possible at this stage.

However, revenue-free market zones for women could be used to encourage women's participation in alternative livelihood activities such as small businesses for processed food, such as puffed rice, cakes or dry fish, or homegrown products, such as fishing nets, cane or bamboo products or household daily necessities, which could help to fulfil local needs. Women from the community would be motivated to go to marketplaces and sell their goods if they did not have to pay rent, leases, charges or VAT, and they could provide goods at a cheap price. This would reduce their business establishment expenses as well. In addition, as some coastal districts are conservative, women might

feel shy or insecure about going to marketplaces. Considering these cultural norms, they could be provided with the most convenient place, with easy transportation and other facilities as mentioned above. Moreover, as government agencies and local government bodies would ensure the security of women vendors through amendment of existing regulations, women would be encouraged to set up in marketplaces and opt for an alternative livelihood.

With the help of UN Women and the DWA, the Ministry of Local Government, Rural Development and Cooperatives (MoLGRDC) could design and develop a program that could assist women to access marketplaces in coastal districts. At the community level, the Union *Parishads* and *Upazila Parishads* are responsible for overseeing the local hat and bazars. In collaboration with Union *Parishads* and *Upazila Parishads*, BRDB under the MoLGRDC could implement such programs.

However, providing access to these marketplaces alone will not be enough to support women to overcome their social exclusion and become economically resilient. The Government should develop a comprehensive program to overcome economic dimensions of vulnerability of women, focusing on the major issues discussed below.

6.3.2.2 Building Resilience Through Micro-savings or Insurance Schemes for Disaster

As it was identified in the empirical data that women have less access to bank loans because of a lack of ownership and access to land and resources, the Government should encourage women to save for disasters so they have access to physical assets such as cash during and after cyclones or other disasters. The BRDB²¹¹ could introduce a disaster savings scheme for rural women in the coastal districts, to encourage them to save some money fortnightly or monthly from their earnings to have access to this money when they face disasters. The BRDB has its own savings program through creating cooperatives that could easily be used to evolve such micro-saving and insurance scheme for coastal women. This would create physical assets through providing funds and social assets through groups that would strengthen ‘their resilience by joining together to address vulnerabilities’ (Fineman, 2008: 15). Moreover, the Government could assist this savings scheme through various measures such as providing high interest rates for women. Initially, the Government could target the poor women taking assistance through various government programs such as VGD, TR and VGF to encourage them to save. The UDMC could also be involved in designing and implementing the program and

²¹¹ The BRDB is the main public sector organisation under the Ministry of Local Government, Rural Development and Cooperatives that engages in rural development and poverty alleviation. It mainly operates by organising small and marginal farmers into cooperative societies for increasing agricultural production through improved means and by forming formal or informal groups of landless men and distressed women to promote income-generating activities in rural areas. For more information, see <http://www.brdb.gov.bd/index.php>

Upazila DMC could monitor progress. Providing women with loans on favourable terms, such as at subsidised interest rates, would assist them to overcome food insecurity, buy seed, poultry and other useful items for disaster recovery. Women would be highly motivated to join this saving scheme, as it would not require land ownership or other forms of ownership to access this saving and credit scheme.

Although the micro-insurance market for disaster risk is still in its infancy (All India Disaster Mitigation Institute, 2011), the Government should think about the option of micro-insurance as a tool for disaster risk reduction. Micro-insurance could support women with some liquidity to re-establish their informal income and recover from devastation and injuries. There are two types of disaster micro-insurance schemes available – ‘one that is indemnity-based and pays claims based on actual losses, and one that is index-based, where insurance contracts, mostly for crop risks, are written against a physical trigger such as rainfall measured at a regional weather station’ (Sharma et al., 2011: 9; Mechler et al., 2006: 9). Though there are NGOs²¹² working in countries such as India (IIDMI, Swayamkrushi, Basix, SEWA), Sri Lanka (Yasiru), Pakistan (NLC), Malawi (NASFAM) and Indonesia trying micro-insurance as a tool to reduce disaster risk, it is not widely accepted among the poor in rural areas. *Proshika* in Bangladesh is also trying to introduce micro-insurance, but experiencing challenges (Sharma et al., 2011). The empirical data showed that the vulnerable community considers micro-credit and related organisations a challenge rather than a support in case of recovering from disaster; the focus group from Patuakhali stated that because of micro-credit, many vulnerable people had fled to escape loan installation payments. Thus, including NGOs in the initial stage of introducing micro-insurance might not be a smart option. The MoLGDR, with support from MoWCA and MoDMR, should start the initiative to implement such a program on behalf of the government. Moreover, the Government could consider index-based insurance considering the cyclone warnings hosted by the Bangladesh meteorological institution.

6.3.2.3 Create Supply Chains for Women’s Alternative Livelihood

Women should have access to the wider market. The MoWCA, MoDMR and MoLGRD could jointly run a program to develop a supply chain for women in the coastal districts in Bangladesh to access

²¹² NGOs include Proshika (Bangladesh), Swayamkrushi (India), Network Leasing Corporation (NLC) (Pakistan) and the National Smallholder Farmers’ Association of Malawi (NASFAM). For more detail, see Mechler et al. (2006: 32) and All India Disaster Mitigation Institute (2011: 152).

national and global markets. There are many private entrepreneurs such as *Aarong*,²¹³ *Nipun*,²¹⁴ and *Pran* group who have similar projects in the other parts of the country who would be willing to invest in and purchase women's homegrown products such as handicrafts, poultry and dairy products if the Government provided those entrepreneurs concessions such as revenue exemptions and toll-free transportation. Thus, the Government could support the development of alternative livelihoods for women. As most cyclone-affected districts are in remote areas deprived of good transportation and communication facilities, entrepreneurs are not willing to invest in those areas, as this would increase costs and time. Local government bodies could provide revenue-free, toll-free facilities for product purchases and transportation to other places. The Philippine Disaster Risk Reduction and Management Act of 2010²¹⁵ includes a similar provision of tax-free importation of international humanitarian assistance to areas in a declaration of calamity (IFRC and UNDP, 2017: 36) to help disaster-affected communities. To reduce the impact of disasters, disaster-prone coastal districts could have similar tax-free and toll-free support for production and transportation of goods and services from disaster-affected district. This would require amendment of certain existing acts, rules and regulations. Moreover, the MoWCA could also support the creation of a value chain system for coastal women, where they could sell handicrafts and other homegrown products. With support from the Government, private entrepreneurs could also supply raw materials to women to work from home and supply them, which is a very popular source of income for many women living near big cities, such as women from the Mushigionj district by *Aarong*.

Moreover, the DWA has some outlets under the *Aangona*²¹⁶ label that sell handicrafts from destitute women from all over the country. The DWA could increase the number of its outlets in other parts of the country and extend its support to those coastal districts where women could work to make their living. Additionally, the MoWCA has established the Joyeeta Foundation²¹⁷ to support women's entrepreneurship all over the country, and is going to establish seven outlets in seven divisional

²¹³ Aarong is one of the most popular retail chains in Bangladesh operating under BRAC since 1978. Its objective is to empower rural artisans, especially women, to rise above poverty through its market linkages; see <http://www.aarong.com/about-aarong/>

²¹⁴ Nipun Crafts, established in 1973, is a pioneering fashion houses in Bangladesh. It exports local fabric-based material to local and international markets. Its products include dresses, jewelry boxes, bags, cushion covers, lamp shades and placemats. See <http://www.hktdc.com/manufacturers-suppliers/Nipun-Crafts-Ltd/en/1X044787/> and <https://www.thedailystar.net/lifestyle/event/celebrating-44-years-nipun-crafts-ltd-1385761>

²¹⁵ For more detail, see Republic of the Philippines (2010: 29).

²¹⁶ Aangona provides few outlets in different places in Bangladesh. Considering the huge number of vulnerable women, it provides minimal opportunities for women.

²¹⁷ The Joyeeta Foundation is working under the MoWCA to build a gender-equality-based society through empowering women economically. The goals of this foundation are to provide women-friendly marketing networks to be run and managed exclusively by women and develop value chains centring on women-friendly marketing networks from rural to urban, from production to marketing, through commercially employing women in different phases of the chain by building their capacity. For more information, see Government of Bangladesh (2018).

headquarters where destitute women will be able to sell their products directly (Rahima 2018, pers. Comm., 3 May). The activities of the foundation could be introduced to cyclone-affected areas. There are training institutions in every *Upazila* for women, who provide basic training on income-generating activities which can be used by women to supply homegrown merchandise.

As discussed, women involved in poultry and small livestock rearing at the *bari* are the major victims of loss during cyclones. The supply chain could help them to recover from the financial loss of disasters. The BRDB is already involved in developing cooperatives, providing micro-credit to farmers and training for income-generating activities. The BRDB could provide various entrepreneurs with poultry and livestock at cheap rates before the two cyclone seasons (see page 34). In the existing system, some small business people buy poultry and livestock at cheap rates before cyclones; however, there are too few to have an impact on the overall situation. Local government bodies such as Union *Parishads* and *Upazila Parishads* assist by providing infrastructural facilities for this program. There should be a subsidiary policy supporting those entrepreneurs and small business persons. If the Government could encourage those entrepreneurs, they would inspire the major food processing companies of the country to invest here before the disaster starts. This would help them buy livestock and poultry at a cheap rate, and would also help the village women to sell their domestic products and earn money before disasters.²¹⁸

Considering the patterns of natural hazards and socio-cultural practices, women's existing skills, capacity and resources need to be used as a source of resilience. Although Joyeeta Foundation is trying to establish a mechanism for destitute women all over the country, there is no special focus on women in coastal districts (Rahima 2018, pers. comm., 3 May). The MoWCA should develop a comprehensive market supply mechanism to support women and men in the coastal areas, especially women with some skills and those who have completed their training on income-generating activities from the Department of Youth Development and the DWA. Women's skills could be used as a source of income generation during the pre- and post-cyclone periods. Empirical evidence (see Chapter 3 section 3.3.2), showed that women from both Kalapara and Banshkhali *Upazilas* have skills in food processing, fish drying, seed preservation, sewing fishing nets, handicrafts, vegetable gardening, poultry and cattle rearing. Empirical data also showed that because of the lack of access to local, national and global markets, women fail to overcome financial losses. The supply chain mechanism

²¹⁸ Bangladesh disaster-related statistics for 2015 show that Patuakhali district lost 908.86 million taka of livestock, 350.86 million taka in poultry and birds, and 414.66 million taka in fisheries over 2009–2014 from disasters. The same source shows that Chittagong district experienced losses of 883.49 million taka in livestock, 49.79 million taka in poultry and birds and 303.52 million taka in fisheries over 2009–2014 from disasters.

could help them sell their skills and products and become financially solvent. With the help of the *Upazila Parishad* and union *Parishad*, a collection centre could be established in every coastal district union to buy products before cyclones. Local women need to be provided with access to those facilities through transport, as studies have identified that women are not allowed to drive in the community. *Upazila* and union *Parishads* could provide transportation facilities to carry women's products to marketplaces.

Women would be willing to respond to that opportunity, as it would help them to convert their domestic products into cash before cyclones and reuse those funds to support themselves to reinvest after cyclones and assist their family to recover from cyclone devastation. As it has been identified that women are less willing to take relief and more willing to work, they would welcome the chance to work hard and marketise their products of their own. The BRDB with support from other local government bodies, NGOs and business groups could facilitate the program on behalf of the Government. These access mechanisms would create a win-win for all by supporting vulnerable coastal women to prevent financial losses, small businesspersons and big entrepreneurs to make profits and the Government to reduce the cost of rehabilitation and relief. As women would not need to travel and as they would be able to earn from home, they would be encouraged to work hard for their family and earn their living. Moreover, it would not hamper their day-to-day responsibilities as homemakers and caregivers, maintaining harmony with the existing culture and norms of the community and society.

6.3.3 Strategies for Reducing Socio-cultural Dimensions of Vulnerability

As the empirical data revealed that changing attitudes for both men and women was the biggest concern for overcoming the socio-cultural dimensions of vulnerability (see page 90), this section discusses how the Government should evolve law, policy and strategies to increase awareness to change attitudes for a more disaster-resilient community. This study recommends that women and men in the community should change their attitudes to overcome vulnerability from insecurity, violence, burden of care, hardship in maintaining daily duties, workloads and so on (see chapter 3 section 3.3.3). The Government with collaboration from its development partners such as UN agencies, NGOs and others such as private organisations should emphasise programs that can facilitate changing attitudes, behaviour and practices for the community, significant groups and key persons to ensure gender equality. Addressing the community through mass communication, training on changing attitudes, behaviours and practices for groups and one-to-one training for top civil servants could be used for changing attitudes for gender equality, which would generate human capital. The

following approaches could be used to reduce the socio-cultural dimension of women's vulnerability in cyclones.

6.3.3.1 Mass Communication for the Community

The MoWCA, DWA, MoDMF and DMM could use various media such as radio, TV, Facebook and the internet to enhance the efforts carried out by civil society, NGOs, UN agencies and donors to change attitudes of men and women in society through developing their human assets. *Shongjog*²¹⁹ has taken some initiative, such as broadcasting live radio programs on disaster preparedness and response through community radio stations to communicate with the community in Bangladesh during disasters. With support from IFRC, BDRCS, BBC and Disaster Emergency Preparedness Program (DEPP), the DDM and SoMaSHTe developed guidelines for communicating instantly through lifeline programs for disaster-affected communities. Unlike traditional programs, lifeline programs provide information to help affected people instantly use this audience-friendly program. Major features of these programs comprise selection of timely subjects, participation of concerned experts, use of local language, quality information and entertainment and addressing requirements of women and marginal people (Government of Bangladesh, 2017: 1–18). This approach basically involves disaster preparedness and response; however, the objective of such mass communication is changing the attitudes of the community to mitigate disaster risk.

The MoWCA and DWA could utilise this community radio program as an effective tool for providing training on changing attitudes, behaviours and practices; and mobilisation for social transformation – two types of training categorised by UN Women (UN Women 2018b). As the ‘Broadcasting live radio programs on disaster preparedness and response through community radio stations’ guidelines emphasise women and marginal people in its features of a good program (Government of Bangladesh 2017), the MoWCA and DWA could negotiate with the DDM to extend its support to collaborate its program and assist the MoWCA to train and educate the wider community to ensure gender equality in its approach. They could develop materials on gender mainstreaming in cutting-edge formats and train and support the media to change attitudes and encourage egalitarian practices in society. Issues such as changing the traditional dress code during disasters, ensuring security for women and girls, and easing the cultural restrictions of *Purdhah* and cultural sensitivity (see Chapter 3 section 3.3.1.5) could easily be addressed with these programs. Moreover, involving celebrities could be an effective

²¹⁹ ‘Shongjong’ has also been suggested for awareness raising and consciousness building regarding health awareness among coastal women and adolescents to overcome the biological dimension of vulnerability. Community radio programs can be a source of strategies as they reach the wider community in disaster-prone areas. Recommendations, here, include supporting women to overcome biological vulnerability and the socio-cultural dimension of vulnerability.

tool for awareness raising, especially among male members of the community, through media. The MoWCA and DDM should identify the most acceptable celebrities for the community and use them to deliver the message of the Government to the community.

6.3.3.2 Training on Changing Attitudes, Behaviours and Practices for Groups

Training on changing attitudes, behaviours and practices includes the synthesis of trainers' critical reflections towards tangible changes in their attitude and fosters the motivation required to put their knowledge and skills into practice and initiate change (UN Women, 2016: 17). The MoWCA could lead the other government agencies to initiate these types of trainings with technical and expert knowledge from UN Women. The MoWCA, with the help of BDRCS and CPP, could select various significant groups to work as agents of change in the process. CPP volunteers, CPP team leaders, civil society groups involved in relief distribution and disaster management, union *Parishad* members, government employees involved with relief and rehabilitation programs, and women and development programs could be involved in this intervention. Based on group specifications, government agencies, with the help of UN agencies and IFRC, could develop various training modules that would help to evolve human and social assets among these groups.

As the CPP volunteers and staff are the most significant group working with the community in response and recovery programs in disasters, they need to be targeted adequately. CPP volunteers are provided with basic training, first aid training, and search and rescue training (Amin, 2012). The DWA, with structural support from the CPP and expert and technical knowledge from UN Women and BDRS, could organise training programs twice a year. Additionally, these training programs could be organised simultaneously with the other CPP volunteer training programs organised regularly. Moreover, CPP staff could organise training on gender equality at the office of the Deputy Commissioners at the districts.

As local NGOs and civil society are involved in the process of disaster management, they should be given training on gender equality and disaster management. The DWA, with technical support on disaster management from CPP and IFRC and technical and gender expert knowledge from UN Women, could organise training twice a year. These programs would help these organisations to synchronise their activities and develop cooperation among NGOs, civil society and government bodies.

With support from the MoDMF, IFRC and UN Women, the DWA could take the initiative to organise training for government staff and officers working at the local level. As there are various government

bodies working at the local level for disaster management in the coastal district, it is highly necessary to provide training to enable them to organise themselves to work together to achieve more gender-equitable spaces. These training programs would focus on changing attitudes, behaviours and practices and mobilisation for social transformation.

Providing training for government officers from the ministries and department (at the centre) who have a significant role in formulating, developing, updating and implementing gender-related laws, policies and programs could address the concerns of the participants from within and outside the Government regarding the issues of changing attitudes (see Chapter 3 section 3.3.3.2). With technical support from UN Women and IFRC, the MoWCA could organise training for officers who could support behavioural and organisational changes through mainstreaming gender equality considerations into all policies and programs of the country. Moreover, there are some training programs organised by the UN Women training centre²²⁰ with the objectives of strengthening ‘capacity and knowledge of managers and organisational leaders to advance gender equality, women’s empowerment, and women’s rights agendas within their organizational contexts and mandates’ (UN Women, 2018b: 11). Training such as those on women’s leadership and transformational leadership for gender equality and women’s rights could be organised on request for officers working in ministries and departments. The UN Women training centre provides training online, in a traditional classroom environment and via face-to-face interactions. As ‘Women’s leadership programs’ and ‘Transformational leadership’ are face-to-face training programs organised by UN Women on request, the MoWCA could arrange this training for officers working with the ministry and department or anyone else requiring this training.

The aim is to engender long-lasting positive change in the way participants think and act – both in terms of their conduct and long-term habits – which would enable them to synthesise their critical reflections on gender equality, apply gender analysis and facilitate change in personal life, community norms and institutional practices. As the training program is evolved based on group specifications and specific needs, attendees are more willing to participate and take action. As changing attitudes and behaviours requires a long-lasting impact, the training needs to be organised continuously for a long time. Therefore, the MoWCA should develop long-term planning for such initiatives.

²²⁰ The UN Women Training Centre provides training to government counterparts, the UN system, civil society organisations, and everyone who is interested in gender equality and women’s empowerment. For more detail, see <https://trainingcentre.unwomen.org/>

6.3.3.3 Use One-to-One Coaching for Top Executives

As the empirical data suggested that the attitudes from some government officers also cause issues for ensuring gender equality at various levels (see chapter 3 section 3.3.3.2.4), it is highly necessary to provide one-to-one coaching to support those officers required to be highly gender sensitive in their approaches, which would support the development of human assets in government institutions. The heads of ministries such as MoWCA, MoDMF, MoHFW and MoLGRD and heads of departments such as DWA, DDM and CPP should be given such training. The MoWCA would be responsible for organising such training. Highly professional persons could be hired to provide support to those officers holding a significant position for formulating and implementing gender-sensitive policy and programs. Promoting and advancing equality and diversity in general and gender equality specifically in daily institutional practice needs to be enhanced by the top officers in the country. This would not only help them to ensure gender sensitivity but also foster a more egalitarian approach in every aspect of organisational life. Retired government officers who have a good reputation for working on gender issues or experts from UN agencies or other organisations could be hired. The MoWCA could also utilise the ‘mobilization for social transformation’²²¹ training for such groups and thereby create human assets in the top executive positions of the government. *The advantage of such training is that it will also address the patriarchal mind-set that may be part of the behavioural norms in the country.*

6.3.4 Strategies for Reducing Political Dimensions of Women’s Vulnerability

As it has been identified that women’s lack of decision-making skills and leadership has contributed most extensively to the political dimensions of vulnerability (see Chapter 3 section 3.3.4), this section of the thesis discusses how the Government should develop its policies, programs and strategies to develop human assets for vulnerable women by increasing women’s skills in decision making and leadership at the household, community and national levels. At the household level, women should be skilled enough to make decisions for planning for mitigation, preparedness, response and recovery. Female members of union *Parishad* should develop their capacity to take part in UDMCs and make a significant contribution by raising their voices for women in the community. At the national level, the MoWCA needs to increase its expertise on gender and disaster to contribute substantially to the decision-making process. This thesis suggests three approaches for increasing women’s decision-making and leadership skills at three levels.

²²¹ Mobilisation for social transformation is a type of training that encourage trainees’ capacity to collaboratively put their knowledge, motivation and skills into practice to change their work, communities and daily lives into more gender-equitable spaces. For more detail, see UN Women (2016: 38).

6.3.4.1 Increase Decision-Making Capacity at the Household Level

Increasing decision-making capacity at the household level will assist women to make decisions before, during and after cyclones as well as plan for disaster risk reduction for the family. Because of the division of labour, patriarchy and long-followed practices, women are not accustomed to make decisions outside day-to-day household activities (see page 99). The empirical study showed that women's decision-making capacity is decision specific. Women face considerable hardship before, during and after cyclones as they have to make many decisions outside their realm of day-to-day activities that are outside of their regular practice. There should be programs to assist development of human assets, which would help women to take decision about the emergency and risk reduction approaches.

There are government programs to support women and men in coastal districts to make the right decisions before cyclones. The intensity of such programs needs to be increased to cover more people in coastal districts, especially in the remote areas where evacuation is difficult. Moreover, the existing curriculum and extracurriculum activities in educational institutions should focus on rational decision-making capacity of students, especially girls, to generate human capital and make them capable of making the right decisions, such as what to take and not take with them before going to cyclone shelter houses, how to safely and successfully reach cyclone shelters, how to plan a safe and secure stay at cyclone shelters, how to start after a cyclone and how determine sources of fund. Moreover, this skills development should include preparation for leadership, essential skills and tools to lead a team, and collaborative leadership skills. The MoWCA, with collaboration from the MoE, MoPME and DDM, could adopt an approach to assist girls to be a capable enough to make decisions regarding emergency and disaster risk management as well as day-to-day activities in the household.

6.3.4.2 Training for Female Members of Union Parishad on Decision-Making and Leadership Skills

As the empirical data revealed that female members of UDMCs are not involved in the decision-making process (see page 21), there should be a training program for female members of union *Parishads* on skills development and capacity building with a special focus on disaster management. The empirical data showed that they have a lack of access to law and policies; however, most policies are available on the websites. Because of a lack of skills and education, they fail to access and understand the existing regulatory system and fail to perform their duties (see chapter 3 section 3.3.4.4.2).

As the MoLGRDC regulates administrative matters of union *Parishads*, it is more relevant for this ministry to take the leading role in the process of training female members of UDMCs. The National Institute of Local Government (NILG), under the Local Government Division of the MoLGRDC, provides training as an asset-conferring agency in different aspects of local government administration and development to the elected representatives of the local government, including male and female members of union *Parishads*. With structural support from the MoLGRD, the MoWCA and MoDMR could extend their cooperation in this regard. Apart from the NILG, various NGOs²²² provide training for female elected representatives from various constituencies. However, they have failed to incorporate disaster risk management.

Although there is no provision for disaster risk management, the program run by UN Women on leadership training for women in Vanuatu could be used as an effective measure for enhancing female members of UDMCs have a significant impact. This training program²²³ has achieved significant outcomes in helping women in election campaigns and running the office. It covers how to involve women candidates in community consultation, campaign strategy, policy development and hands-on interview skills (UN Women National Committee Australia, 2018). This program could provide technical expertise for the NILG to increase capacity to run the office and help to provide input in decision making and planning disaster risk management for the local community.

The MoWCA, with support from MoDMR, could develop strategies to address emergency management, disaster risk reduction and decision-making and leadership qualities among female members. As a result, they should be given training on how they could represent the women of the community and contribute to decision making on disaster risk management for the community. They should be involved in the planning process of emergency and risk management in the community, especially to support local women and address their risk management capability. The Government, with support from UN Women, could develop a leadership training program to assist women to develop this human asset. This type of training will also alert women to the types of vulnerabilities that are currently faced and counter the patriarchal mind-set which may be prevalent.

²²² Some NGOs provide training for elected members of local governments, including Khan Foundation, Bangladesh Nari Pragati Sangha, CARE Bangladesh and Nari Uddug Kendra; see Democracy Watch (2002: 35).

²²³ UN Women ran a training program for election candidates in Vanuatu's municipal election in 2014. Five women were elected in that election and all of them were participants in this training program; see UN Women National Committee Australia (2018).

6.3.4.3 Develop Leadership Among Gender and Disaster Experts

As it has been identified from the empirical data that there is a lack of leadership on gender and disaster from within and outside the Government at the national level. Regional inter-governmental organisations²²⁴ and international organisations²²⁵ are focusing on training on leadership for policy makers, civil society organisations, development agencies and people interested in gender and disaster management. The MoWCA, with collaboration from MoDMR, could support these training facilities for capacity building among concerned government officers, NGOs, scholars and civil society organisations.

6.3.5 Strategies for Reducing the Organisational Dimension of Women's Vulnerability

As the data analysis revealed that most of the existing expectations of local and community participants can be fulfilled by proper implementation and monitoring of existing laws, policies and programs of the Government, this section discusses how the Government and development practitioners should evolve strategies for the successful implementation of existing laws, policies and programs. UN agencies and other international organisations²²⁶ are also focusing on successful implementation, monitoring and evaluation of gender-sensitive laws, policies and programs. They have suggested various strategies, toolkits and checklists for gender-sensitive evaluation and monitoring of projects and programs. However, the GoB could foster the following strategies based on the social, economic and cultural context.

6.3.5.1 Establishing an Office of Ombudsman

A review of the existing organisational set up demonstrated that there is no post for reviewing and overseeing the process of implementation, monitoring and evaluation of existing disaster management activities of the Government (see Chapter 4 section 4.4). Creating a post of ombudsman as an independent body could help implementation of women's rights from the grass-root to national levels

²²⁴ Asian Ministerial Conference for DRR held in New Delhi in November 2016 endorsed the Guidance Note 'Gender Inclusion and Women's Empowerment at the Centre of Resilience Building: Operationalising the Asia Regional Plan for Implementation of the Sendai Framework for Disaster Risk Reduction'. The guidance note contained a two-year plan of action (2016–18) indicating the responsibilities of governments and stakeholders and including enhancing women's technical and leadership skills through policies and affirmative action.

²²⁵ UN Women and other UN agencies, World Federation of United Nations Association and Women Organizing for Change in Agriculture and Natural Resources provide training on gender leadership.

²²⁶ FAO, World Bank, UNISDR, IFRC and others have developed various measures for successful gender-sensitive implementation, monitoring and evaluation. See World Bank (2005: 25, 2011: 58).

to work as a ‘watchdog’ in case of violence against women, corruption, irregularities in relief distribution, mismanagement of shelter houses and bribery in service delivery.

A new set up consisting of various stakeholders from the government, non-government bodies and civil society could be involved in this process, which would evolve physical and social assets within and outside government. Persons or organisations relating to service delivery directly should not be a part of it. Based on the nature of the complaint, a jury would be established. Depending on the nature of complaint, the MoWCA, MoDMR or MoLGRD could be involved in this process. Moreover, other bodies such as international NGOs, NGOs and civil society organisations could also be a part of this process to ensure neutrality of the service.

The office of ombudsman would be able to support women and others to oversee their complaints and help protect their rights. Creating a post for ombudsman would assist ensuring implementation, monitoring and evaluation of existing gender-sensitive policies and programs in disaster management and thus help women to overcome vulnerability during and after disasters. Specifically, local women from the community would be provided with information about the services of the ombudsman, with CPP volunteers used for distributing this information. Women seeking help from the body would be required to seek support from the office. There would be paid staff to assist women to lodge their grievances. Moreover, the ombudsman could identify and lodge investigations of their own to ensure enforcement of existing laws and policies. As social norms of not complaining might discourage women from seeking help, CPP volunteers could assist women to ask for help. Moreover, as the process would not involve people under investigation, women would be encouraged to seek support.

6.3.5.2 Implementation, Monitoring and Evaluation Body

Apart from the ombudsman, there should be a body set up to oversee the implementation of existing laws, policies and programs on a regular basis. As mentioned in Chapter 3, many policies, such as the Cyclone Shelter Construction Maintenance and Management Policy 2011, SOD 2010, Disaster Management Policy 2015 and Disaster Management Act 2012, require successful implementation for more effective disaster risk reduction. The Cabinet Division should develop a body of expert human resources responsible for monitoring and evaluation of gender-sensitive laws, policies and programs with a special focus on gender and disasters. The MoWCA and DWA should define the job description and job specification of those positions assigned the responsibility of ensuring the quality of implementation, monitoring and evaluation of gender-sensitive laws, policies and programs. The MoWCA and DWA should liaise with the ministries responsible for implementing laws, policies and

programs relating to gender. The MoWCA could outsource the oversee of matters significant for the greater interest. The position would be created in a way to provide access to beneficiaries. The body, as a physical asset, should cover women's views about the service when they evaluate the process. As the empirical data identified that there is a lack of capacity among existing resources within and outside Government to conduct evaluation and monitoring of gender-sensitive activities of the Government and other development practitioners (see Chapter 3 section 3.3.5), there should be training on capacity building for such human resources. The MoWCA or the DWA could work as a responsible body for developing such skilled human resources and a post could be created in these Government agencies to oversee successful implementation, monitoring and evaluation within the ministry.

6.3.5.3 Provide Logistic and Budgetary Support

The empirical data showed that the local government and field administration do not have sufficient logistic support for implementation of existing disaster risk management activities (see Chapter 3 section 3.3.5). There are many small isolated islands in Patuakhali district that require speedboats for evacuation, rescue operations and relief distribution in many remote islands. Such logistic support could help women, especially pregnant women, the elderly and children, be provided with assistance. Lack of budget for such logistic support, bureaucratic process of including it in the 'table of organisation and transport', and creating a post for such vehicle makes the process of providing logistic support more complicated. The MoWCA and MoDMR could work as liaison bodies to support the process of creating physical assets to address gender vulnerability in cyclones. Moreover, as the empirical data also suggested that there is no budget allocated for DMC meetings (see chapter 4 section 4.4.3.1), the Ministry of Finance should allocate funds to run their regular activities.

Although the empirical data suggested that successful implementation and monitoring is very important for fulfilling the expectations of the community, the Government should focus on reforming existing laws, policies and programs to reduce risk vulnerability of women and economic and social losses from natural disasters. The following section provides an overview of required reform needed for disaster risk reduction for women.

6.3.5.4 Mainstreaming Gender Vulnerability in Existing Disaster Management Laws, Policies and Programs

This thesis suggests inclusion of gender vulnerability in the existing regulatory framework. The empirical data and critical analysis of existing laws, policies and programs demonstrated that women's

vulnerabilities have not been considered adequately. Although gender mainstreaming is widely accepted by the GoB, there are gaps specially the locus of emphasis about gender issues in the existing laws, policies, guidelines and others relating to women. These recommendations are based on the critical analysis of existing laws, policies and programs with a special focus on Disaster Management Act 2012, SOD 2010, Disaster Management Policy 2015 and the CPP. As mentioned, having a strong gender-sensitive regulatory framework is important for achieving gender equality in society. The critical analysis of existing laws, policies and programs on disaster management showed that they have failed to address women's vulnerability adequately and ensure gender equality in the long run (see Chapter 4). The Disaster Management Act 2012 should amend provision for protecting women from violence (see section 6.3.5.6) or any other adversity they experience during disasters. Besides, Inclusion of women representative at the apex body should be considered (see section 6.3.5.5). As it has been also identified that the concept of gender mainstreaming is very narrowly perceived and addressed in various laws, policies and programs, the Government should take more comprehensive steps to overcome this problem.

As discussed in Chapter 4 section 4.4, the existing allocation of business ignores the role of the MoWCA in disasters, and thus, this should be reformed to include the MoWCA in various disaster management activities for women. This would help the ministry to be involved with providing expert opinion and implementation, monitoring and evaluation of disaster management activities of government and other international agencies such as INGOs, UN agencies, and national and local NGOs. Moreover, the ministry would have the authority to create positions regarding disaster management and gender and initiate programs and projects on disaster management.

Furthermore, the study also identified that activities relating to gender and disaster management are carried out by various bodies in a fragment fashion. There are many agencies working directly²²⁷ and indirectly to address natural hazards from within and outside the Government. This study suggests a strong and coherent set up should be adopted to implement gender and disaster risk management approaches for women. There should be many ministries, departments, institutes, UN agencies and donor organisations involved in this management and coordination process. Rather than developing a new institutional arrangement to address vulnerability for women, it is more appropriate to develop a

²²⁷ The organisations working directly for disaster management are the Cabinet Division, armed forces, MoDMR, DDM, BDRCS, CPP, Flood Forecasting and Warning Centre, Bangladesh Meteorological Department, IFRC, UN Women, CARE, BRAC, Proshika and many others. See Ministry of Food and Disaster Management (2010: 248). Apart from these, there are other organisations working within and outside the government that address vulnerability of citizens of the country.

new network among the existing system that works for disaster risk management for women and girls as well as for the community as a whole.

6.3.5.5 Increase Representation of Women in Different Bodies

As revealed, women are poorly represented in the high levels of disaster management bodies. Interestingly, this research identified that the higher the level, the lower the representation of women. The Disaster Management Act 2012 should be amended to include the Ministry and Secretary of Women and Children Affairs in the NDMC. According to the provision of section 4(4) of the Disaster Management Act 2012, the council is empowered to co-opt any other person as a member of the NDMC; this makes the inclusion of the concerned members easy. In addition, the CPP Policy Committee, CPP Implementation Board and Committee for Speedy Dissemination and Determination of Strategy of Special Weather Bulletin have no women representative or representative from MoWCA or DWA (see page 141). These bodies must include women representatives from MoWCA and DWA. Moreover, the SOD²²⁸ needs to be updated to increase the number of female members or representatives from the MoWCA, DWA and other concerned bodies from within and outside the Government. Although the empirical data suggested that the capacity for raising voices is more significant than a mere number, including women or representatives from women's bodies might increase the rate of female participation in the concerned bodies.

The Cabinet Division should consider including women in various disaster management bodies. Reform is required to include women; updating the SOD could achieve this. In addition, members of the bodies should not only include the representative from the MoWCA, but also from other concerned bodies with expertise in this area. The inclusion would help the MoWCA to raise women's concerns in disasters. Moreover, there are many disaster management programs nationally and internationally where representation of this ministry is highly essential.

Moreover, to ensure true participation of women and their representatives in various disaster management bodies, there should be a provision to include the opinions of women representatives in the resolution of the meetings. As the empirical data revealed, at UDMC meetings, women representatives failed to participate for various reasons. If they made it mandatory for women representatives to include their concerns and opinions, this could make significance progress in the process of decision making in disaster management bodies.

²²⁸ The SOD is currently being updated by the MoDMR. Only after publication of the updated SOD could we conclude the extent to which they have involved women representatives in the process.

6.3.5.6 Ensure Legal Protection against Violence in Disasters

This thesis recommends that the existing disaster-management-related laws and policies not only be gender sensitive but also that existing gender-related laws and policies consider disaster. The existing law regarding violence against women and children, which includes punishment for sexual offences, women and children trafficking, causing death for dowry, rape or sexual oppression and other sexual crimes, was enacted in 2000. However, violence against women in disasters requires special attention. Both empirical and existing literature (see page 88 and 13) showed that violence against women increases during disasters. Review of the Disaster Management Act 2012 showed that there is no provision to protect women against violence. The provisions relating to violence in disaster situations or during relief distribution or rehabilitation activities should be included in the laws relating to violence against women. With consultation from the MoWCA, UN Women and NGOs working to ensure women's rights, the Ministry of Law, Justice and Parliamentary Affairs could take the initiative on such amendment.

6.3.5.7 Women-Friendly Aid Packages

Although in some cases, women are provided with women-friendly aid packages, this is not widely practiced. Most of the humanitarian assistance and other relief includes CI sheets, rice, dry food and cash (Ministry of Disaster Management and Relief, 2013a, 2016). The existing relief distribution and recovery practices target families and women-headed households. Women are considered part of the family and their specific needs are ignored (see page 105). Moreover, government officers in the field and community consider supporting women, children, the elderly and the disabled in relief and rehabilitation as humanitarian issues (see page 105). However, failing to consider women's specific needs places women in a vulnerable situation, as most women-specific needs are implicit, such as sanitary pads, adolescent girls' clothing, firewood, fuel and kitchen utensils. Women should also be provided with goats, duck and chickens so that they can restore their small farms to support their family and themselves to survive. The DWA and DDM should develop a package for women considering women's specific needs to be provided after cyclones. IFRC and CARE Bangladesh could provide expert support in developing women-friendly aid packages for cyclone-affected women in coastal areas.

6.3.5.8 Organizational set up for Management and Coordination

This thesis suggests that the NDMC should be the coordinating body for gender-sensitive disaster management. The NDMC is the apex body for disaster management in Bangladesh, backed by the

Disaster Management Act 2012 and SOD 2010. The NDMC is headed by the prime minister and the cabinet secretary of the Cabinet Division is the member secretary (Ministry of Food and Disaster Management, 2010). As the apex body, the NDMC is able to include all stakeholders and support to develop a holistic approach to disaster risk management. Moreover, as the prime minister heads the body, it has the opportunity to ensure gender mainstreaming involving all Government agencies, UN bodies, NGOs and others.

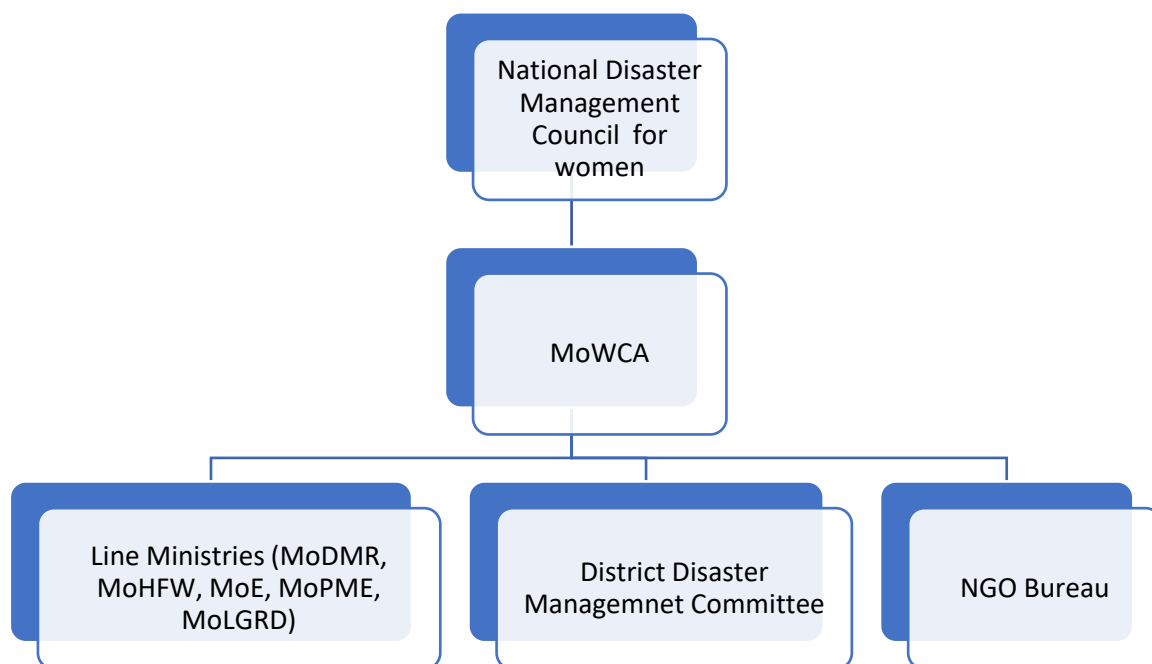


Figure 6.1: National Disaster Management Council for women

A proposed body for coordinating disaster management activities for women

The above organisational mechanism would assist programs involving community at the community level and would be implemented and monitored through the District Disaster Management Committee (DDMC), which would report to the MoWCA on progress of its programs. Because of the nature of its activities, training on awareness raising and consciousness building, skills-based health education, ensuring access to marketplaces, encouraging women's micro-saving and micro-insurance schemes, and creating a supply chain for women's income generation would be implemented through DDMC. Other programs such as mass communication for community, training on changing attitudes, behaviours and practices for groups, one-to-one training, training on capacity building and leadership skills, establishing a post of ombudsman, monitoring and evaluating a body and increasing representation of women would be implemented through ministries, and MoWCA would work as the focal ministry to implement and oversee these programs.

6.3.5.9 Synchronisation of Policies and Programs

The empirical evidence also demonstrated that there is a lack of synchronisation of policies and programs formulated and implemented by the various government bodies. Both development and regulatory ministries directly or indirectly work to support women in disasters. According to Fineman (2008:19), if we want to ‘reconceptualize the role of the state’, we need to introduce a more responsive structure that involves empowering the vulnerable subject. Developing a mechanism for synchronisation can ‘ensure a more equitable distribution of assets’. The MoWCA, MoHFW, MoEF, MoLGRD, MoE, MoPME, MoSW, DWA, DDM and many other Government bodies have various programs and projects that work to ensure gender equality. Yet, there is no agency overseeing the activities that address women’s vulnerability to increase their resilience in the community. Currently the interaction relating to gender and disaster risk management can be described as siloed efforts involving MoDMR or few other departments. The proposed set up under the NDMC could synchronise policies, programs and projects for women and ensure consistency among them. The Government should not only confine its responsibility within the Government, it should coordinate the activities of NGOs and the private sector. The NGO Bureau could assist the NDMC to regulate NGOs working to address women’s vulnerability in disasters.

6.4 Summary of Recommendations

This thesis focuses on developing cooperation among various Government departments and ministries and developing a platform for addressing women’s existing vulnerability as well as overall disaster vulnerability to reduce the risk of disasters. The existing system of Government and other development practitioners have already tried to address natural disasters as a response or reaction to natural hazards. However, the existing scholarship and the empirical data of this research demonstrated disaster vulnerability of women is an amplification of existing vulnerability. The positive aspect of this situation is that the existing system of Government, or other development partners, already have mechanisms to address disaster vulnerability. However, there has a failure to identify the locus and missing links to address women’s vulnerability. This thesis focuses on identifying the locus and missing links; and connects the process through development of mechanisms and pulling together various stakeholders to work accordingly to overcome vulnerability, which has an adverse impact on the entire social development. In doing so, we collated information on women’s vulnerability within the country and the best stories of resilience from within and outside the country.

Moreover, this thesis identifies the significance of developing a regulatory framework considering women's vulnerabilities and emphasises the importance of implementation, monitoring and evaluation to develop a practice of an ongoing problem-solving approach. The study has suggested recommendations (see above), which can be categorised into four major tools: training, education, developing the regulatory framework and providing facilities for women and organisations working for disaster risk management.

This thesis suggested training in five areas addressing three dimensions of vulnerability (biological, socio-cultural and political), with specific objectives of developing human and social assets for vulnerable women and others working to address disaster risk reduction. First, training on awareness raising and consciousness building has been recommended for addressing women's biological vulnerabilities during and after disasters, which would develop a new platform for social assets among government bodies, NGOs and international organisations. Government bodies such as MoWCA, MoHFW, CPP and CwC and NGOs working in coastal areas and on health-related issues such as Caritas, BRAC, Proshika and UN Women, and WHO could cooperate with each other to develop a coordinated response to address women's biological issues. Second, this study also advised developing human assets through training for changing attitudes of significant groups, such as CPP volunteers, CPP team leaders, CPP staff and elected members of local government, involved in disaster risk management. It recommended focusing on training on changing attitudes, behaviours and practices through the development of partnerships among the MoWCA, UN Women and IFRC. This would bring together the CPP, local government bodies involved in DMCs, NGOs and civil society involved in disaster management at the local level and develop social assets. Third, this thesis also requested special attention for developing decision-making and leadership skills for female members of union *Parishad*, with cooperation among concerned Government bodies such as NILG, MoLGRDC, MoWCA, MoDMR and UN Women. Fourth, the study demonstrated that training for top management and among 'gender and disaster' experts is also required to evolve human capital. It suggested that the top executive positions of MoWCA, DWA, MoDMR, DDM, CPP, MoHFW and MoLGRD be given one-to-one coaching to develop a gender-sensitive attitude to work as a catalyst for mobilisation for social transformation. Lastly, the thesis suggested exploring training opportunities for various stakeholders such as government bodies, scholars and civil society to develop leadership among 'gender and disaster' experts, which would extend cooperation among inter-governmental organisations and international agencies.

This thesis recommended educating people in three areas to address three dimensions of vulnerability (biological, socio-cultural and political), with the specific objective of developing human assets.

Inducing ‘skills-based education’ could be a milestone for enhancing children’s psychosocial skills that minimise risk factors through bringing together expert knowledge and experience from UNICEF and WHO, and existing Government bodies such as MoWCA, NCBT, MoPME, MoE and MoHFW and education institutions functioning within the country. Moreover, it also recommended mass communication for educating the community through various social media: this would pull together the relevant government agencies, international bodies and the private sector to work together to address the community to develop awareness for changing attitudes to women. With expert support from IFRC and UN Women, MoWCA, DWA and MoDMF, the DMM could extend cooperation to work with the private sector and media for maximum coverage. Further, this could increase capacity at the household level for rational decision making during, before and after disasters with support from the MoWCA, MoE, MoPME and DDM.

To provide a more gender-sensitive response to disaster risk management, this study suggested developing a regulatory framework to bring together the various existing bodies segregated within and outside the government to support women in disasters. It recommended three types of organisational set ups to develop physical assets for implementing gender-sensitive disaster risk management with a specific objective of ensuring coordination, monitoring, evaluation and overall successful implementation. Establishing a national coordination body empowering the Cabinet Division through NDMC could pull together all bodies within and outside the government, NGOs, international partners and the private sector involved in disaster risk management. It would also help to develop social assets for the government to extend its support for and gain cooperation from various stakeholders. In addition, the study suggested developing coordinated response among the Government bodies such as MoDMR, DDM, DWA, MoE, MoPME, MoLGRD, BRDB and CPP by the MoWCA through monitoring and evaluating all disaster risk management activities relating to women’s vulnerability. This could assist to evolve a platform among those bodies working for disaster risk reduction. Moreover, establishing a post for ombudsman to oversee complaints relating to activities pre, post and during disasters could bring transparency and accountability and ensure security for women. These could assist in a coordinated response.

This thesis suggested creating physical and social assets directly for vulnerable women and organisations such as government bodies, NGOs and business groups who are supporting women to become resilient. To address the economic dimensions of vulnerability, the thesis recommended ensuring access to marketplaces, providing micro-saving or insurance schemes, and developing supply or value chains to support women’s alternative livelihoods, which would bring together government, NGOs and the business sector. Ensuring access to marketplaces for women would

develop cooperation with the market *samity* and coordination with DWA, MoED, BRDB, union *Parishad* and *Upazila Parishad*. In addition, building resilience through micro-saving or insurance schemes for disaster could develop a platform among MoWCA, BRDB, MoDMR, the private sector and NGOs such as *Proshika* and BRAC. Moreover, creating a supply chain for women's alternative livelihoods could develop a coordinated response for MoWCA, MoDMR, BRDB, Upazila Parishad, union Parishad and other business sectors involved in activities in coastal districts. The Government would support and encourage the business sector and women from the community to develop a patron–client relationship.

In addition, to support women with response activities, the Government should consider providing a women-friendly relief package. Government bodies such as DMCs, CPP, DDM, MoDMR and MoWCA should be provided with logistic and budgetary support for proper implementation, monitoring and evaluation of disaster management activities. Moreover, women's representation should be increased in various disaster management bodies to ensure true participation. Further, the Government should consider synchronisation of existing policies and programs to ensure consistency in disaster management programs and projects.

Chapter 7: Conclusion

The thesis identifies the extent to which the vulnerabilities of women are addressed in the existing disaster management laws, policies and programs related to cyclones in Bangladesh. In doing so, this thesis identifies the various dimensions of vulnerabilities women face in disasters, with a special focus on cyclones. In addition, it focuses on revealing the extent to which the current disaster laws, orders, policies and CPP address these vulnerabilities. Finally, it suggests how women's vulnerabilities be better incorporated into policies and practices in Bangladesh.

Primary data from the field visit were collected while living in the community for three months, and analysed as primary sources on laws, orders, policies and programs. In the primary data collection, nine categories of participants provided a wide range of data that assisted the researcher to categorise vulnerability into five basic dimensions. This is an expansion of disaster vulnerability theory, which assumes that the social aspects of vulnerability are multi-dimensional. The existing literature provided the basis for the framework, which has been redefined and reframed based on the data collected from the field, leading to the development of the biological, economic, socio-cultural, political and organisational dimensions of vulnerability.

This provides a deeper understanding of the challenges faced by women to design better policy options for governments and development practitioners. Understanding these dimensions of women's vulnerability is useful to reduce its impact on society and to ensure gender equality for development. Despite the radical decline of cyclone-related mortality, including women's mortality, the loss of economic resources and its long-lasting socio-cultural impact on women have seen no significant progress in Bangladesh. This thesis argues that there are pre-existing variables, which vary from society to society, that are responsible for the progression of disasters. Unless these pre-existing variables are addressed adequately, the vulnerability of women cannot be reduced. To identify those pre-existing variables, the multi-dimensional aspects of vulnerability can assist as a framework for analysis. This thesis explores the various types of vulnerability within those dimensions and identifies the reasons for them.

This thesis identified that the existing disaster management system has failed to achieve desirable outcomes because more is required to be done to address key gaps in its interventions. The empirical data revealed that participants' concerns regarding vulnerability in each dimension were different than the existing Government interventions. In Bangladesh, the biological dimension of women's vulnerability requires a focus on addressing the lack of self-consciousness among women. The

economic dimension is more likely to be influenced by the social exclusion of women from economic resources and access to marketplaces and the public domain. In addition, the political dimension needs to focus on capacity building for women as decision makers and leadership at the household, community and national levels. Additionally, in case of reducing socio-cultural dimension of vulnerability, emphasis should be given on changing attitudes of the community or patriarchy to develop a more women-friendly environment. Finally, the organisational dimension of vulnerability underlined the significance of a more gender-sensitive approach and successful implementation of existing gender-sensitive approaches for women for disaster risk reduction

Among the five dimensions, the organisational dimension of vulnerability received the highest priority among the participants, who questioned the very existence of a disaster management culture and approaches developed over the course of time. It is reasonable to argue that instead of addressing disaster vulnerability, the existing disaster management approaches have created more concerns among the various stakeholders. Moreover, the data showed that the priority of government interventions are different than the concerns of participants. The existing disaster management system focuses on providing assistance, including short-term employment generation, insufficient relief and rehabilitation support, which fail to address the major concerns of the participants. A more comprehensive approach is required to address those contributing factors to make women more resilient and reduce risk in cyclones. Government interventions to address women's vulnerability are focused on providing assistance to women for a short period and ignore women's capability to survive and be resilient. Moreover, they fail to recognise their contribution.

In addressing biological vulnerability, it is noted that pregnant women receive some special care from CPP staff and people from the community during sheltering and limited medical facilities from the Government and others working in the disaster recovery process. However, providing required medical support in terms of physical as well as psychological vulnerability are not adequate for overcoming biological dimension of vulnerability. The lack of self-consciousness among women is the most essential element needed to be prioritised in government and international interventions.

In terms of the economic dimension of vulnerability, it has been identified that Government interventions focus on relief distribution and employment generation for a short period of time. Women are provided opportunities for short-term work and forced to work in the wage-earning labour force rather than facilitated in entrepreneurship or self-employment. This returns women to their previous positions, or merely helps them to survive, resulting in more vulnerability in future cyclones. Women's subordination is reflected and reinforced by these interventions, rather than improving their

pre-existing situations. Women are offered employment opportunities that are not considered socially honourable and do not address women's needs.

In addressing the political dimension of vulnerability, it was revealed that the Government should emphasize more on the capability building on women as a leaders and decision makers. Although women's representation in various disaster management bodies is high, their decision-making capability needs to be improved. Simultaneously, the analysis also demonstrated that women are underrepresented in various decision-making bodies. Interestingly, the level of representation is pyramidal, so there are many women in the periphery but few at the top. Therefore, it requires more representation in the top management position of disaster management.

To reduce socio-cultural vulnerability, it was noted that the Government and development practitioners should emphasise awareness raising relating to issues of gender and disaster management. The existing disaster risk management system emphasize on awareness raising of the community about disaster. But focus should be given on women issues more extensively. Further, considering the organisational dimension of vulnerability, a gender-sensitive approach is still missing in practice. Achievements in the legal and organisational mechanism have failed to achieve desired outcomes as a result of lack of proper implementation, monitoring and evaluation.

Among those five dimensions of vulnerability, the organisational dimension has been given more attention by analysing the existing regulatory framework, to analyse the existing disaster management system to assess the extent to which these vulnerabilities have been addressed in the major laws, orders, policies and programs. To provide a more extensive analysis of the existing disaster management system, the Disaster Management Act 2012, SOD 2010, the Disaster Management Policy 2015, the CPP and related organisational mechanisms have been analysed. Interestingly, women are viewed as part of the other vulnerable community, including the elderly old, disabled and children, which reflects that the law has failed to distinguish the difference between women and other vulnerable groups in Disaster Management Act 2012. It is also a sign that the apex law ignores the capacity of women as a resilient force in disasters. In the SOD 2010, more focus was given to a short-term approach than a long-lasting sustainable approach; it emphasises recovery and rehabilitation whereas women's vulnerability requires more attention on pre-existing inequality, discrimination and exclusion. The Disaster Management Policy 2015 showed significant progress in addressing women's vulnerability; however, this thesis has identified that there are many aspects of vulnerability ignored by the policy. Moreover, the CPP is basically confined to the activities of early warning and awareness raising, with limited focus on women.

The thesis argues that a more comprehensive approach to disaster management is required to address women's vulnerability in cyclones. Approaches to disaster management require both short-term and long-term interventions through integrating various government bodies and other organisations. This thesis suggests more coordination and collaboration through a Cabinet Division at the apex. The Disaster Management Act 2012, SOD 2010, Disaster Management Policy 2015 and CPP require a more gender-sensitive approach to addressing women's vulnerability. A wide range of suggestions was given to address the five types of vulnerability, which encompass a holistic approach to disaster management.

Finally, the thesis proposes that women's perspectives on disaster management should be at the centre of disaster risk reduction approaches. As a discipline, gender and disaster management should be placed at the centre of the analysis. Disaster study is still dominated by geography, sociology and the natural sciences; other disciplines such as law, public policy, gender study, psychology and political science should play a greater part in contributing to the development of this discourse. Rather than a siloed approach, it requires a more holistic approach, to bring together all disciplines to provide a better solution to reducing the impact of disaster on the community.

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Appendices

Appendix 1.1: Major Cyclones in Bangladesh and Their Impact²²⁹

Name of cyclone and date of landfall	District affected	Casualties	Economic loss
1. The deadliest and devastating cyclonic storm that caused the highest casualty in the history of Bangladesh is known as 'Bhola cyclone'. 12 November 1970	More than half of the country was affected. Chittagong, Barguna, Khepupara, Patuakhali, north of Char Burhanuddin, Char Tazumuddin and south of Maijdi, Haringhata and caused heavy loss of lives and damage to crops and property.	300,000 killed	A total of 38,000 marine and 77,000 inland fishermen were affected by the cyclone. It was estimated that some 46,000 inland fishermen operating in the cyclone affected region lost their lives. More than 20,000 fishing boats were destroyed; the damage to property and crops was colossal. Over one million cattlehead were reported lost. More than 400,000 houses and 3,500 educational institutions were damaged.
2. The Great Cyclone of 1991 known as Gorky. 29 April 1991	It had a dimension of more than the size of Bangladesh. Most affected parts are Sandwip, Chittagong, Patuakhali, Barguna, Cox's Bazar, and Bhola.	138,882 killed	The loss of life and property was colossal. The loss of property was estimated at about Tk 60 billion, cattlehead killed 70,000.
3. 19 May 1997	Offshore islands and chars of Chittagong, Cox's Bazar, Noakhali and Bhola.	155 killed	Compared to other cyclone the loss was low. 2,042,738 people were affected, 7,344 people were injured, 512,593 houses were damaged, cattleheads killed 1899 and 29,951 hectares of crops damaged.
4. Sidr, 15 November 2007	Out of 30 districts, Gopalgang, Bagerhat, Khuna, Madaripur, Satkhira, Barisal, Patuakhali, Pirozpur,	3,406 killed with 1,001 missing and more than 5,500 injured	Total damage and losses were 115.6 billion taka (US\$1.7 billion). It was also reported that 565, 000 houses were totally destroyed, and 955,000

²²⁹ Adapted from Government of Bangladesh (2008: 182), Islam (1999); Department of Disaster Management (2014:2); Department of Disaster Management (2016: 4); Mallick and Rahman (2013); Ministry of Disaster Management and Relief (2013d: 7); Majumder (2016) and UN Department of Humanitarian Affairs (1997).

Name of cyclone and date of landfall	District affected	Casualties	Economic loss
	Bhola, Barguna, Shariatpur and Jhalakhati were badly affected		houses were partially damaged. Out of 8,075 km, 1,714 km were fully damaged and 6,361 km partially damaged. The loss of production of all crops was an estimated 1.3 million metric tons.
5. Aila, 25 May 2009	Out of 14 districts, Barisal, Bhola, Pirojpur, Satkhira, Khulna, Bagerhat, Barguna and Patuakhali were the most affected	330 killed and 190 immediate deaths, injuries to 7,103 people	Damage to 6,000 km of roads; more than 1,700 km of embankments collapsed; more than 500,000 people became homeless
6. Mahasen, 16 May 2013	Patuakhali, Chittagong, Pirojpur, Noakhali, Borguna, Bhola, Satkhira and Laxipur	17 people killed and 102 injured	A total of 386,221 people was affected, 14,828 houses were fully damaged and 44,182 were partly damaged.
7. Roanu, 21 May 2016	Chittagong, Cox's Bazar, Chandpur, Noakhali, Feni, Laxmipur, Bagerhat, Khuna, Satkhira, Barisal, Patuakhali, Firozpur, Bhola, Barguna and Jhalakhati	24 people lost their lives, two were reported missing	Overall 1,10,684 families were partially and 29,168 fully affected.

Appendix 1.2: Disaster-related Acts, Policies, Plans, Rules and Guidelines

Disaster Management Act, 2012

Standing Orders on Disaster (SOD) – 2010

National Disaster Management Policy 2015

Cyclone Shelter Construction, Maintenance and Management Policy – 2011

Disaster Management (Committee Formation and Activities) Rule, 2015

SDG Action Plan of Ministry of Disaster Management and Relief

National Plan for Disaster Management 2010–2015

National Plan for Disaster Management (2016–2020)

Plan of Action to Implement Sendai Framework for Disaster Risk Reduction 2015–2030

Humanitarian Assistance Program Implementation Guidelines 2012–13

Food for Work Implementation Guidelines

Implementation Guidelines for Test Relief

Post-Disaster Dead Body Management Guideline 2016

Appendix 1.3: Vulnerability Viewed from Various Disciplines

Discipline	View(s) of vulnerability	Recommendation(s)
Geography	Vulnerability is determined by the use of hazard-prone areas	Land-use planning that takes into account hazards to reduce risk
Meteorology	Vulnerability is due to a lack of advanced warning of severe weather	Acquisition, creation and effective use of warning systems
Engineering	Vulnerability occurs when structures and infrastructure cannot withstand the forces of hazards	Design and construction of buildings and infrastructure that promote disaster resistance
Anthropology	Vulnerability emanates from constraining values, attitudes and practices	Alter attitudes to discourage risk-taking practices and susceptibility
Economics	Vulnerability is related to poverty and results in an inability to prevent, prepare for or recover from a disaster	Improve the distribution of wealth and purchase insurance to minimize losses and promote resilience
Sociology	Vulnerability is a product of inaccurate assumptions about disaster behavior and is related to race, gender, age, disability, etc.	Understand behavioral patterns in disasters and pay attention to needs of special populations
Psychology	Vulnerability is a function of overlooking or minimizing risk and not being able to cope emotionally with stress and/or loss	Help people to recognize risk and provide crisis counseling to enable resilience
Epidemiology	Vulnerability is susceptibility to disease or injury and is related to malnutrition and other health factors	Improve provision of public health/emergency medical care before, during and after disasters
Environmental science	Vulnerability is proneness to environmental degradation, which may change weather patterns and produce long-term disasters	Conserve natural resources, protect green space areas, and ensure that debris management is performed in an environmentally conscious manner
Political science	Vulnerability is produced by the political structure and incorrect decision making	Alter structure of political system and educate politicians and legislators about disasters
Public administration	Vulnerability results from misguided laws, the failure to implement policies effectively, and an inability to enforce regulations	Strengthen response and recovery capabilities through preparedness measures, improved policy implementation and increased code enforcement
Law	Vulnerability results from negligence, which is a failure to act as reason or legal statutes dictate	Understand the law, alter statutes, and ensure compliance with widely accepted ethical practices in emergency management
Journalism	Vulnerability is a result of insufficient public awareness about hazards and how to respond to disasters	Dispel myths about disasters, foster increased media capabilities, and educate the public about hazards
Emergency management	Vulnerability is the lack of capacity to perform important functions before and after disaster strikes (e.g. evacuation, search and rescue, public information, etc.)	Foster public awareness about disasters and build capacities through hazard and vulnerability analyses, resource acquisition, planning, training and exercises
Homeland security	Vulnerability is due to cultural misunderstandings, permeable borders and fragile infrastructure, and weak disaster management institutions	Correct domestic and foreign policy mistakes, enhance counter-terrorism measures, protect borders and infrastructure, and improve WMD capabilities

Source: Adapted from McEntire (2003, pp. 298-308)

Appendix 1.4: Domain and Dimension of Gender and Exclusion in Bangladesh

Domain	Dimension	Vulnerability components
Resources	Material/economic resources	<ol style="list-style-type: none"> 1. Lack of earning opportunities and low income 2. Low possession of necessities 3. No home ownership 4. Restricted access to other assets 5. No savings and high debt 6. Higher incidence of subjective poverty 7. Limited access to common property resources
	Access to public and private services	<ol style="list-style-type: none"> 1. Limited access to public services 2. Restricted access to utility services 3. Limited access to public transportation 4. Discriminated access to private services 5. Limited or no access to financial services
	Social resources	<ol style="list-style-type: none"> 1. Institutionalization/separation from family 2. Limited or no access to social support system 3. Limited access to safety net programmes 4. Low frequency and quality of social contact
Participation	Economic participation	<ol style="list-style-type: none"> 1. Differential access to labor market 2. Gender differentials in labor market outcomes 3. Prevalence of bonded labor 4. Undertaking unpaid work 5. Delayed and discounted payment for wage labor 6. Low quality of working life
	Social participation	<ol style="list-style-type: none"> 1. Limited participation in common social activities 2. Limited or no participation in decision making
	Cultural participation	<ol style="list-style-type: none"> 1. Limited or discriminated access to educational attainments 2. Limited or discriminated access to basic skills
	Political and civic participation	<ol style="list-style-type: none"> 1. Restricted and conditional citizenship status 2. Lack of political participation 3. Limited participation in civic and voluntary activities 4. Limited membership in civil society organizations
Quality of life	Health and well-being	<ol style="list-style-type: none"> 1. Weak physical health and exercise 2. Poor mental health situation 3. Low life expectancies 4. Limited opportunities for personal development 5. Low self-esteem 6. Higher susceptibility to stigma and prejudice
	Living environment	<ol style="list-style-type: none"> 1. Low housing quality 2. Higher incidence of homelessness 3. Lower neighborhood safety 4. Low neighborhood satisfaction 5. Limited access to open space
	Crime, harm and criminalization	<ol style="list-style-type: none"> 1. Low social safety 2. Victim of crime 3. Low subjective safety, i.e. under threat and fear of crime 4. Exposed to eve-teasing, bullying and harassment 5. Victim of discrimination 6. Unaware of legal rights & victim of imprisonment

Source: Rashid and Shafie (2013: 352).

Appendix 1.5: List of Major Categories of Participants

Category	Major category	Relevance	Sub-group	Number of participants
First	Government officers at the national level	This group reflects the government policy and approaches to disaster management and risk reduction. They help to understand how far the Government has considered the gender aspect of disasters.	MoDMR	4
			MoWCA	2
Second	Government officers at the field administration	This group works with the community and know the practical problem of disaster management and risk reduction. They inform me about the practical problem of gender and disaster.	Patuakhali	2
			Chittagong	2
Third	NGOs	Local NGOs have experience of working with vulnerable women and deeper understanding about gender and disaster.	Caritus	1
			YPSA	1
Fourth	International agencies	International agencies have local and international knowledge about gender and disaster. They are working with the Government and vulnerable community which provides overview of the situation.	IFRC	1
			UN Women	1
Fifth	Scholars	Scholars working on gender and disaster have access to all stakeholders such as government, NGOs, vulnerable community. They have independent views of the problem.	-	2
Sixth	CPP staff	This group have the longest working experience with the vulnerable community, Government and International agencies.	Kalapara in Patuakhali	1
			Banskhali in Chittagong	1
Seventh	CPP volunteers	They are able to inform us with the practical problem of vulnerable women as they work in the front line in cyclones.	Kalapara in Patukhali	2
			Banskhali in Chittagong	2

Category	Major category	Relevance	Sub-group	Number of participants
Eighth	Local female representatives	This group work as a part of the local disaster management committee. They address the real-life situation and work closely with the various body and support vulnerable community.	Kalapara in Patuakhali	2
			Bashkhali in Chittagong	2
Ninth	Vulnerable women from the community (Focus group)	They are the most significant group who know where the shoe pinch. They provide the vivid picture of the vulnerability experienced by themselves in cyclones.	Nilganj at Kalapara in Patuakhali	5
			Khankhanabad at Bashkhali in Chittagong	5

Appendix 1.6: Participant's Information

No of participants	Source	Sex	Work experience or cyclone experience
Participants from the national level			
Government bodies at the national level			
1.	Ministry of Disaster Management and Relief	Male	He has more than 20 years working in disaster management in Bangladesh. He is the pioneer introducing comprehensive disaster management approach and gender in disaster management in Bangladesh. He worked as project director of CDMP. He is recognized for his contribution national and internationally.
2.	Ministry of Disaster Management and Relief	Female	She has more than 18 years of experience. The other had both academic and professional qualifications on gender and disaster management since 2000.
3.	Department of Disaster Management	Male	He has more than 19 years of work experience in disaster management in Bangladesh.
4.	Department of Disaster Management	Female	She has more than 16 years of work experience on disaster management and other-related field. She also has practical experience on evacuation and relief distribution.
5.	Ministry of Women and Children Affairs	Female	She has more than 8 years working experience working on issues relating to disaster management. She is also the focal point officer for disaster management for the MoWCA. During the time of interview, she was involved in developing a project proposal on National Resilience programme which is now lunched.
6.	Department of Women Affairs	Female	She has working experience of 19 years specially with vulnerable women. Her specialization includes gender related laws, policies, rules, and guidelines.
International agency			
7.	IFRC	Male	He has been working in IFRC since 1986 and has practical experience of

No of participants	Source	Sex	Work experience or cyclone experience
8.	UN Women	Male	<p>several cyclones including cyclone Gorky of 1991 and cyclone of 1997. He worked in several coastal districts including some islands in the Bay of Bangle.</p> <p>He has more than eight years of experience working in disaster management and gender. He maintains liaison with relevant government organizations for disaster management. He has both work experience with vulnerable community and developing policy and projects on disaster management and gender.</p>
Scholars			
9.	Dhaka University 1	Female	<p>She has been involved in research in gender and disasters for more than 28 years. She is one of the pioneers of gender and disaster research in South Asia. She has been working closely with Government and other NGO working on disaster management in Bangladesh and other parts of the world. She has also contributed to the development of many policy framework in Bangladesh.</p>
10.	Dhaka University 2	Female	<p>She has more than seven years of experience working on gender and disaster management in Bangladesh. She also worked with IFRC, BDRCS and vulnerable women in various parts of Bangladesh.</p>
Participants from the local level			
Government officers from the field administration			
11.	UNO Kalapara	Male	<p>He has 11 years of work experience working at the local administration and 4 years' experience working as UNO. UNO is the most significant position of Government who involve in disaster management and risk reduction activities at sub-district. He is the head of the Upazila Disaster management Committee. He was involved in evacuation and relief activities when cyclone Mahasen hit Barguna in 2013.</p>

No of participants	Source	Sex	Work experience or cyclone experience
12.	Patuakhali DRRO	Male	He has two years' experience working in district administration.
13.	UNO Banshkhali	Male	He has 12 years of experience working at the local administration and 4 years' experience working as UNO. As UNO, he is head of the Upazila Disaster management Committee. He was involved in evacuation, relief and rehabilitation activities when cyclone Sird hit Coastal districts in 2007.
14.	Chittagong, DRRO/PIO	Male	He has been working as PIO for two years. As PIO, he is involved in relief and rehabilitation activities in Chittagong.
Cyclone preparedness program (CPP) staff			
15.	Deputy Director, Chittagong	Male	He has been working in CPP for 30 years and has experience in almost every cyclone that hit Bangladesh within last 30 years. As a CPP staff, he has wide experience in all aspects of CPP activities including early warning, evacuation, relief distribution, rehabilitation, and awareness raising.
16.	Assistant Director, Patuakhali	Male	He has been working in CPP for 22 years and working at Patuakhali for more than ten years. As a CPP staff, he has wide experience in all aspects of CPP activities including early warning, evacuation, relief distribution, rehabilitation, and awareness raising. He has worked during cyclone Sird, Alia, Mahasen and Ruano.
NGO activists			
17.	Caritus	Male	He is working with Caritus for 6 years and he also worked in BDRCS for few months. As living in the coastal districts, he has some practical experience of cyclones. Moreover, his work experience was also related to disaster risk reduction.
18.	YPSA	Male	He is working with YPSA for one year but he is among those vulnerable community who suffer from natural disasters including cyclone and salinity.

No of participants	Source	Sex	Work experience or cyclone experience
Community participants			
Female Union <i>Parishad</i> members			
19.	Nilgonj, Kalapara in Patuakhali	Female	She has eight and half year of experience working as Union parishad member. She is elected twice as female member of union parishad. Apart from this, she has work experience as a CPP volunteer and NGO activist. She had experience of several cyclones include cyclone Sidr in 2007.
20.	Nilgonj, Kalapara in Patuakhali	Female	She is elected twice as female member of Union Parishad having 8 years working experience. She was actively involved in various cyclone management activities for the last 10 years.
21.	Khankhanabad, Chittagong	Female	She has more than 14 years of working experience as female member of Union Parishad. She has more than 28 years of cyclone experience including cyclone Gorky in 1991, Cyclone Sidr in 2007, and Roanu in 2016.
22.	Khankhanabad, Chittagong	Female	She has been working more 3 years as elected female member of Union Parishad and 28 years of cyclone experiences include major cyclones of 1991, 1997, 2007 and 2016. She has also worked as CPP volunteer and NGO activist.
Community volunteers from CPP			
23.	Community volunteer from Kalapara in Patuakhali	Male	As a community volunteer, he has some unique experience. He was 7 or 8 years old when the Bola Cyclone hit in 1970. He lost all his family members and survived miraculously. He has been as a volunteer since 1970.
24.	Community volunteer from Kalapara in Patuakhali	Female	She has more 10 years working experience as a CPP volunteer. She has experience of all cyclones including major cyclone Sidr in 2007, Nargis in 2008 and Alia in 2009.
25.	Community volunteer from Chittagong	Male	She has 24 years of work experience as a CPP volunteer. Since 1991, he has been involved in all major cyclone

No of participants	Source	Sex	Work experience or cyclone experience
			‘Warning Signal Disseminator’ in the community and working in other disaster management activities in the community.
26.	Community volunteer from Chittagong	Female	One and half years of working experience as a community volunteer and 10 years of cyclone experience as living and working within the community.
Vulnerable women from the community			
27.–31.	Nigonj union at Kalapara <i>Upazila</i> in Patuakhali	Female	Each one of them have more than 20 years of cyclone experience. Moreover, they are the community people who has born and brought up within the cyclone affected areas and they have practical experience on vulnerability.
32.–36.	Khankhanabad union at Banskhali in Chittagong	Female	Each one of them have more than 20 years of cyclone experience. Participants from Khankhanabad were living coastline of Bay of Bangle. This union has experienced of Disastaing cyclone Gorky, Sird and Ruano. Moreover, they are the community people who has born and brought up within the cyclone affected areas and they have practical experience on vulnerability.

Appendix 1.7: Prompts for Interviews

Government officials

Introduction

- 1.1 Could you please tell me how long you have been working here?
- 2.1 What are the vulnerabilities women face during disasters and why they face them (especially cyclones)?
- 2.2 To what extent is the vulnerability of women addressed in the existing disaster management policies, laws and programs?
- 2.3 Do you know anything about the government's effort to consider the vulnerability of women in coastal cyclones?
- 2.3 How does the Government work to address women's issue in coastal cyclones in Bangladesh?
- 3.1 Do you think that the existing regulatory framework considers women's resilience to cyclone disaster management?
- 3.2 What plans does the Government have to focus more on women in future?
- 4.1 Do you think there are ways to improve the resilience of women through changes in laws, policies and programs of the Government and others?
- 4.2 What can be done to improve the situation of women to increase their resilience?

National NGO and International Organizations

Introductory

- 1.1 Could you please tell me what activities your organisation takes to address the situation of coastal cyclones?
- 1.2 What are the vulnerabilities women face during disasters and why they face them (especially cyclones)?
- 2.1 Do you think that the Government of Bangladesh has taken into account women's vulnerability in disaster management policies and programs, especially in coastal cyclone management?
- 3.1 Do you think Government policy or the regulatory framework can be used as a means of increasing women's resilience to natural disasters? If yes, how?

- 4.1 How could Government organisations work more effectively to address the problems women face in coastal cyclones?
- 4.2 What sort of policy measures or other changes do you suggest to bring about positive changes in the existing situation in this regards?

Scholars

Introduction

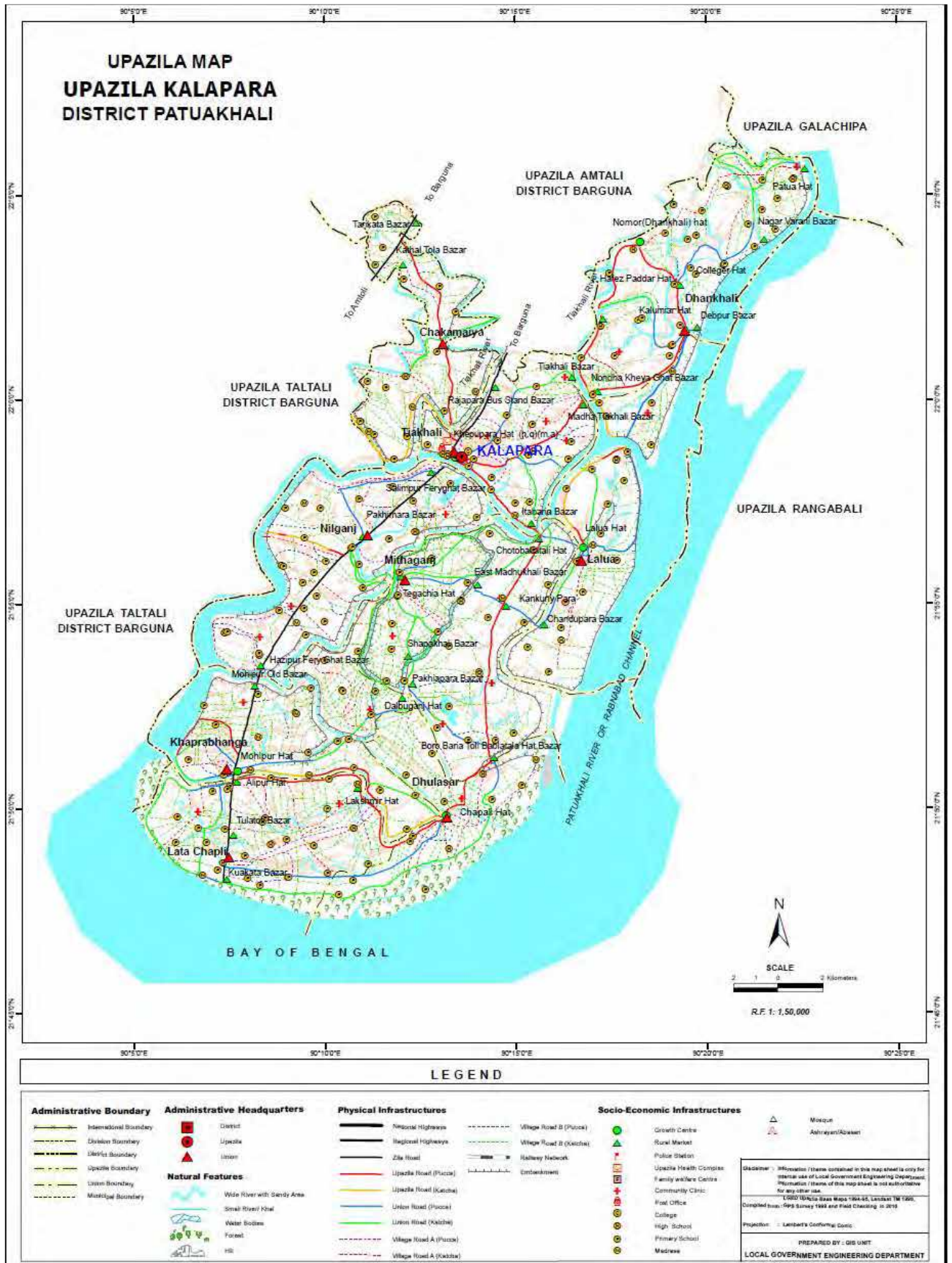
- 1 What are the vulnerabilities women face during disasters and why they face them (especially cyclones)?
- 1.1 Do you think women's issues should be taken into account separately by the Government and development practitioners in developing policies, programs and other activities to address natural disasters?
2. To what extent is the vulnerability of women addressed in the existing disaster management policies, laws and programs?
- 2.1 What do you think about the existing policies, programs and activities taken by the Government to address the needs of women in natural disasters?
- 2.2 Do you think that the Government of Bangladesh has taken into account women's vulnerability in coastal cyclone management?
- 3.1 Do you think Government policy or the regulatory framework can be used as a means of increasing women's resilience to natural disasters? If yes, how?
- 4.1 Could you please tell me how Government organisations could work more effectively to address the problems women face in coastal cyclones?
- 4.2 What sort of policy measures or other changes could you suggest to bring about positive changes in the existing situation in this regards?

Community participants

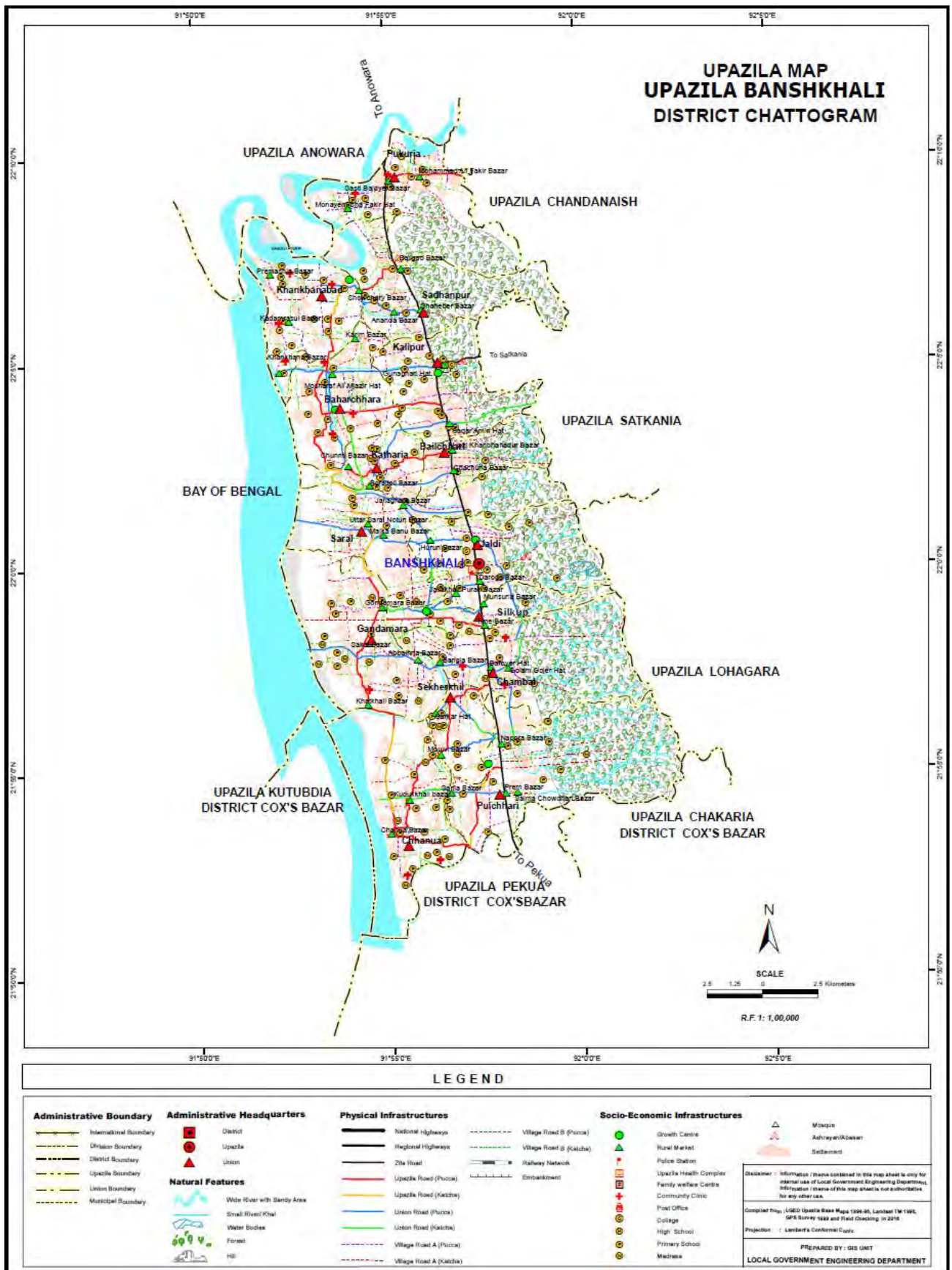
- 1.1 Do you have any experience of cyclones?
- 1.2 When did it happen and how was it?
- 1.2 What kind of problems did you face before, during and after the disaster?
- 2.1 What kind of support and facilities do women get from the Government and other organisations in coastal cyclones?
- 2.2 Do you think women should get extra support from the Government and others in cyclones and other natural disasters?

- 3.1 Could you please tell me how you face the challenges of cyclones? What do you do to overcome these vulnerabilities?
- 3.2 Could you please let me know what more you do to reduce the risk of cyclones and recovery after natural disasters?
- 4.1 What could the Government or others do to increase women's resilience to fight natural disasters, especially coastal cyclones?

Appendix 1.8: Map of Kalapara



Appendix 1:9: Map of Banshkhali



Appendix 2.1: Twelve Assumptions of Disaster Vulnerability Theory

No	Assumptions of vulnerability theory	Content	Application to women
1.	Vulnerability of social systems is the reduced capacity to adapt to environmental circumstances	This assumption defines vulnerability in a disaster and relates it to community development; sustainable development and sustainable disaster mitigation are closely related development goals.	Women's vulnerability also derives from the reduced capacity of women to adapt to environmental circumstances. Reducing women's vulnerability can ensure community and sustainable development.
2.	Vulnerability is not evenly distributed across the world, countries, communities or even groups within communities	This assumption highlights the inconsistent distribution of vulnerability based on place and population. It provides the basis of including differential impact of disaster on developed and developing countries, minority community, class and gender in vulnerability theory.	Vulnerability is not evenly distributed among men and women in the community. The number of women suffering from disasters is higher than men. In addition, the impact of disaster lasts longer for women than men.
3.	The concept of disaster vulnerability is multi-dimensional	This assumption articulates that vulnerability affects all social subsystems differently and to understand vulnerability, one should examine the relationship between the subsystems and their functioning in the community.	Women's vulnerability in disaster is also multi-dimensional, affecting biological, economic, political, cultural and organizational aspect of women's life.
4.	The availability and equitable distribution of resources in a community decreases disaster vulnerability and facilitates resilience	Vulnerability theory views fair distribution and access to community resources as a significant variable for reducing vulnerability.	Fair distribution of resources and access to resources can reduce vulnerability for women. The substantive equality or difference debate of feminism and legal feminism are connected to vulnerability theory. Fineman (2008) argued that lack of access to assets (physical, human and social) places them in a more vulnerable situation
5.	Vulnerability is largely the result of environmental capabilities and liabilities	The environment, here, includes physical matter, buildings, bridges and roads, social norms and status, cultural values and beliefs, technical tools and	Women's vulnerability also derives from the unfriendly social and physical environment for women. This thesis focuses

No	Assumptions of vulnerability theory	Content	Application to women
		devices, and economic systems. This analyses root causes in the social and physical environment. Communities are vulnerable when they are unable to control adverse forces in their social and physical environments.	on social issues rather than the physical environment.
6.	Social and demographic attributes of people are associated with, but do not cause, disaster vulnerability	Based on social and demographic attributes, people defined as vulnerable are economically and socially marginalised, and suffer limited access to resources for survival and disaster recovery.	Women's social and demographic attributes such as physical capacity, underweight, malnutrition, lack of access to resources, legal and policy benefits are associated with disaster vulnerability.
7.	Unsafe conditions in which people live and work are the most proximate and immediate societal causes of disaster	Unsafe conditions involve a wide range of issues, such as dangerous locations, unprotected infrastructure, low levels of development, and a lack of disaster preparedness.	Both men and women are affected by unsafe living conditions. However, the impact of unsafe living conditions influences women more than man. This is applicable to women all over the world.
8.	Root causes, the socio-cultural characteristics of a community or society, historically and in the present, are the ultimate causes of disasters	Three basic root causes for community vulnerability are insecure and unrewarding access to livelihoods and resources, low priority for government interventions, and lack of trust in their own methods for self-protection and losing confidence in their own local knowledge	Lack of access to immovable property, dependence of natural resources, lack of support from the government, lack of willingness for self-protection contribute to women's vulnerability.
9.	Disasters occur because of a chain of causality in which root causes interact with structural pressures to produce unsafe conditions	Vulnerability theory uses the pressure and release model to analyse the interaction of root causes with structural pressures to produce unsafe conditions. Natural hazard works as a stimulation for unsafe conditions to create disasters.	The root cause of women's vulnerability results in unsafe conditions, which interact with natural hazards and produce a bigger impact after disasters.
10	Culture, ideology and shared meaning are of central importance in the progression to disaster vulnerability	Some scholars suggest that disasters are entirely socio-cultural constructions. The ideology of developed nations is based on and reinforces dominance over the natural environment. Further, this	Culture has importance in the progression to disaster vulnerability for women through division of labour, sole responsibility as caregivers, patriarchy dependence, less access to public places, <i>Purdhah</i>

No	Assumptions of vulnerability theory	Content	Application to women
		implies that the perception of a threat is important in understanding why people exhibit certain behaviours.	and traditional dress. Moreover, ideology such as structural adjustment and economic globalisation are not gender neutral. Further, women tend to perceive hazards as more destructive, and they subjectively appraise their exposure to disasters as more severe.
11.	Environmental capabilities, liabilities and disaster susceptibility are related in complex ways to produce the level of community vulnerability	Environmental capabilities include resources reflected in the aspects of the social, physical and natural environment to reduce vulnerability. Inversely, liabilities increase the effects of stress, adversity or loss.	Increasing women's capabilities can decrease vulnerability in natural disasters. Women's access to resources such as credit and savings accounts and early warnings increases women capacity to survive and recover from disasters.
12.	The environments of communities are growing in complexity and are increasingly global in scale	'Population growth, rapid urbanisation, environmental degradation, global warming, climate change and political conflicts are dynamic pressures affecting deep-rooted societal causes, which in turn increase disaster vulnerability' (Pulwarty et al., 2004 cited in Zakour and Gillespie 2013:34).	Both growing complexity and globalism increase the nature of disaster, which has an impact on women.

Source: Adapted and applied to women from Zakour and Gillespie (2013).

Appendix 3.1: Codes for Participants

No of participants	Sources of participants	Codes	Date of interview
Participants from the national level 1.0.0			
Government bodies at the national level 1.1.0			
1.	Ministry of Disaster Management and Relief	1.1.1	9 May 2017
2.	Ministry of Disaster Management and Relief	1.1.2	11 April 2017
3.	Department of Disaster Management	1.1.3	8 May 2017
4.	Department of Disaster Management	1.1.4	8 May 2017
5.	Ministry of Women and Children Affairs	1.1.5	8 June 2017
6.	Department of Women Affairs	1.1.6	18 June 2017
International agencies working for disaster management 1.2.0			
7.	IFRC	1.2.1	9 April 2017
8.	UN Women	1.2.2	15 May 2017
Scholars working on gender and disaster management 1.3.0			
9.	Dhaka University 1	1.3.1	24 May 2017
10.	Dhaka University 2	1.3.2	20 June 2017
Participants from the local level 2.0.0			
Government officers from the field administration 2.1.0			
11.	UNO Kalapara	2.1.1	18 April 2017
12.	Patuakhali DRRO	2.1.2	21 April 2017
13.	UNO Banshkhali	2.1.3	9 May 2017
14.	Chittagong, DRRO/PIO	2.1.4	13 May 2017
Cyclone preparedness program 2.2.0			
15.	Deputy Director, Chittagong	2.2.1	10 May 2017
16.	Assistant Director, Patuakhali	2.2.2	18 April 2017
Local NGO workers/activists 2.3.0			
17.	Caritus	2.3.1	11 May 2017
18.	YPSA	2.3.2	11 May 2017
Participants from the community level 3.0.0			
Female union parishad members 3.1.0			
19.	Nilgonj, Kalapara in Patuakhali	3.1.1	19 April 2017
20.	Nilgonj, Kalapara in Patuakhali	3.1.2	19 April 2017
21.	Khankhanabad, Chittagong	3.1.3	11 May 2017

No of participants	Sources of participants	Codes	Date of interview
22.	Khankhanabad, Chittagong	3.1.4	11 May 2017
Participants from community volunteers 3.2.0			
23.	Community volunteer from Kalapara in Patuakhali	3.2.1	20 April 2017
24.	Community volunteer from Kalapara in Patuakhali	3.2.2	20 April 2017
25.	Community volunteer from Chittagong	3.2.3	12 May 2017
26.	Community volunteer from Chittagong	3.2.4	12 May 2017
Female participants from the community (focus group) 3.3.0			
27.–31.	Nilganj at Kalapara in Patuakhali	3.3.1	20 April 2017
32.–36.	Banskhali in Chittagong	3.3.2	12 May 2017

Appendix 3.2: Photographs from Kalapara showing man driving vehicle

Photograph 3.2.1. Man driving Van



Photograph 3.2.2. Man driving Motor cyclone with woman behind



Photograph 3.2.3. Man driving Bicycle



Photograph 3.2.4. Man driving Auto (a local vehicle)



Photograph 3.2.5. An Adolescent who Catch Crabs



Photograph 3.2.5. Man working in Brick Field



Appendix 4.1: Disaster Management Act, 2012

Appendix 4.1 removed from Open Access version as it may contain copyright/sensitive/confidential content.

Appendix 4:2: National Women Development Policy 2011

Appendix 4.2 removed from Open Access version as it may contain copyright/sensitive/confidential content.

Appendix 4:3: DMCs

According to SOD 2010 a list of various coordinating bodies.

National Mechanism for Policy Guidance and Coordination

National Disaster Management Council

Inter-Ministerial Disaster Management Coordination Committee (IMDMCC)

National Disaster Management Advisory Committee

Earthquake Preparedness and Awareness Committee (EPAC)

National Platform for Disaster Risk Reduction (NPDRR)

National Disaster Response Coordination Group (NDRCG)

Cyclone Preparedness Programme (CPP) Policy Committee

CPP Implementation board

Committee for Speedy Dissemination and Determination of Strategy of

Special Weather Bulletin

Committee for Focal Points Operational Coordination Group

Coordination Committee of NGOs Relating to Disaster Management

Disaster Management Training and Public Awareness Task Force

(DMTPATF)

LOCAL-LEVEL COORDINATION

City Corporation Disaster Management Committee (CCDMC)

District Disaster Management Committee (DDMC)

Upazila Disaster Management Committee (UzDMC)

Pourashava Disaster Management Committee

Union Disaster Management Committee

Local Disaster Response Coordination Group (LDRCG)

City Corporation Disaster Response Coordination Group (CCDRCG)

District Disaster Response Coordination Group (DDRCG)

Upazila Disaster Response Coordination Group (UDRCG)

Disaster Response Coordination Group (PDRCG)

Meeting and Responsibility of (LDRCG)

Local-Level Multi-Agency Disaster Incident Management System

Appendix 4:4: A List of Various Ministries, Divisions, Departments and Government Owned Corporation Related to Disaster Management

Prime Minister's Office

Cabinet Division

Bangladesh Army

Bangladesh Navy

NGO Affairs Bureau

Ministry of Food and Disaster Management

Disaster Management and Relief Division (DM&RD)

Food Division

Disaster Management Bureau

Directorate of Relief and Rehabilitation

Duties of Relief and Rehabilitation Officers at District and Upazila Level

Cyclone Preparedness Programme (CPP)

Cyclone Preparedness Programme (Head Quarters, Dhaka)

Field Level CPP

Directorate of Food (DGFood)

Field Offices of the Directorate of Food

Ministry of Home Affairs

Bangladesh Rifles (BDR)

Bangladesh Police

Directorate of Ansar and VDP

Fire Service and Civil Defence

Bangladesh Coast Guard

Ministry of Defence

Bangladesh Meteorological Department

Space Research and Remote Sensing Organization (SPARRSO)

Ministry of Water Resources

Bangladesh Water Development Board (BWDB)

Field Offices of Chief Engineer/Superintending Engineer/Executive Engineer/

Assistant Engineer (Cyclone related) of the BWDB

Bangladesh Water Development Board (Flood Related Activities)

Flood Forecasting and Warning Centre (FFWC)

Field Level Offices of Chief Engineer/Superintending Engineer/Executive

Engineer/Assistant Engineer (Flood-disaster-related activities) of BWDB

Ministry of Agriculture

Department of Agricultural Extension (DEA)

Field Offices of the DEA

Agricultural Information Service (AIS)

Bangladesh Agricultural Development Corporation

Ministry of Fisheries and Livestock

Department of Livestock Services (DLS)

Field Offices of the DLS

Department of Fisheries (DoF)

Field Offices of Fisheries Directorate

Ministry of Health and Family Welfare

Directorate General of Health Services

Field office of the DG Health Services

Ministry of Environment and Forest

Department of Forests

Department of Environment

Ministry of Information

Bangladesh Betar (Radio Bangladesh)

Bangladesh Television

Mass Communication Department

Press Information Department

Department of Films and Publications

Ministry of Posts and Telecommunications

Bangladesh Telecommunication Regulatory Commission (BTRC)

Bangladesh Telecommunication Company Limited (BTCL)

Director General, Bangladesh Post Office

Ministry of Local Government, Rural Development and Cooperatives

Local Government Division

Local Government Engineering Department (LGED)

Rural Development and Cooperatives Division (including BRDB)

Department of Public Health Engineering (DPHE)

Dhaka WASA

Ministry of Housing and Public Work

Public Works Department (PWD)

Urban Development Authority (RAJUK, CDA, KDA, RDA & NHA)

Ministry of Establishment

Ministry of Finance

Finance Division

Economic Relations Division

Internal Resources Division (National Board of Revenue)

Ministry of Planning

Planning Commission

Ministry of Women and Children Affairs (MWCA)

Department of Women Affairs

Ministry of Law, Justice and Parliamentary Affairs

Ministry of Social Welfare

Department of Social Services

Ministry of Shipping

Bangladesh Inland Water Transport Corporation (BIWTC)

Bangladesh Inland Water Transport Authority (BIWTA)

Department of Shipping

Chittagong Port Authority

Mongla Port Authority

Ministry of Communications

Bangladesh Bridge Authority

Bangladesh Railway

Bangladesh Road Transport Authority

Roads and Highways Department

Bangladesh Road Transport Corporation

Ministry of Industries

Ministry of Education

Ministry of Primary and Mass Education

Directorate of Primary Education

Ministry of Chittagong Hill Tract Affairs

Chittagong Hill Tract Development Board

Ministry of Science and Information & Communication Technology

Bangladesh Atomic energy Commission

Ministry of Youth and Sports

Department of Youth Development

Ministry of Religious Affairs

Ministry of Cultural affairs

Ministry of Civil Aviation and Tourism

Civil Aviation Authority of Bangladesh

Ministry of Land

Ministry of Foreign Affairs

Ministry of Textiles and Jute

Ministry of Commerce

Ministry of Power, Energy and Mineral Resources

Petroleum and Mineral Resources Division

Geological Survey of Bangladesh

Department of Explosive

Ministry of Labour & Employment

Ministry of Liberation War Affairs

Ministry of Expatriates Welfare & Overseas Employment

Other Ministries

Appendix 4.6

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