Utrecht University

MASTER THESIS

International Development Studies

Faculty of Geosciences

Utrecht University

WOMEN'S EXPERIENCES AND ASPIRATIONS

Women's perspectives on non-migration decisions in the face of environmental risks: A comparative multi-case study in Bangladesh

Author: Sarah Gunsenheimer

ABSTRACT

Bangladesh, being highly vulnerable to cyclones, floods, and droughts, is among the countries most affected by climate change. Within the Bangladeshi society, gender inequalities place women's health and livelihoods at particular risk. Women also face limited opportunities for migration due to restricted access to resources and societal expectations regarding their roles. Given the non-gender-neutral nature of the climate crisis, this research delves into women's perspectives on non-migration decision-making processes amidst climate change-induced risks, exploring voluntary and involuntary non-migration decisions. Employing a multi-case study design, the study compares decision-making processes of women in both rural and urban settings. A combination of observational data, in-depth interviews, and visual storytelling is used to explore the subject comprehensively. The findings reveal a general trend, with rural women expressing a preference to remain due to place attachment and strong community bonds, while urban women tend to desire migration due to adverse living conditions and a sense of place disconnection. The study highlights the intersectionality of social identities, such as class, religion, education level, and age, in shaping women's experiences and aspirations. Through this research, a deeper understanding of women's perspectives on non-migration emerges, offering insights that can inform gender-transformative policies and interventions in the context of climate change-induced risks in Bangladesh.

Keywords: environmental non-migration, women's perspectives, gender inequality, Bangladesh, intersectionality

TABLE OF CONTENTS

LIST OF FIGURES, TABLES, PHOTOGRAPHS AND MAPS

List of Figures

List of Tables

List of Photographs

List of Maps

LIST OF ABBREVIATIONS

IOM – International Organisation for Migration

NGO – Non-governmental Organisation

UNDP – United Nations Development Programme

UN Women – United Nations Women

USAID – United States Agency for International Development

CHAPTER 1: INTRODUCTION

In this chapter, the research problem is introduced, offering a concise overview of the topic's theoretical and geographical context. The research objectives and questions are clearly defined, presenting the specific aims of the study. The chapter delves into the significance of the research within the broader field, underscoring its relevance. Moreover, it offers a preview of the thesis structure, providing an outline of the subsequent chapters.

1.1 Introduction of the research topic

One of humans' biggest global challenges is anthropogenic climate change, as its environmental consequences are becoming increasingly evident. The risks are unevenly distributed and have a more significant impact on people and communities that are generally more disadvantaged than others. The severity of the influence of climate-related hazards on people's livelihoods depends on one's vulnerability, exposure, and adaptive capacities (United Nations Environment Programme, 2019). Bangladesh was ranked one of the most affected countries by climate change induced hazards on the Global Climate Risk Index, with a high number of weather extreme events, high financial damage and many fatalities (Eckstein, et al., 2021). Climate change induced risks range from slow on-set sea level rise to rapid on-set cyclones, floods, and droughts. The natural disasters that Bangladesh is currently facing are predicted to intensify under climate change in the future (World Bank Group, 2021).

Disaster risk in Bangladesh is also highly impacted by its social vulnerability. Bangladesh's large population and high population density enhances people's exposure to environmental risks (Agrawala, 2003). Additionally, the country's high poverty rates, inadequate infrastructure, and limited resources compound its vulnerability, making it difficult for communities to adapt to the changing conditions (Reggers, 2019). Even though Bangladesh has made impressive strides in its economic and social development, the poverty rate still remains high. As of 2016, it was estimated that around 24.3% of the population in Bangladesh lives below the national poverty line (World Bank Group, 2021). The impacts of climate change also vary based on socio-economic inequalities (Reggers, 2019; UN Women, 2022). Bangladeshis living in poverty are often more dependent on natural resources for their livelihoods, such as agriculture or fishing, which is severely threatened by changes in the environment. Poverty also increases the vulnerability of communities to the effects of climate change by limiting their ability to invest in infrastructure and resources to reduce the risk of harm (Agrawala, 2003).

Migration is considered as an adaptation strategy to environmental challenges. Though, most people threatened by natural disasters did not migrate so far (IOM, 2018; Zickgraf, 2018; Mallick & Schanze, 2020).

This may be due to involuntary or voluntary decisions. People are either forced to remain in place because they lack the capabilities to migrate or they don't have the aspirations to migrate (Carling, 2002; Mallick & Schanze, 2020). Media solely highlights an increase of environmental migration, and portrays it as a crisis, framing migrants as climate refugees and thereby victimising and disempowering the people affected (Sakellari, 2022). Additionally, media and politics portray climate change-induced migratory flows as a threat to national security, so politics shifted its priorities in climate-change policymaking and development funding to tackle migration (Sakellari, 2022). This not only leads to data gaps regarding people remaining despite climate hazards but also results in a weak integration of the topic into the overall climate agenda and political negligence of the needs of non-migrants exposed to climate change.

Bangladeshi women are more severely impacted by environmental risks due to their roles and responsibilities in the society (Reggers, 2019; UN Women, 2022). On top of high fatality rates among Bangladeshi women, limited control over resources, restricted access to decision-making in households and communities, and their traditional caretaker roles further contributes to their heightened vulnerability (Tanny & Rahmann, 2016; Reggers, 2019). In addition to facing increased exposure to climate change threats, women encounter substantial restrictions on their mobility, discouraging them from migrating despite environmental risks (Tripathy Furlong, 2022; UN Women, 2022; Sengupta & Samanta, 2022). There are various socio-economic factors that contribute to non-migration among women in Bangladesh. In particular, the intersection of gender and poverty influences women's vulnerability to the impacts of climate change and their likelihood of migrating. Furthermore, women are frequently portrayed as voluntary non-migrants. This assumption derives from the association of women with the private space, in particular in patriarchal systems like the one in Bangladesh. Hence, it is important to understand women's experiences and aspiration in the context of Bangladesh's social and cultural norms.

The literature body about non-migration established that social, economic, environmental, demographic, and political factors have an impact on migration decision-making (Foresight, 2011; Balgah & Kimengsi, 2022; Mallick, 2023). These drivers determine the environment one lives in and are closely linked with an individuals' aspirations and capabilities to either stay or move (Zickgraf, 2018; Mallick, 2023). This research investigated the aforementioned problem by observing and interviewing women from different geographical and socio-economic background about their living environment, risk perception and risk tolerance to environmental challenges, and their aspirations and capabilities to remain or migrate. The case study was conducted at two study sites, one in the rural setting and one in the urban setting in Bangladesh and targeted women living along the river embankment.

1.2 Research objectives

This research primarily aims to enhance comprehension of women's lived realities in Bangladesh society, their experiences with climate change induced risks, and their capabilities and aspirations to migrate or to remain. The specific research objectives for this study are as follows:

1. *Understand what factors influence women's living environment and how they affect their living environment on a community level.*
   Analysing which drivers have an impact on women's lived realities in the Bangladesh society and how, paying specific attention to environmental drivers associated with climate change and highlighting intersectional variations.

2. *Investigate women's behavioural response to risk on an individual level and how it is impacted by their living environment*
   Understanding how the living environment affects women's behavioural response to risks in regard to non-migration, taking risk perception and risk tolerance into account, and investigating the intersectional variations.

3. *Analyse how women's aspirations and capabilities to remain are impacted by these factors*
   Comprehending the impact of the drivers affecting the living environment and the behavioural response to risk on women's aspirations and capabilities to remain, taking intersectionality into consideration.

Another objective of this study is to contribute to the literature on non-migration decision-making processes of climate change-exposed populations. By focusing specifically on women's perspectives, this study hopes to draw attention to the gender inequality intrinsic to climate change non-migration and increase the scope of adaptation options available to women affected by environmental degradation in Bangladesh. Furthermore, the research promotes the development of policies for building more gendertransformative community resilience.

1.3 Research questions

With the research objectives and the analytical framework as a foundation, this study formulated specific research questions to effectively address the central research problem. These questions serve as a guide to investigate women's living environment, their risk perception and risk tolerance, to climate change risks, as

well as their aspirations and capabilities to migrate or remain, and the relation of each component to one another.

RESEARCH QUESTION

What are women's perspectives on non-migration decision-making processes concerning climate changeinduced risks in Bangladesh?

The main research question will be answered with the support of the following four sub-questions:

1. *What factors influence women's living environment, and how?*

2. *How does the living environment influence women's behavioural response to environmental risk?*

3. *How do these factors affect women's aspirations to remain?*

4. *How do these factors influence women's capabilities to remain?*

1.4 Relevance of the research

The section on the research paper's relevance considers both academic and societal components, emphasising the study's significance and influence in these areas.

1.4.1 Academic relevance

Immobility, in particular in the environmental context, is very little researched. Not much is known about the non-migration decision-making process and the drivers that influence it (Carling, 2002; Zickgraf, 2018). This academic relevance of this research lies in its contribution to the existing body of literature within the field of environmental immobility. By investigating women's perspectives on non-migration decisionmaking processes concerning climate change-induced risks in Bangladesh, this research is addressing a specific research gap within the literature. It produces new perspectives and provides valuable insights which add to the analytical framework. Consequently, this research paper adds to the academic discourse, encourages further investigation, and lies the foundation for future research within its field.

1.4.2 Social relevance

Immobility is not just very little present in the academic domain but also neglected by politics and media. Policy makers often forget about the immobile population even though they are especially vulnerable to climate change-induced risks (Zickgraf, 2018; Vince, 2022; Naser, et. al., 2023). That's why more research about this topic is crucial in order to gain more insight into the complex process and to recognise immobile populations when establishing policies. As Bangladeshi women are often affected more severely by climate change and have fewer opportunities to migrate, gender-sensitive analyses of the phenomenon such as this study employs are highly necessary. The outcome of such studies can lead to positive changes in policymaking, for example by designing gender-responsive action planning. Even though the results of this study may not have a direct positive effect, the cumulation of research surrounding this topic may have potential benefits for women in Bangladesh in the long run.

The media has portrayed mass migration as one of the main responses to environmental hazards aggravated by climate change, predicting that large populations will migrate across continents, with an emphasis on South to North migration (Zickgraf, 2018; Vince, 2022). However, the literature suggests that media attention should shift to people who don't migrate as they outnumber those who do (Carling, 2002; Zickgraf, 2018). The narrative of large numbers of 'climate refugees' is not only problematic because it is false but also because it represents people as passive victims subject to their surrounding environment and the help of the Global North (Boas et al., 2019). It is crucial to highlight that the immobile as well as the migrant are active agents that develop in situ adaptation strategies and build resilience either while staying or by leaving. This research may foster increased societal awareness and facilitate increased engagement within the media landscape.

1.5 Structure of the thesis

The research paper consists of seven chapters and has the following set-up: The first chapter provides a general introduction to the research problem, presenting the research objectives and questions, and highlighting its relevance. The subsequent chapter dives deeper into the topic by unfolding the existing literature on it and throwing light on the geographical context of the study. Next, the theoretical background and the analytical framework that serves as the guideline for this research is presented. The fourth chapter explains in detail the methodological approach to this study, paying specific attention to sampling, data collection, and data analysis. The methodology also points out the ethical considerations taken into account and the limitations intrinsic to this study. After, the findings section outlines the results of this research, including several quotes from the interviews as a supporting component. The following chapter discusses the findings in a broader context, relates it to the existing literature and reviews the

limitations. Lastly, the conclusion chapter sums up the final outcomes, offers practical implications, and gives recommendations for future research.

CHAPTER 2: LITERATURE REVIEW AND GEOGRAPHICAL CONTEXT

Firstly, this chapter reviews the existent literature relevant to non-migration with the main emphasis on environmental non-migration and gendered immobility. Secondly, the national context of Bangladesh is examined by outlining the country's political landscape and socio-economic characteristics, the environmental challenges that Bangladesh faces and the country's issues concerning gender equality, in particular in the context of climate change risks. Lastly, the two study sites relevant for this research are described in detail.

2.1 Environmental non-migration

A growing body of literature includes immobility within the mobility paradigm (Carling, 2002; Zickgraf, 2018; Mallick & Schanze, 2020; Sengupta & Samanta, 2022). Immobility is inextricably linked, if sometimes unrecognised, with our understanding of human mobility. When we try to understand the variables affecting migration or its effects, we are essentially asking why people choose not to stay and the implications of such decisions for themselves, their families, and the societies they influence. As Zickgraf (2018) puts it: *'migration and non-migration can thus be seen as two sides of the same coin'* (p. 71).

While it is commonly assumed that climate change will lead to increased human migration, it is equally plausible that more individuals will find themselves unable or unwilling to move due to several reasons. The immobile can be categorised by two main characteristics: involuntary vs. voluntary. People forced to remain in place despite environmental hazards can also be called "trapped populations" (Carling, 2002; Mallick & Schanze, 2020). These people might have the aspirations to migrate but lack the capabilities to do so. Even relatively short-distance movements can be significantly challenging due to the lack of sufficient resources or restrictive migration policies. Though, not all people that remain are trapped. Voluntary nonmigrants don't have the aspirations to move, despite environmental risks, even though they might be capable of doing so (Foresight, 2011; Zickgraf, 2018; Naser, et al., 2023). Place attachment, sense of identity and dedication to family, land and culture are some of the main drivers for voluntary non-migration (Adams, 2016; Mallick & Schanze, 2020). In particular, indigenous peoples have a very strong connection to their ancestral lands because of cultural and spiritual reasons. Some communities may even insist on staying on their homelands and refuse to relocate even though despite the lack of in-situ adaptation options available (Farbotko, 2018).

The migration literature body traditionally portrays men as willing migrants while women, along with children and the elderly, are seen as voluntary non-migrants (Lutz, 2010; Jónsson, 2011). This can be referred to as "gendered immobility" which describes a prevailing and ingrained link between a specific

gender and immobility (Jónsson, 2011). Women's participation and important role in mass migration is therefore neglected or attributed to a perceived lack of their agency (Carling, 2005). This can be traced back to the *'tendency to associate women with the home, the private space, and men with the public'* (Jónsson, 2011, p. 11) in patriarchal societies. Hence, it is important to challenge the assumption that women prefer to stay at home and establish an understanding of women's relationship with home in the context of environmental non-migration.

2.2 National context of Bangladesh

Bangladesh is situated in Southern Asia and located on the Bay of Bengal, bordering India in the west, north and east, and Myanmar in the southeast. The majority of Bangladesh is made up of low-lying and flat land and the country has the world's largest river delta, consisting of the Ganges, the Brahmaputra, and the Meghna Rivers which make their way from the Himalayas to the Bay of Bengal. The Sundarbans which are located in the South of the country are the world's largest mangrove forest (Husain & Tinker, 2023). Bangladesh is one of the world's most densely populated countries with an estimated total population of over 171 million in 2022 (World Bank Group, n.d.). Most of the population resides in rural areas, engaging in agriculture and fishing as their primary occupation. The majority of Bangladesh's population belongs to Islam, with a percentage of 89.1. Hinduism makes up for 10 per cent of the population (Husain & Tinker, 2023). As can be seen in Figure 2, the Hindu minority has been steadily decreasing over the years. This is due to outward migration of Hindus and a comparatively lower total fertility rate in the Hindu population (The Global Economy, 2013). The other 0.9 per cent are mostly Roman Catholics as indicated in Figure 1.
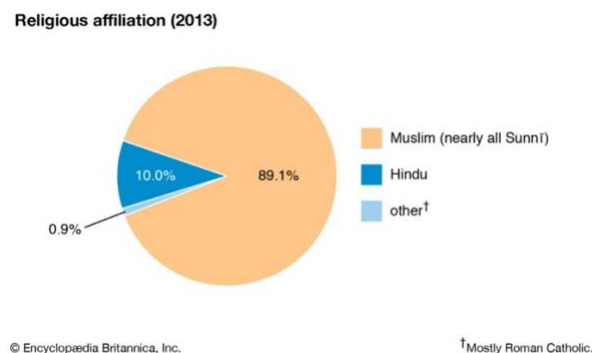
Figure 1: Religious affiliations in Bangladesh (Husain & Tinker, 2023)

Figure 2: People practicing Hinduism as percent of the population. Longer historical series. (The Global Economy, 2013)

The focus on non-migration in this research also requires an understanding of the prevalence of migration within the population. The World Migration Report states that Bangladesh was the fifth largest country of origin in the world in 2015 (see Figure 3). Most of Bangladeshi migrants are temporary migrant workers in the GCC countries, helping to reduce poverty through remittances in their home country (McAuliffe & Ruhs, 2017).
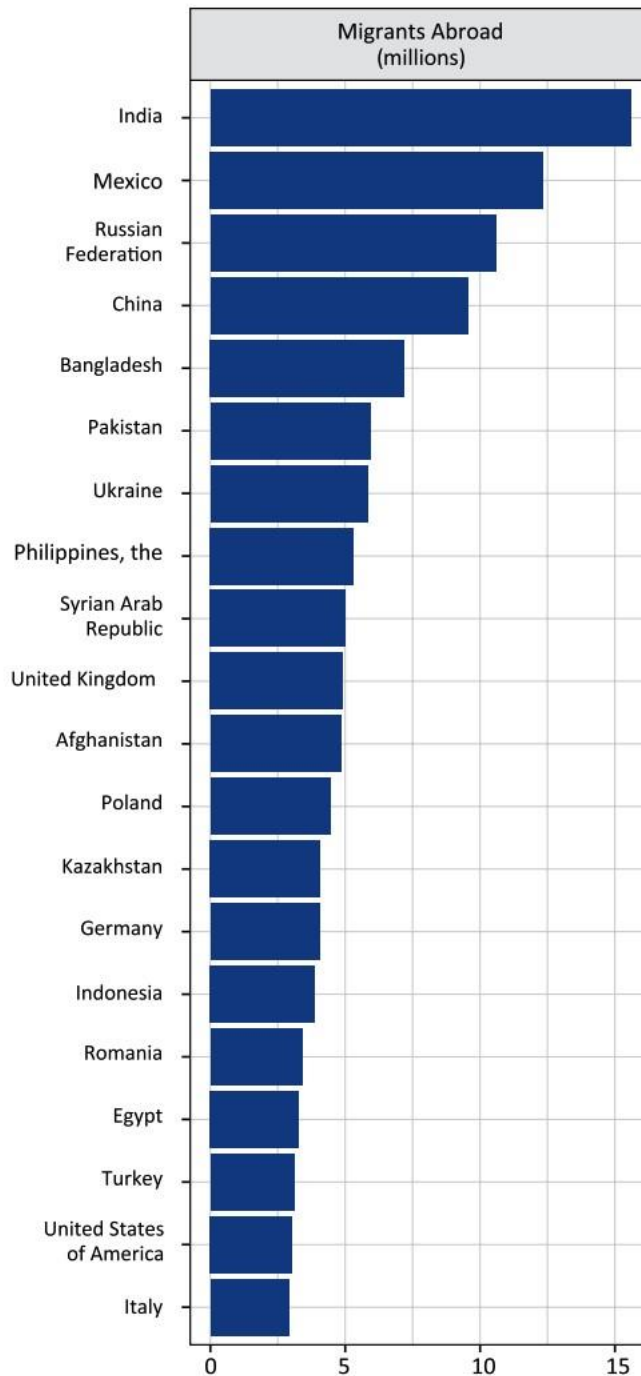
Figure 3: Top 20 origins of international migrants in 2015 (McAuliffe & Ruhs, 2017, p. 19)

Until 1947, the country as it is known today was under British colonial rule. After that, the British colonial territory was divided into two countries: India and Pakistan. The area of Bangladesh was declared as part of Pakistan and was referred to as East Pakistan from 1955 onwards. This division was ostensibly based on religion but did not entirely reflect it. This had many disagreements between Muslim and Hindu contingents as a consequence (Husain & Tinker, 2023). Bangladesh gained independence in 1971, preceded by a bloody liberation war. During the Bangladesh War of Independence, around 10 million Bengalis, mostly

Hindus, fled to India (Ranjan, 2016). The political landscape has been marked by alternating periods of democratic governance and military rule since the country gained independence from Pakistan. Even though, the parliamentary democracy is generally considered as stable, the country faces corruption, human rights violations, and a growing extremist threat (Ali, 2022).

Since 1971, Bangladesh has achieved remarkable strides in economic and social development, including significant reductions in poverty rates. Bangladesh's GDP growth rate of 5.2 percent in 2020/21 is among the highest in Asia and its economy demonstrated resilience despite the impacts of the global pandemic (UN Women, 2022). In 2019, 20,5 per cent of the population lived below the national poverty line in Bangladesh (ADB, 2023). As can be seen in Figure 4, the country underwent significant transformations in several social sectors. To name a few, the life expectancy rate increased remarkably, infant mortality and maternal mortality decreased drastically, and the overall literacy rate improved from 35 per cent in 1991 to 53 per cent in 2020 (UN Women, 2022).
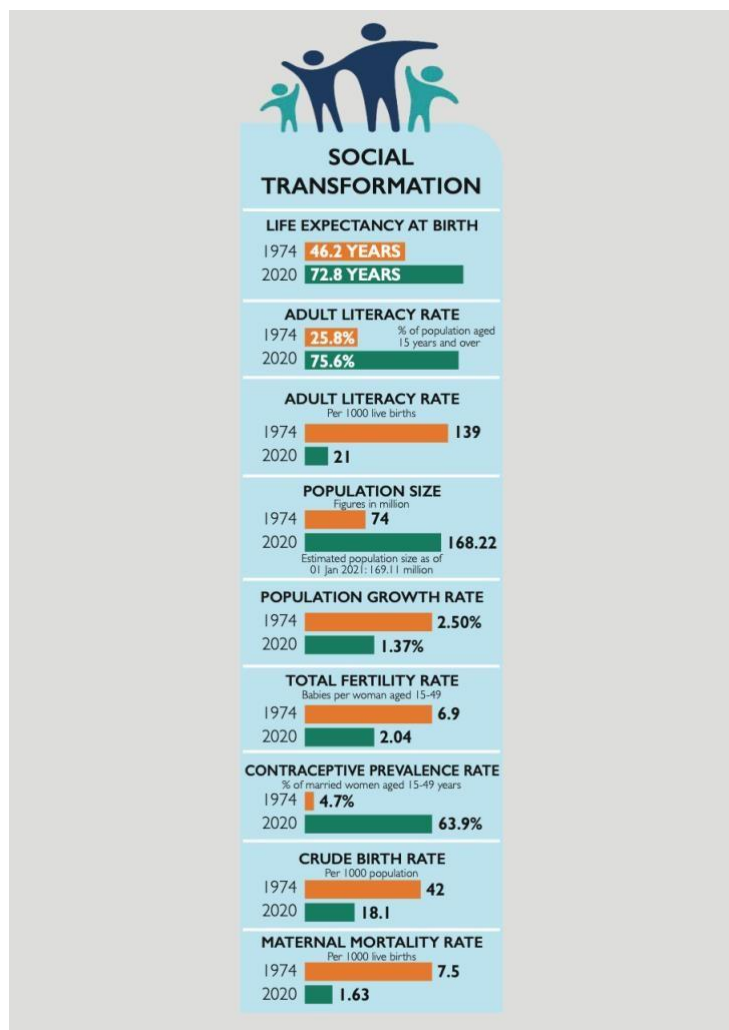
Figure 4: Social transformations (UN Women, 2022)

2.2.1 Climate change induced risks in Bangladesh

Bangladesh was ranked one of the most affected countries by climate change induced hazards on the Global Climate Risk Index, with a high number of weather extreme events, high financial damage and many fatalities (Eckstein, et al., 2021). Due to its location on large river deltas, Bangladesh is ranked 1st in the world when it comes to exposure to flooding. Climate change induced risks range from slow on-set sea level rise to rapid on-set cyclones, floods, and droughts. The impact of climate change varies based on location. As shown in Figure 5, the most severely affected regions are the central and western coastal regions because of salinity and cyclones, the northern highlands because of drought, the northern wetlands because of flash floods, and the areas near the major rivers because of erosion and flooding caused by rivers (UN Women, 2022). The natural disasters that Bangladesh is currently facing are predicted to intensify under climate change in the future (World Bank Group, 2021).

Figure 5: Vulnerabilities to different natural hazards (UN Women, 2022, p.13)

Disaster risk in Bangladesh is also highly impacted by its social vulnerability. Bangladesh's large population and high population density enhances the people's exposure to environmental risks (Agrawala, 2003). Additionally, the country's high poverty rates, inadequate infrastructure, and limited resources compound its vulnerability, making it difficult for communities to adapt to the changing conditions (Reggers, 2019). Even though Bangladesh has made impressive strides in its economic and social development and the poverty rate still remains high. As of 2016, it was estimated that around 24.3% of the population in Bangladesh lives below the national poverty line (World Bank Group, 2020).

The impacts of climate change also vary based on socio-economic inequalities (Reggers, 2019; UN Women, 2022). Bangladeshis living in poverty are often more dependent on natural resources for their livelihoods, such as agriculture or fishing, which is severely threatened by changes in the environment. Poverty also increases the vulnerability of communities to the effects of climate change by limiting their ability to invest in infrastructure and resources to reduce the risk of harm (Agrawala, 2003).

2.2.2 Gender inequality in Bangladesh

Based on the Gender Inequality Index, Bangladesh has significant gender inequality across selected indicators of labour force participation, political empowerment, health, and education. In the global context, Bangladesh is positioned at 119th out of 159 countries, with lower rankings indicating a greater level of inequality (UN Women, 2022). Bangladesh has a deeply entrenched system in which men hold most of the power and control in society, while women face limitations and lack independence. Women are denied access to decision-making and are hindered from having control over their own lives (Kabeer, 1988). Social control over women is maintained and reproduced through marriage, the organisation of the family, and gender segregation in the public sphere.

Marriage is traditionally structured in Bangladeshi society. Women are obligated to marry outside their lineage and their village and have to move to live with their husband's family. This undermines women's autonomy and increases the dependency on their husband (Kabeer, 1988). Also, sons often inherit the majority of their fathers' property and women continue to face discrimination under Islamic inheritance laws and therefore have restricted access to resources (Reggers, 2019). Furthermore, more than half of all married women experience physical or sexual violence from their husband during their lifetime (UN Women, 2022). This reflects the asymmetrical power relations in Bangladeshi society and further hinders women from having control over their own lives. However, it is important to not portray Bangladeshi as passive but as active agents that assert their agency through strategic decision making (e.g., negotiations with their husband), defying their restrictive environment (Nazneen, 2017).

Despite the rising rate of women's participation in the labour force, the nature of female employment and participation does not align with the expected developmental outcomes of Bangladesh's rapid economic growth (UN Women, 2022). The clear division between men and women in Bangladesh's society also extends to the labour force and encompasses discriminatory treatment towards women which inhibits gender equality. According to Bangladesh Bureau of Statistics (2018), women only represented 36.3 per cent of the total labour force and their employment was still restricted to only a few sectors that offer lowpaying opportunities. Women's poor representation in higher paying jobs is also a consequence of poor representation in higher education (UNDP, 2020). Bangladesh's deeply ingrained socio-cultural norms such as unequal power relations in the household and child marriage pose a significant challenge for women's education and work opportunities.

In public decision-making spaces, such as policy spaces, there is often a significant imbalance in gender representation, with men predominantly holding positions of power and influence. Even though women and men enjoy equal voting rights and Bangladesh parliament reserves 50 seats for women, male dominance in decision-making limits women's participation and input (UN Women, 2022).

Additionally, migration in Bangladesh is characterised by gender imbalance, with a higher proportion of men migrating compared to women. Men often migrate to different destinations, primarily to search for alternative livelihoods. This leaves women behind to shoulder the responsibilities of running households and caring for family members. In contrast, female migration is motivated by family-related factors, such as marriage, rather than economic reasons (UN Women, 2022).

2.2.3 Gendered impacts of climate change and gendered (im)mobility in Bangladesh

Bangladeshi women are disproportionally affected by environmental risks due to their roles and responsibilities in the society (Reggers, 2019; UN Women, 2022). During the 1991 cyclone in Bangladesh, statistics report that 90% of the 140.000 people that were killed were women (Neumayer & Plümper, 2007). Reason for the highly gender unequal distribution of fatalities is limited access to information of early warning for disasters, gender-based violence due to inadequate design of cyclone shelters and women's inability to swim as they were never taught (UN Women, 2022; Tanny & Rahman, 2016). In addition to drastic fatality rates among Bangladeshi women, lack of ownership and control over resources, limited access to decision making in the household or at community level, and the traditional role of caretakers of their families add to their increased vulnerability to the impacts of climate change (Tanny & Rahmann, 2016; Reggers, 2019). This is particularly poignant in the Bangladeshi culture, where sons often

inherit the majority of their fathers' property and women continue to face discrimination under Islamic inheritance laws (Reggers, 2019).

On top of women's heightened exposure to threats from climate change, women face considerable mobility restrictions which discourages them from migrating despite environmental risks (Tripathy Furlong, 2022; UN Women, 2022; Sengupta & Samanta, 2022). In Bangladesh, non-migration among women is driven by a number of factors, including cultural norms, poverty, lack of education and job opportunities, and limited access to transportation. Furthermore, women are often subject to gender-based violence and discrimination, which makes them feel unsafe and hampers them from migrating (Reggers, 2019; UN Women, 2022; Tripathy Furlong, 2022). In conclusion, the intersection of gender, poverty, age, and religion makes women in Bangladesh more vulnerable to the impacts of climate change and less likely to migrate.

2.3 Study sites

This multi-case study was conducted in the district of Khulna, Bangladesh. As this research aims to compare women's realities through an intersectionality lens, two different geographical contexts were chosen. One study site was located in a rural setting and the other study site was situated in an urban area. The main criterion for the study sites was proximity to a river. Underneath, Map 1 shows the exact locations of both study sites.
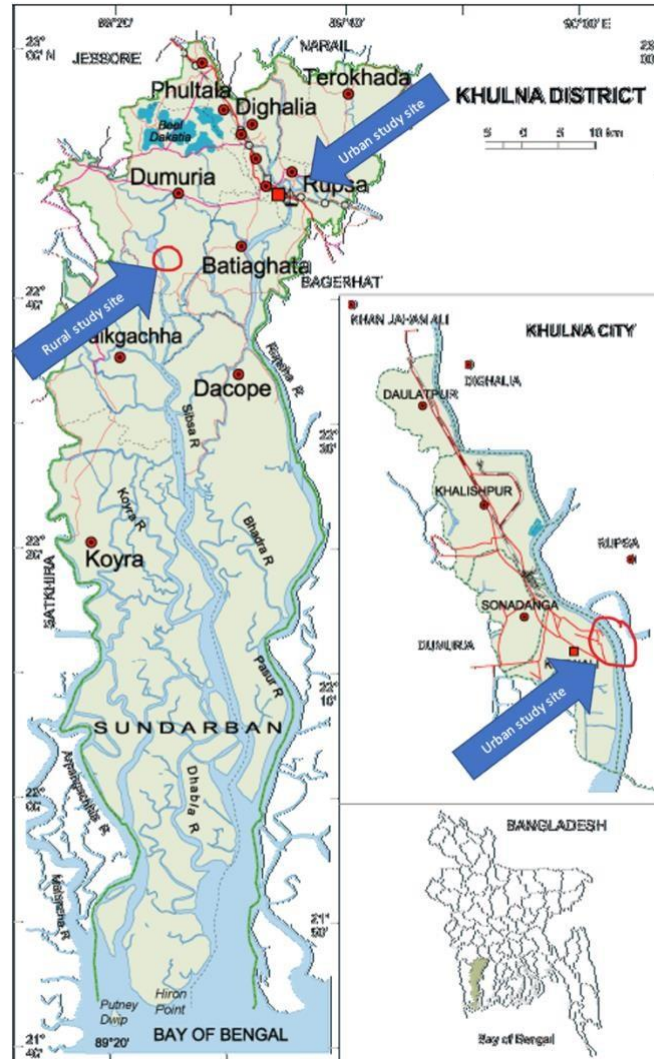
Map 1: Khulna Division: Study sites (Journey Plus, n.d.)

2.3.1 Rural setting

The rural study site is located in the Dumuria Upazila, approximately 7.5 kilometres distance from Dumuria and 20.5 kilometres from Khulna city (beeline). The study site is part of the Shobhana Union and situated on the bank of Shipsha river As of 2011, 3,700 households lived in the Shobhana Union, making up a total population of 15,175 people. Hinduism and Islam are the two major religions practised by the locals, 46% are Muslims and 54% are Hindus (Blue Gold Program, 2016). This is unusual for Bangladesh as the vast majority of its people are Muslims. The main industries that provide jobs for the local population are agriculture, industry, and services. Agriculture activities generally involve crop farming, fishing, livestock and poultry farming. Women mostly take care of the household which is also reflected in their low labour market participation as can be seen in Figure 6 below (Blue Gold Program, 2016). The area has experienced

several severe environmental disasters, such as cyclones and flooding in the past. Below, the exact locations of the interviews, which are marked with a blue circle containing a white flag, can be seen in Map 2.
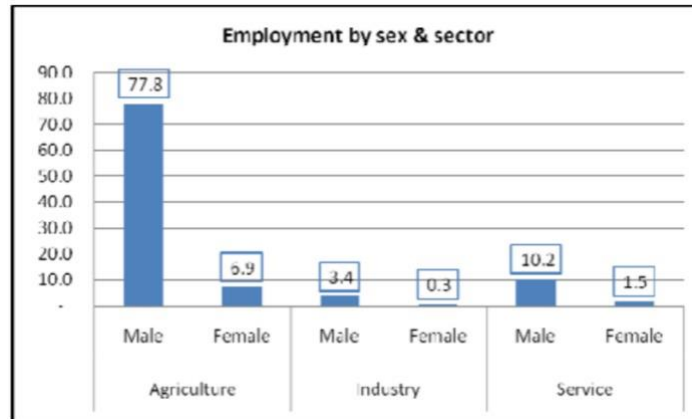
Figure 6: Employment by sex & sector in the rural study site (Blue Gold Program, 2016, p.107)
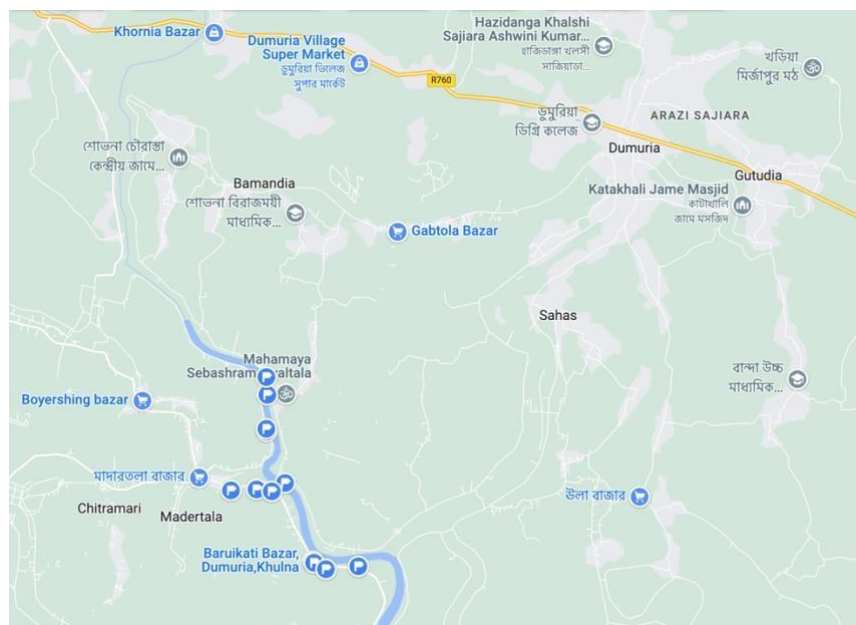
Map 2: Locations of interviews in the rural area (Google Maps, 2023)

2.3.2 Urban setting

The urban study site is located in the Rupsha slum in Khulna city. Khulna city is with its 1.5 million inhabitant the third largest city in Bangladesh. Rupsha slum is one of the oldest and biggest slums in Khulna and is situated on the western bank of the Rupsha River. The slum currently covers approximately 6.13 acres of land and is home to an estimated 3,700 families, comprising a total population of 15,876 people (Haque, 2022). Rupsha slum is well-known for providing shelter to climate migrants originating from the

entire south-west coastal region. It is located a mere 2 kilometres away from the city centre, where various trading and commercial activities take place. Additionally, fish processing factories and a water vessel landing station for unloading fish, timber, salt, and building materials are situated in a close proximity. The residents of the slum are engaged in a diverse range of occupations to earn a living, e.g., rickshaw pulling (three-wheelers), wage labour at the water vessel landing station and shrimp factoring, small-scale trading, street vending in the city centre, and construction work (Haque, 2022). The area experienced significant effects from extreme weather events induced by climate change, including waterlogging, floods, and other related challenges. Below, the exact locations of the interviews conducted in the urban area (marked with a blue circle containing a white flag) can be seen in Map 3.
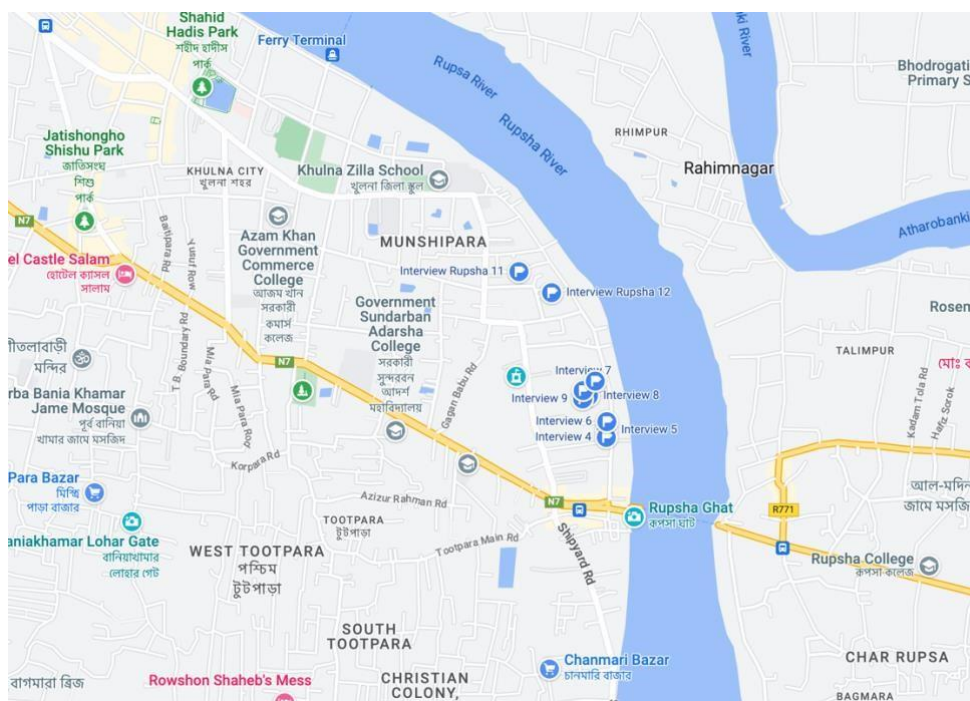
Map 3: Locations of interviews in the urban area (Google Maps, 2023)

CHAPTER 3: THEORETICAL AND ANALYTICAL FRAMEWORK

Literature on environmental (non)-migration takes up several theoretical frameworks which were helpful for establishing my research approach. As migration results from a logical decision, non-migration decisions are bound to the same logical decision-making process (Zickgraf, 2018). Therefore, the same concepts and theories can be applied to non-migration research. The following chapter gives a brief summary of prominent theories significant to the research topic that have profoundly influenced the analytical approach adopted in this study. Subsequently, the analytical framework concerning environmental nonmigration, as formulated by Mallick (2023), is presented in detail and adjusted to fit this gender-focused research. Lastly, the variables employed in this study are operationalised.

3.1 Theoretical background

Sen's capabilities approach focuses on people's agency and acting freedom. According to Sen (1985), capabilities are defined as a person's ability to choose and achieve the functioning they need to live a life they have reason to value. To realise their capabilities, access to essential resources is required. People's physical, financial, social, and political situation is being analysed concerning their access to resources to determine their capabilities. Climate change (non-)migration depends on one's capabilities to leave or remain in place (Assaduzzaman, et al., 2020). The theory recognises humans as active agents and acknowledges human diversity. Sen distinguishes between two kinds of freedom, namely *well-being freedom* and *agency freedom,* and analyses their achievement. Well-being freedom is concerned with humans' general well-being and agency freedom is about one's unrestricted ability of self-expression (Robeyns & Byskov, 2023). In addition, Sen's capabilities theory introduced the concept of livelihoods and promoted a bottom-up, person-centred research approach (1985). This study can be positioned within Sen's way of thinking and is equally concerned with assessing individual well-being and evaluating social arrangements. It views Bangladeshi women as active agents and analyses their well-being and agency achievements.

Furthermore, several new approaches to migration, specifically non-migration, are relevant to this research. Zickgraf (2018) uses the abilities and aspiration approach to analyse immobility. Conditions that contribute to the inability to migrate range from macro-structural barriers, such as administrative barriers and lack of transportation infrastructure, to micro-structural obstacles, such as financial resources, demographics, social networks, and human capital. Additionally, people's immobility may be due to their lack of aspirations to move. The social, economic, environmental, demographic, and political context of a macro, meso, and micro-environment determines one's aspirations and capabilities to migrate (Zickgraf, 2018). In order to understand voluntary staying, Czaika & Reinprecht (2022) looked at personal heuristics and cognitive biases in relation to risk perception. The authors contend that lack of information, scarcity of material resources, or irrationality are not the only causes of non-migration. Instead, decision-making about mobility is heavily influenced by cognitive biases and the perception of risk. Status quo bias, endowment effect and regret avoidance, just to name a few, shed light on the cognitive mechanisms that influence non-migration decision making. Status quo bias stands for individuals' preference for maintaining their current situation, mostly due to place attachment. Endowment effect means that people tend to assign higher value to what they already possess compared to alternative options and regret avoidance leads to people being more cautious in decision-making (Czaika & Reinprect, 2022). How risks are perceived or accepted is strongly influenced by individuals' values, beliefs, and attitudes as well as the wider social or cultural context that they live in (Williams & Noyes, 2007).

This links to the framework by Foresight (2011) which claims that social, economic, environmental, demographic, and political factors influence migration decision-making. Balgah & Kimengsi (2022) applied this framework to non-migration decisions while also adopting individuals' aspirations and capabilities. Their findings reveal that social factors, particularly place attachment and family/cultural obligations, serve as the primary determinants influencing the decision to remain in a given location. Environmental aspects, however, also have a significant impact, in particular the ability to develop coping capacities.

The beforementioned theories and framework contribute to comprehending decision-making processes, both in a broad context and specifically concerning environmental non-migration. However, the primary focus of this research lies on examining the gender aspect through an intersectionality lens. To do so, the fundamental idea of intersectionality needs to be understood. Hankivsky (2014) states that '*according to an intersectionality perspective, inequities are never the result of single, distinct factors. Rather, they are the outcome of intersections of different social locations, power relations and experiences*' (p.2). Human lives are complex and cannot simply be explained by just one category, like gender, ethnicity, or socio-economic status. Instead, people's lives are multifaceted, shaped by various factors and social interactions that are interconnected (Hankivsky, 2014). As discussed in the literature review and the geographical context above, the hierarchical system of gender relations in Bangladesh oppresses women by denying them access to social power as well as partially the autonomy over their own lives (Kabeer, 1988; Sultana 2010; Asia & Pacific Office, 2022). But not all women have the same lived realities under the patriarchy system. Factors, such as the geographical context that women live in (urban vs. rural), their age, the religion that they practice, and the ethnicity that they belong to, also influence power dynamics that women experience in their daily lives (Hankivsky, 2014).

3.2 Analytical framework

The beforementioned approaches go hand in hand with Mallick's (2023) framework on environmental nonmigration (as can be seen in Figure 7). It represents most elements of the theoretical assumptions and succinctly summarises them within a single coherent structure. The framework takes up both the living environment on a community level and the behavioural response on an individual level including risk perception and risk tolerance. The living environment is made up of five drivers including social factors, political factors, economic factors, environmental factors, and demographic factors. At the community level, these factors influence people's living environment, which, in turn, affects how individuals respond to those conditions. The living conditions also play a role in shaping personal risk perception and tolerance, further impacting their responses. However, the final decision on migration and non-migration depends on the individual's aspirations and capabilities, ultimately determining whether the choice is voluntary or

involuntary. This study implements an intersectionality lens by paying specific attention to the individual level, focusing on how identities and oppressions intersect. The intersectionality approach is employed by showing that the concepts of women's behavioural response to risk and their aspirations and capabilities vary depending on their demographic background and their respective living environment. These concepts and the relationship anticipated between them is explored in this study by critically analysing women's perspectives on non-migration decision-making based on the intersection of their social identities. The framework also laid the foundation for the research questions central to this research. Figure 8 presents an adapted version of Mallick's (2023) framework, which serves as the analytical framework for this study. The adjustments have been made to suit the specific needs and focus of the research, and Figure 8 is providing a visual representation for clarity.
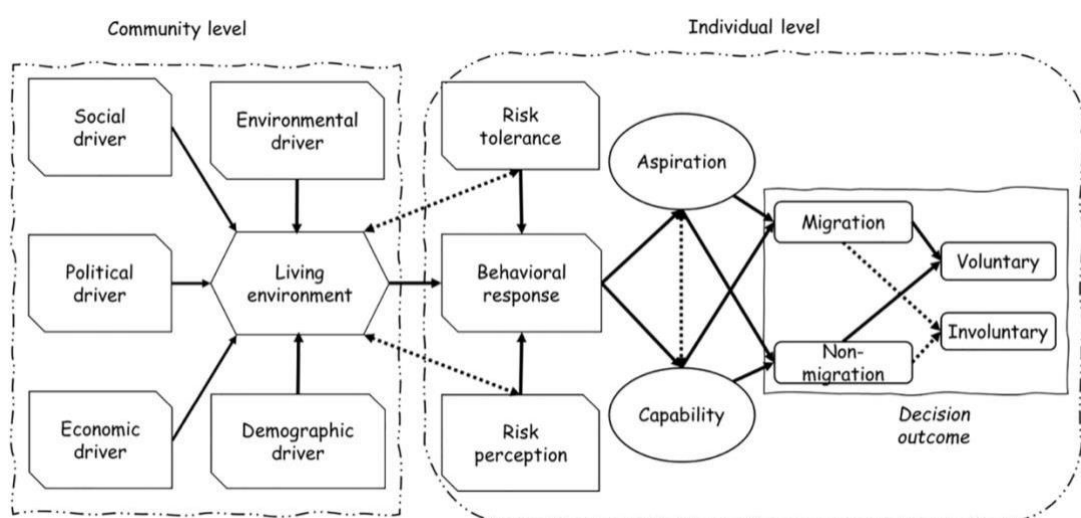
Figure 7: Conceptual framework by Mallick (2023, p.4)
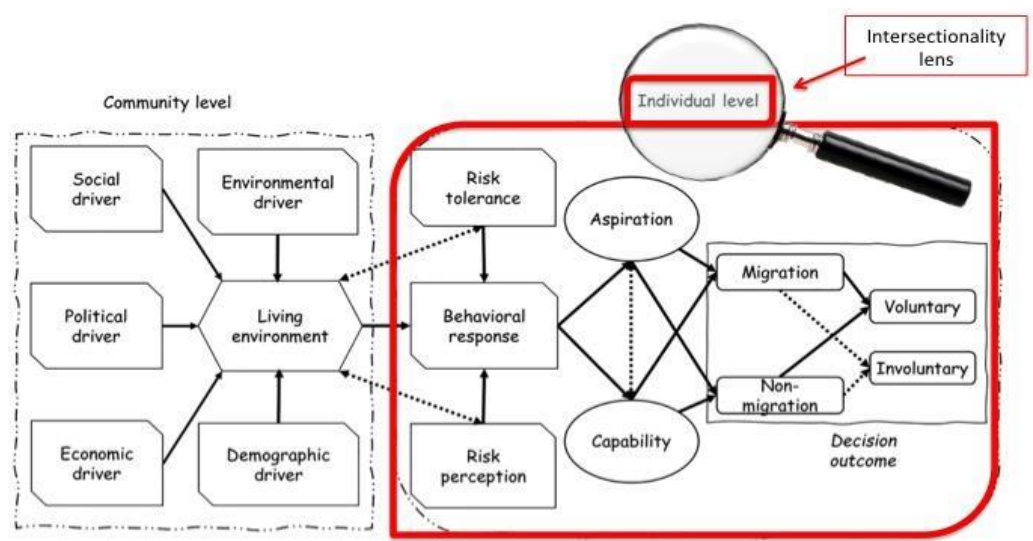
Figure 8: Analytical framework

3.3 Operationalisation of concepts

This section concentrates on explaining how I assessed the concepts identified in the analytical framework. This was necessary to understand the variables on a deeper level and to come up with valid questions and probes in the interview guide that try to capture the concepts. The operationalisation of the concepts established the foundation for the data collection and analyses, assuring that the research's objective is effectively addressed. The variables were operationalised based on the existing literature. Below, the variables relevant for this research and their respective operationalisation are summarised in table 1.

Concept	Variables	Expected behavioural response	Interview questions
Social driver	Place attachment	Intergenerational belonging contributes to nonmigration	How long have you and your family been living here?
		Emotional attachment with home results in nonmigration	Can you describe what 'home' means to you in five words?
	Social network	Strong social network/ community cohesion	How would you describe your relationship to your

		contributes to nonmigration	relatives/neighbours/other people in your community?
	Experience with migration	A person whose relatives migrated would prefer to migrate	How many people close to you have migrated from your family, and community?
	Husband's family dynamics	Limited freedom in decision making in the household contributes to nonmigration	How would you describe your freedom for decision making in the household?
Political driver	Support by institutions	Political support contributes to non-migration	What kind of support do you receive from the government or other organisations in your community?
	Trust in government	A high level of involvement and transparency in the decision-making process leads to non-migration	Have you ever been involved in the decisionmaking processes in your village? If so, can you describe your experience?
		Satisfactory outcomes of decision-making result in non-migration	How do you feel about the outcomes of the decisionmaking processes?
		Faith that government will help in difficult times contributes to nonmigration	Do you believe that the government will help you out in difficult times? Why, why not?

Economic driver	Income Ownership Work opportunities	People with sufficient income, land ownership, and work opportunities prefers to remain	Would you describe your income/occupation as stable and/or sufficient? How much land do you own? Would you say that you have enough opportunities for work in your area?
	Quality of housing	People in high quality housing prefer to stay	How do you feel about your general housing situation? Observation of construction material (concrete, mud)
Environmental driver	Severity and frequency of disasters	People that experience high frequency of environmental risks would prefer to migrate	What are some environmental challenges that you face?
		People that experience severe loss and damage due to environmental hazards would prefer to migrate	How did those changes in the environment impact your daily/work life?
			Have you ever had to deal with property damage or other negative consequences from extreme weather events?

Demographic driver	Gender	Women prefer not to migrate	Only female participants
	Geographical setting	People in the rural area	Rural vs. urban

		prefer to remain and people in the urban setting prefer to migrate	
	Level of education	Less educated people prefer to stay	How many years of school?
	Religion (Islam – Hinduism – Christianity)	A person that belongs to the majority religion in the community would not like to migrate	What religion do you belong to? What religion do most people in your community belong to?
	Age	Elderly people prefer to remain	Age in years
Behavioural response	Risk perception	People concerned about future environmental risks prefer to migrate	How concerned are you about environmental risks, in the future? How confident do you feel in your ability to respond to extreme weather events?
	Risk tolerance	People that can prepare for/cope with extreme weather events are more likely to stay	How do you prepare for extreme weather events? What barriers do you face in preparing for extreme weather events?

(Non-) migration perception	Aspirations		Do you have any aspirations to migrate in the future? If not, why don't you want to migrate? If yes, why do you want to migrate?
	Capabilities		What is your migration strategy? or What is your adaptation strategy?

Table 1: Operationalisation of variables

3.3.1 Living environment

In the following, a clarification for each variable important for determining one's living environment and their potential influence on non-migration decisions is presented. The living environment is assessed on a community level and the behavioural response to risk which derives from the environment one lives in is assessed on an individual level. The indicators and how I measured them can be seen in Table 1 above.

Social driver

Place attachment, sense of belonging to the community, access to family or social networks, and experience with migration are examples of social factors that influence migration or non-migration decisions. Place attachment refers to the emotional and psychological bond that individuals develop with a specific location, in this case the place that they consider their home (Foresight, 2011; Farbotko, 2018). A home can mean stability and security for one and family and social connections for another. That's why community cohesiveness and a neighbourhood support network are also important drivers impacting future mobility. The social network variable covers practical help received from neighbours, such as monetary, material, or emotional support (Irwin et al., 2004; Hunter, et al., 2015; Mallick, et al., 2021). Earlier migration experiences or the migration experiences of extended family members also have an impact on migration aspirations and opportunities (Hunter, et. al., 2015). Similarly, the dynamics that women experience in their husband's family household and the level of freedom they enjoy based on that impacts women's migration aspirations and capabilities (Jónsson, 2011). Based on the literature, this study

prioritises the social factor as the most important one for non-migration decisions (Foresight, 2011; Farbotko, 2018; Balgah & Kimengsi, 2022).

Political driver

Political forces can influence decisions on environmental migration or non-migration in a variety of ways. Lubkemann (2008) contends that political instability may be a driver of migration and obstacles to movement, resulting in non-migration in some circumstances. People who perceive positive treatment and support from the political system are more inclined to choose non-migration, preferring to remain in their current location. Additionally, people that exhibit trust in the existing governance system, encompassing both national and local government structures, tend to favour non-migration and are more likely to stay put rather than seeking migration (Van Hear, et. al., 2018).

Economic driver

The ability and aspiration of poor women to migrate is determined by their economic situation and access to resources (Assaduzzaman, et al., 2023). According to the literature, individuals that have a secure income, sufficient wealth, and enough work opportunities are less inclined to migrate as they are more likely to be able to cope with environmental risks. Similarly, land ownership and the quality of housing plays a role in migration decisions. People that own land and/or reside in well-constructed houses designed to withstand cyclones and other adverse conditions are less likely to migrate (Mallick, et al., 2021).

Environmental driver

The severity, frequency and experience of environmental hazards has a crucial impact on people's lives and their migration decisions. People that are subject to frequent and harmful environmental disasters are more likely to desire migration. Similarly, people that suffer major losses and damages as a result of catastrophic disasters are more likely to consider relocation as an option (Foresight, 2011; Balgah & Kimengsi, 2022).

Demographic factor

The research uses an intersectionality approach when studying women's perspectives as the single category of gender cannot adequately explain women's circumstances. As mentioned above, the lives of women are complex and multifaceted. The geographical setting that Bangladeshi women live in has an immense impact on their empowerment, e.g., women in the urban space have more freedom in decision making than women in rural Bangladesh (Tabassum, et al., 2019). Generally, it is found that education, employment status, and age play a vital role for women's empowerment status. Women that are educated have a higher

chance to participate in the labour force and receiving their own income makes them less reliant on their husband (USAID, 2023) and thus, more likely to migrate. Age and family structure also determine women's authority in decision making. Older women are more likely to stay put due to health conditions, or family ties. Additionally, religion is a crucial component that influences both empowerment and autonomy in decision making, and consequently migration decisions (Haque, 2011).

3.3.2 Behavioural response to risk

Below, the two components which determine the behavioural response to risk are explained. Risk perception and risk tolerance are individual activities which are shaped by the living environment that the individual lives in. The decision to migrate or not is considered a personal behavioural response triggered by the individual's risk perception and risk tolerance (Mallick, 2023).

Risk perception

Risk perception can be defined as an individual's view and interpretation of a risk and is shaped by their beliefs and understanding within the particular context (Wiegel, et al., 2021). In this study, risk perception involves the perceived severity, perceived vulnerability, and concerns about future events. The perceived severity of environmental risks describes the way one observes and evaluates relative changes in the environment. Perceived vulnerability assesses how an individual perceives the impact of environmental changes on their daily lives. Concerns about future risks or in other words, the likelihood perceived by individuals of the threatening event happening add to the risk perceived about future events (Mallick, et al., 2021). As the perception of environmental risks increases, individuals are less inclined to feel secure and safe enough to remain in their current location.

Risk tolerance

Risk tolerance signifies one's risk-taking ability which is closely associated with one's coping capacities and willingness to bear risks. Individual's coping responses and adaptation strategies depends on their risk assessment (Mallick, et al., 2021). So, risk tolerance can be understood through the lens of an individual's level of preparedness and the barriers they encounter while attempting to make preparations. The extent of risk tolerance influences the probability of continuing the individual's livelihood in the risk prone location.

3.3.3 Aspirations

(Non-)migration aspirations refer to individuals' subjective desires, or intentions regarding whether they wish to stay in their current home (non-migration) or move to another place (migration) in response to

different factors, such as environmental risks, socio-economic opportunities, or personal considerations (Zickgraf, 2018; Balgah & Kimengsi, 2022; Mallick, 2023). Aspirations can reflect the individual's perception of their current living environment, their expectations for the future, and their adaptation strategies in the face of environmental challenges (Zickgraf, 2018).

3.3.4 Capabilities

(Non-)migration capabilities involve the resources, capacities, and opportunities that individuals possess or lack, which enable or hinder their ability to either migrate or to remain in the face of various factors, such as environmental risks, socio-economic conditions, and personal circumstances (Zickgraf, 2018; Balgah & Kimengsi, 2022; Mallick, 2023). These capabilities include financial resources, access to social networks and support systems, agency and decision-making power, and the capacity to make informed choices (Zickgraf, 2018; Mallick, 2023).

CHAPTER 4: METHODOLOGY

This chapter introduces the research design and methodology employed in this study to gain a comprehensive understanding of women's perspectives on non-migration decision-making processes in the context of climate change-induced risks in Bangladesh. The data collection and analysis followed the example of Hennink, et al. (2020). The chapter outlines the study design for this research, elaborating on the data collection strategies and the data analysis approach. Additionally, it pays attention to the researcher's positionality, the limitations inherent to this study, and the ethical considerations taken into account during the research process.

4.1 Research design

Firstly, secondary data was collected by conducting a literature review on the topics and concepts at the heart of this study: climate change-induced risks in Bangladesh and environmental non-migration. By doing so, in-depth knowledge about the relevant issues was obtained, and a research gap was established. The literature review generated the foundation for the concepts central to the research questions and the framework applied in this study.

Next, an appropriate study design for investigating decision-making processes was created. This study is situated within the research philosophy of interpretivism as I am trying to understand individual and shared social meanings. As a consequence, the conclusions of this research may depict subjectivity and therefore, need to be viewed within the parameters of the interpretive paradigm. It is a qualitative study that takes a deductive approach based on the analytical framework presented earlier but also allows for inductive data to emerge. It was decided that a collective case study is the most suitable research design as the aim of this research is to gain concrete, contextual, and in-depth knowledge about two groups in their real-life settings (Crowe et al., 2011). I conducted two case studies, one in the rural area and one in the urban context, to be able to compare and illuminate different aspects of my research problem. The research design is a descriptive one which makes use of qualitative research methods as this allows me best to investigate opinions and meanings in a local context (Hennink, 2020).

4.1.1 Sampling strategy

The target population for this study are Bangladeshi women that live along the river embankment. This target population was identified based on the specific experiences that women living along the river embankment have with climate change induced risk. Due to that, they can report important information on the study problem. I segmented my study population by the geographic criterion of either rural or urban

setting. The sample size for this study was 23 out of which 12 participants live in the urban space and 11 participants live in the rural space.

The sampling strategies used for this research were of non-probability nature. Due to their flexible process, convenience and snow-ball sampling proved to be the best choice to capture a sufficient diversity of perspectives. Women in both rural and urban context were approached based on their availability and willingness to participate in the study. In the urban setting, I chose a different entry path into the slum each day and talked to the first woman that I encountered. In the rural environment, I walked into a different direction from the boat docking points each day and approached the woman living in the first house along my way. This approach was a conscious decision in order to include participants out of various social circles and thereby, minimise the homogeneity in the sample. As the convenience sampling process still encountered challenges in achieving sufficient diversity within the sample, the study participant targeted by convenience sampling was asked to refer other people from a different religious or economic background. In the rural environment, where the majority of women identified as Hindu, it was more challenging to recruit participants who identified as Muslims or Catholics. Conversely, in the urban environment, where the majority of women identified as Muslims, it was more difficult to find participants from other religious backgrounds such as Hinduism or Catholicism. The same method was used to identify people from a different economic background. Snowball sampling was a great tool to find "hard to reach" participants and to establish a diverse sample. This was particular important for this research due to its intersectionality approach.

4.1.2 Data collection

The following section delves into the data collection methods employed in the study, along with their inherent limitations, and the subsequent strategies implemented to mitigate these limitations. The data collection of this research took place in the Khulna Division, Bangladesh in the period February to April 2023. A detailed description of the study sites including maps can be found in Chapter 2.3 Study sites. The study made use of observations, in-depth interviews and visual story telling as tools for the data collection process.

4.1.2.1 In-depth interviews

Several in-depth interviews were conducted with the help of two different translators in the rural and the urban setting. The total number of interviews that were organised is 23, out of which 12 were done in the urban space and 11 in the rural space. Data saturation was reached at 23 interviews which is why no more interviews were being held. The interviews were held at the interviewees' homes and took between 45 and

75 minutes. The difference in length is based on the knowledge of the participants and their willingness to answer all the questions. The interview guide included semi-structured and open-ended questions. The same interview guide was used for each interviewee as the information given by the participants needs to be broadly comparable for cross-case comparison. Though, depending on the atmosphere during the interview, it was judged whether a question was appropriate to be asked. So, answers may vary in depth and nature. Each interviewee was verbally asked for informed consent and their permission for the interviews to be recorded.

The translators gave a direct translation of my questions from English to Bengali and of the interviewee's answers from Bengali to English, so that I was able to react to the interviewees' responses and stayed in control of the interviews. Each of the interview was transcribed based on the translations. The translator in the urban setting was a female university student who comes from a wealthy background and the translator in the rural setting was a male local who had finished his university degree. I reflect on the way this influenced my research in the positionality section below.

During the data collection cycle, the interview guide was adjusted several times based on new information obtained. To be able to understand women's living conditions questions revolving around the social, economic, political, environmental, and demographic variables were formulated. To obtain information regarding their risk perception and risk tolerance questions surrounding their previous experience with environmental hazards and their capacities to prepare for these were asked. The final questions directly related to their (non-) migration decision. The final interview guide can be found in Appendix A.

In-depth interviews were selected as the most suitable method to gather data as it allows me to gain information on personal experiences. This tool provides an effective way to investigate women's living environment because it enables the researcher to understand the socio-economic context participant's live in. Additionally, this method is useful for elucidating people's decision-making process, beliefs, perception, and motivations pertaining specific behaviour, all of which constitute the central focus of this study (Hennink, et al., 2020). The indicators that made up the interview guide and some of the interview questions are presented in section 3.3 Operationalisation of variables.

4.1.2.2 Visual storytelling

Another research method that was employed in this study is visual storytelling. Upon completion of the interview, each participant was asked to showcase a specific aspect within their home to which they feel a deep personal connection. Following explicit consent from the participants, a photograph capturing both

the participant and the designated element was captured as part of the data collection process. The interviewees were then asked why they feel attached to this specific aspect.

Visual images are a powerful communication tool. The photo voice method allowed participants to reflect on what home means to them and thereby, analyse their feelings and experiences. The photographs also captured the lived experience and offered a deeper understanding of the participants' environment (Pierce, 2018). Furthermore, participants felt empowered and enriched by being involved more deeply in the research process.

4.1.2.3 Observations

In addition to interviews and visual storytelling, observations and simple conversation with locals offered essential insights for grasping the local, societal context. I was observing the environment of my field and people's behaviour throughout the whole research process, but it was particularly my focal point in the first couple of weeks as it built the foundation for several research decisions that needed to follow. During the observations I systematically watched, listened, and questioned people's behaviours, expressions and interactions. I always carried a small notebook with me to write down anything that seemed of importance to my research. I mostly noted down environmental issues that were obvious to the eye, but it also helped me to discover silent social norms and values, especially in regard to gender roles and gender inequality. The observations served as an additional and complementary source and enhanced the data produced by the in-depth interviews.

4.1.3 Data analysis

Once the data collection period was completed, the parts translated to English by the translator in the recorded interviews were transcribed with the help of Otter.ai. During the transcription process any data that exposed information that could identify the participant was removed or replaced, e.g., names with pseudonyms. This multi case study mainly concentrated on a deductive approach, the analytical framework serving as a guide for the thematic analysis. Though, to keep an open mind, I allowed room for themes to emerge that are were related to the analytical framework. For the analysis, I used the programme NVivo as a tool to organise, analyse and visualise the data.

The qualitative data underwent a rigorous analysis process aimed at unravelling its content and extracting its underlying meaning. To achieve this objective, the data was systematically coded to identify relevant themes and topics, facilitating the organisation and clustering of the data. This analytical approach enabled the identification of emerging themes and patterns within the dataset. By that, the data was transformed

into a simplified and comprehensible format, optimising its suitability for further analysis and interpretation, facilitating the alignment of the findings with the original research goals. Quotes were selected from the transcript. These carefully chosen quotes served as supportive evidence to underscore and reinforce the obtained results. The analysis also considered the data obtained from the observations and photographs. Observations served as complementing data for describing women's living environment. The themes and codes were outlined and visualised in a coding tree (Appendix B). Photos were grouped in themes and linked to the data obtained through the interviews. Lastly, a concise and comprehensive summary of the findings was presented in the results section, providing a consolidated overview of the key outcomes derived from the analysis.

4.2 Positionality

My positionality as a researcher was the one of an outsider as I was not a member of the communities that I was studying. This entailed the common challenges of language barrier and lacking the cultural understanding and insider knowledge, but it also offered several opportunities. The fact that I was a foreigner brought about a lot of curiosity. This was very helpful for approaching women and gaining their interest for participating in my research as everyone was happy to talk to me. I believe that this also led to women being more open and willing to share their stories as they didn't fear judgement, though sometimes it also evoked shyness.

The data collection was not only influenced by my own positionality but also by the positionality of my translators. The impact that the gender of my translators had is clearly reflected in how elaborate the answers to gender sensitive questions were. Participants felt at ease when answering gender sensitive questions about their relationship to their husband and their interconnected freedom in decision-making when talking to my female translator. The gender of my male translator posed a challenge for getting honest answers to gender sensitive questions, and asking these questions also made my translator feel uncomfortable. Though, at the same time, my female translator came from a wealthy family and was a university student, which created a certain distance between her and the participants. Her attitude seemed sometimes superior which may be reflected in her translations and generate bias.

My translators' as well as my own positionality were taken into account while analysing the data. I acknowledged the potential influence on the data generation and interpretation due to positionality. To minimise the researcher bias I continuously and consciously self-reflected during the research process.

4.3 Ethical considerations

This research followed the ethical guidelines for qualitative research, taking all aspects of autonomy, informed consent, anonymity, confidentiality, social harm, and cultural sensitivity into consideration (Hennink et al., 2020). Ethical challenges

Autonomy is ensured by allowing participants to decide voluntarily whether to participate in the research (Hennink et al., 2020). All participants were told that their participation in this research was entirely voluntary, that they could leave the interview to their liking and that questions they wished not to answer would be skipped. In addition to making sure that their participation is voluntary, I double checked several times during the interview if they felt comfortable.

Informed consent assures assures that participants' voluntary participation is based on the fact that they have been provided with clear information about the research (Hennink et al., 2020). Participants were informed about the researcher's and the translators' identity and the purpose of the research. Their right of autonomy, anonymity, confidentiality, and protection from harm was explicitly explained to them. The informed consent was asked verbally instead of written to prevent distrust and misunderstandings. Most participants were poorly educated and thus might have not understood the written consent form.

According to Hennink et al. (2020) anonymity is guaranteed if the published data does not lead to the identification of the individual participants. The names of the participants as well as any other details that may identify them were taken out of the transcripts. The individuals' identities were protected by using pseudonyms such as participants or interviewee instead.

Confidentiality is provided by discarding any sensitive or harmful information for any of the participants (Hennink et al., 2020). It has been clearly communicated to the participants how the data will be used, stored, and accessed. The participants were made aware that other researchers will have access to the data.

Participants' well-being was of utter importance during the research. It was ensured that they were not harmed in any way as a consequence of their participation in the study. This includes physical, psychological, emotional, and economic harm. No compensation was offered for their participation, but I made certain that participants don't lose income during the time of the interview. I provided some snacks during the interview to show appreciation for their participation. Additionally, to prevent putting my

participant in an uncomfortable situation I skipped gender sensitive questions that investigated the participants' relationship to their husband or parents' in-law if they were in earshot.

Considering the Bangladeshi culture, I picked up my female translator from the university or from her home to assure that she doesn't need to travel alone. I made sure that my translators returned home before dark as their safety was my responsibility. Furthermore, I employed a male translator in the rural area instead of asking my female translator to travel to remote areas as it may not have been safe or easy for her.

4.4 Limitations and challenges

This study is subject to the typical internal and external validity issues that come with qualitative research. These have been identified and minimised as much as possible. Firstly, I mention the limitations that I encountered during the sampling and data collection phase and secondly, the limitations that I came across during the data analysis. Lastly, I present the practical challenges encountered in the field that might have had an influence on the findings of this research.

The sampling and data collection process was limited by several restrictions. Convenience and snow-ball sampling might have led to sampling bias as participants who are easily accessible or referred by others may not represent the entire population of interest. This restricts the generalisability of the findings to a broader population (Hennink et al., 2020). The use of translators might have introduced challenges in accurately capturing what the participants said. Translations may not fully convey the depth and nuance of participants' expressions, thus resulting in loss or misinterpretation of information. Additionally, interpretation bias might have occurred as the translators understanding of the participants' responses is influenced by their own perspectives and cultural background. Thus, the translators' interpretations may not fully align with the intended meanings conveyed by the participants. Building trust and rapport between the researcher, participant, and translator may be more complex as multiple parties are involved. This may limit the authenticity of the participants' answers during the interview process. Furthermore, misunderstandings, miscommunication, and misrepresentation during the interview were bound to happen due to the researcher and the translators not speaking the same mother tongue. Another issue that might have occurred is that the participants have inaccurate memory about certain topics and can't give reliable answers (Hennink et al., 2020).

I tried to overcome these challenges by establishing clear and open communication with my translators, giving thorough instructions, and making sure they were aware of the research objectives. I minimised the impacts of the language barrier by repeatedly double checking if I understood everything correctly. Additionally, I critically reflected on the potential influence of translation on the results.

Thematic analysis consists of interpretation and subjective judgments by the researcher (Hennink, et al., 2020). The identification and interpretation of themes might have been influenced by my background, personal opinions, and the analytical framework. The analysis process also involved reduction and simplification of the data. This might have led to potential overlooking of context or nuances within the data and loss of rich and detailed information. Furthermore, qualitative research makes it difficult to draw generalisable conclusions. The data that I obtained is based on a small sample size and therefore, can't speak for the whole population.

By following Hennink's et al. (2020) guidelines I tried to ensure a thorough and nuanced analysis. Also, I believe that the literature review provided me with sufficient knowledge to make informed judgements. Generally, qualitative research makes it difficult to draw generalisable conclusions as the data is based on a small sample and limited by a subjective analysis. Though, this case study does not aim to provide a generalisation of the results but instead aims to gain a contextualised understanding of the study problem. It is important to keep these limitations in mind when interpreting the findings of this study as well as to recognise the potential boundaries within which the conclusion can be applied.

Lastly, I experienced several practical and cultural problems during my fieldwork which had an influence on the quality of this study. In particular, the climate in Bangladesh was a great challenge for me but I also suffered from health problems, struggled with the time frame, and was limited by the availability and conditions of the infrastructure. During some of the interviews, participants' answers were falsified as they could not answer my questions freely because we were surrounded by a crowd of people. In addition to that, sometimes the assembled men would intervene in the interview and answer questions before the female participants could or the participants would readdress the question to their husband before responding to me. As a consequence, not all interviews were as informative. The aforementioned problems posed limitations on the quantity and quality of the data.

CHAPTER 5: FINDINGS

In the following, the results are introduced in accordance with the variables presented in section 3.3 and in the order of the sub-questions. At first, a picture of the general living environment at the community level is drawn, highlighting major differences between the rural and the urban setting. After that, I will describe the individual behavioural responses to environmental risks based on the intersection of social identities and the respective (non)migration aspirations and capabilities.

5.1 Living environment at community level

The depiction of the women's living environments, both rural and urban, derived from questions concerning the five drivers (social, political, economic, environmental, and demographic) included in the analytical framework. Below, I will summarise what the five drivers in the setting of this research's two cases of urban and rural Bangladesh entail and how they impact the women's environments. The findings are structured according to the operationalised variables, making a comparison between the urban and the rural case. Quotes from the interviews serve as supporting evidence.

5.1.1 Social driver

The elements of the social driver established during the interviews were place attachment, social network, household dynamics and experiences with migration.

5.1.1.1 Place attachment

In the rural setting, all women that were interviewed expressed a multi-generational place attachment even though they only migrated to their current homes after marriage. Most of the women have had an arranged marriage at a young age (between 13 and 17) and didn't choose for themselves to live there. So, it is not the ancestors of their own family that tie them emotionally to the land but the ancestors of their husbands' family. Many times, the participants didn't know how long the husband's family already lived there or owned the land. However, the husbands' family history adds to women's attachment to the land and fills them with pride. In the following quote, the participant demonstrates that she is proud of living at her husband's place that has withstood and adapted to several different periods of time. '*They have bought this house before 1947, so [her husband's] grandfather actually bought this house at the time of British rule'.* Furthermore, many women in the rural area mentioned that they like their general housing situation, predominantly because they own the land and the house, and it offers everything that they need. Owning the land and being able to build up their own house is connected to emotional and financial investment which in turn leads again to a closer connection with their home. One of the participants contentedly told me that *'they actually made [their house] by themselves. She and her husband didn't take any labour in. So, this is their own house, made by their hard work. So that's why they don't want to actually go anywhere else'.*

On the contrary, in the urban setting women expressed place dysconnectivity as they didn't feel attached to the land that they live on. The women felt no connection to the land as most families moved there recently because of losing their land in a rural area due to environmental hazards. Several women conveyed that they would like to return to their family home in the country site as this is where their family belongs. One of the women told me that *'they have to leave because nobody is from here'* which captures

the detachment most women felt towards their home. Rupsha slum was described as a "stopover", solely a place to stay for earning money but not to actually live. This evokes the perception of impermanence of their home and prevents the establishment of deep emotional ties. Several interviewees from the urban area told me that they are planning to move as soon as they saved enough money.

Furthermore, the land that most women lived on in Rupsha slum was not owned by them but instead they rented it. This further hinders the development of a deeper connection with their home as they don't feel in control over the property that they occupy and face uncertainty and insecurity about the future. As an exception, for those women who own the land in Rupsha slum, there exists a unique and profound connection to their homes. One woman passionately expressed that her home is her ultimate shelter – a place of true security and ownership. Having a home of her own, not subject to rental agreements, makes her feel a genuine sense of belonging. The absence of external ownership claims allows her to truly call it "home" without any encumbrance on her freedom and security. In her own words, she described her home as 'h*er shelter. She was saying that her home is something really secured and safe and that belongs to her. Since her house is of our own, she's not in a rented place, so that feels like a home. Nobody's doing any kind of ownership over her so that's home'*.

When asked to describe what home means to them and what they are most attached to, most women answered their husband and children. This was the case in both settings. Women in the rural setting ranked their land and house as the second most important and women in the urban space pointed out some objects such as a computer or a fridge. As women in the rural setting mostly own the land that they live on and are dependent on their land for their livelihoods, it is of much more importance to them than to women in the urban setting. This is why the land that they grow their crops on or that houses their livestock is one of the first things that comes to their mind when they are asked to describe the meaning of home to them. The woman in Photograph 1 shows the paddy field behind her house and told me that the field is her responsibility as she is the main farmer in her family.

Photograph 1: Woman showing her paddy field

In Rupsha slum, an interviewee proudly displayed her computer during the interview, considering it a profound symbol of what home represents to her. With her computer, she has the opportunity to develop her online business and hopefully save enough money to eventually leave the slum behind (Photograph 2). She affectionately referred to her desktop as *'her heart'*, recognising its crucial role in supporting her studies and aspirations.

Photograph 2: Woman presenting her computer

Some of the women interviewed also emphasised that home represents safety to them, offering shelter and protection during adverse weather conditions like inclement weather or cyclones. Although this sentiment was shared in both settings, it was particularly evident among women living in well-constructed houses. In one instance, a woman proudly showcased how her house effectively shields her from floods. In Photograph 3, she indicated the water level during such floods, demonstrating the security her home provides.

Photograph 3: Woman demonstrating the water level during floods

5.1.1.2 Social network

The sense of community and strong family ties are evident among the women living in both rural and urban setting. It was observed that a relatively large number of their relatives also reside within the same community. This close proximity has fostered a culture of mutual support and assistance among them. The women unanimously acknowledged the importance of being there for each other during times of need, providing both emotional and practical support. One key aspect of this support network is the way they assist each other with childcare responsibilities. Mothers often rely on the help of extended family members to care for their children, allowing them to pursue work or other activities. This communal approach to childcare not only eases the burden on individual mothers but also strengthens the bonds between family members.

While financial support is also part of this network, it is not always feasible for everyone to contribute in that way. However, this does not hinder the strong sense of solidarity and unity they share. As one woman expressed, '*it's not all about the financial thing. It's all about the love they have for each other. So, there is a lot of emotional support'.* This sentiment highlights the essence of their relationship—care and compassion for each other.

The sense of community cohesion is a significant aspect of life in both cases, and it plays a vital role in enhancing a supportive and harmonious environment. This cohesion is particularly pronounced in the rural area, where the overall unity among residents is described as good. Neighbours in these communities have developed a strong bond and are readily available to help each other out in times of need. One of the striking features of this community spirit is the way residents come together and spend their free time collectively. Social gatherings, and communal event, in particular connected to religious aspects, are common occurrences, further reinforcing the connections among neighbours. This not only strengthens interpersonal relationships but also creates a positive and friendly atmosphere within the rural community.

In the urban setting, while the community cohesion is generally strong, a few women mentioned the occasional occurrence of quarrels or disputes among residents. However, these arguments are usually resolved quickly. Residents value the bonds they share with their neighbours and recognise the importance of being there for each other, regardless of the occasional disagreements. This helps to maintain a sense of unity and understanding among the residents.

Interestingly, among women belonging to minority religious groups, there were some instances of conflict. Despite this, they emphasised that they have never been hindered from practicing their religious beliefs. The broader community respects their freedom to follow their religion, contributing to what they described as *'a peaceful life.'* This acceptance and tolerance toward religious diversity further reinforce the notion of unity within the community.

5.1.1.3 Household dynamics

The rural and urban settings exhibit notable differences in the marital practices and the freedom of decision-making for women. In the rural setting, it is customary for women to be married off at a younger age, often arranged by their families. On the other hand, the urban setting sees a higher prevalence of love marriages. This distinction is also reflected in their living arrangements, where women in the rural setting live with their in-laws, while most women in the urban setting reside with their husbands and children. Despite these variations, women from both settings generally reported having good relationships with their in-laws and husbands. However, there appeared to be some hesitancy among participants to openly discuss their relationships with their husbands and in-laws.

One notable aspect affecting women's decision-making freedom is their level of financial independence. In the rural area, women are often more dependent on their husbands due to limited access to economic opportunities. In contrast, most women in the urban setting have occupations, such as working as tailors or

in shrimp factories, which grants them financial independence and the ability to make decisions about how to spend their earnings.

Living separately from their parents-in-law in the urban environment also plays a role in achieving more decision-making autonomy for women. This separation allows them to have a greater say in household matters. Some women even shared stories of how they have moved out of their in-laws' place, leading to a shift in decision-making dynamics within their households. One woman mentioned that *'there was a time when her father-in-law and mother-in-law used to make the decisions but now it's depending on herself and her husband. Whatever they find good they discuss and do that'*. Women from the Rupsha slum claimed that they make all decision concerning the household and their children collectively with their husband, even though their husband was clearly mentioned as the head of the household. In contrast, in the rural setting, while women may be involved in the decision-making, the final authority often rests with the husband.

One poignant observation is that marriage has been a significant barrier to many women realising their dreams of education. The responsibilities and expectations that come with marriage limit their opportunities for pursuing further education or personal aspirations. Though, it is important to note that this is not the sole reason as financial factors also play a big role in restricting their education opportunities.

5.1.1.4 Experience with migration

The theme of migration was present among all the women, with experiences often linked to marriage purposes. It was practice for most women to move in with their husband's family after marriage and this transition often involved relocating to a different place depending on where their husband's family resided. Additionally, in the context of the Rupsha slum, it was evident that many women had migrated there with their families due to the destruction of their homes in the village caused by environmental hazards.

In the rural area, migration to India was a common phenomenon among the Hindu community, with many women having relatives or acquaintances who had migrated to India. The reasons for their migration included seeking better work opportunities and becoming part of the majority Hindu community in India.

In the urban area, migration was a very visible phenomenon. Many families in the community were seen moving away from the slum in search of better living conditions. Most participants reported that their community experiences frequent changes as families arrive and depart.

5.1.2 Political driver

The variables determined for the political driver were support by institutions such as the government or NGOs (Non-governmental Organisations) and trust in the government.

5.1.2.1 Support by institutions

The level of support received by women from either the government or other institutions was not sufficient, often causing feelings of dissatisfaction and disappointment. Nevertheless, in the urban area, a few women were fortunate to receive assistance from NGOs. The NGOs helped by constructing houses at higher elevations, offering protection against floods, and the use of more durable materials like concrete, ensuring safer and more resilient homes for these women.

Additionally, there was a unique case in the urban area where the church which can be seen in Photograph 4 provided the small Catholic community with land to inhabit, rent-free and without any fear of eviction. This arrangement fostered a profound sense of place attachment within the community. As one participant eloquently described it, '*this is her mission place, so she doesn't want to leave this place because of her God'*. This also provided the Catholic participants with a sense of security and belonging, making them want to remain.

In the rural area, women mentioned some assistance during the challenging times of the COVID-19 pandemic. However, the help they received was significantly limited in scope and scale, highlighting the inadequate support available to them during times of crisis.

Photograph 4: Church in Rupsha slum

5.1.2.2 Trust in government

In both rural and urban environments, there is a prevailing lack of trust in the government among the women, primarily due to a history of receiving little to no assistance, even during challenging times. The much-needed financial support from the government remains elusive, leaving them in desperate need. However, it's worth noting that some women have observed improvements in infrastructure, such as the construction of roads and bridges, which have positively impacted their daily lives by enhancing mobility.

Regarding the level of transparency in decision-making, a notable difference exists between the rural and urban area. In the rural setting, women are largely excluded from community decision-making processes. On the contrary, in the urban environment, women are given the opportunity to participate, but their opinions often fail to influence the outcomes, primarily due to corruption. It is observed that decisions are predominantly made by male individuals, leaving women's voices marginalised.

Interestingly, women in the urban area were less satisfied with the results of the decision-making process than women in the rural area. Rural women generally reported being content with the decisions made within their community even though or because they were not involved in the decision-making.

5.1.3 Economic driver

The economic landscape is shaped by several key indicators, namely income levels, property ownership, work opportunities, and the standard of housing available. These factors collectively contribute to the overall economic conditions and dynamics of the communities.

5.1.3.1 Income

The primary source of income in every woman's household is derived from the earnings of their husband or their sons. In the rural setting, the majority of women identified as housewives and primarily engaged in domestic tasks, with some contributing to cultivating farmland as a means to support their family's livelihood. On the other hand, women in the urban setting held a wider range of jobs, including positions as maids, tailors, or employees in shrimp factories located nearby. Despite their varied occupations, the financial stability for these women and their husbands was described as precarious and insufficient, a sentiment shared by many women in both settings. This financial struggle often hindered their access to essential services like healthcare and education.

Both the rural and urban area predominantly housed low-income families facing challenges to make a living. The majority of families live from day to day, unable to save any money for the future. However, I also interviewed a couple of women that are financially more fortunate. In both regions, their wealth was reflected in their living situation which was noticeably distinct from participants with a low income. The living environment for these more fortunate women demonstrated a higher standard of living and greater access to resources.

5.1.3.2 Land ownership

As previously discussed in the context of social drivers, land and property ownership have a substantial influence on women's sense of rootedness and their inclination to stay. In the Rupsha slum, land ownership is not common among participants, pushing them to rent the houses they reside in. Most women in the urban area aspire to achieve the dream of owning their own house. They try to save money to fulfil this aspiration, seeing it as a steppingstone to a better life and an opportunity to move out of the slum setting. The desire for property ownership is not solely rooted in the physical aspect of having a home; rather, it signifies a vision for a more stable and secure future.

In sharp contrast, all participants in the rural area possess the land they live on, with many families also owning agricultural land. These rural lands are utilised for various purposes, including cultivating crops like paddy, vegetables, and fruits, engaging in poultry farming, or practicing aquaculture. So, land ownership in the rural area goes beyond just having a place to reside; it becomes the foundation of their livelihood and economic stability. All in all, property ownership seems to foster a sense of stability and fulfilment in women's living environments, and therefore contributes to women's aspirations to remain.

5.1.3.3 Work opportunities

The contrast in work opportunities for women between the urban and rural areas emerged as a significant theme in the interviews. Participants unanimously reported that there are plenty of work opportunities available for women in the urban setting, whereas the options are relatively limited in the rural area.

In the rural setting, women's work opportunities predominantly revolve around agriculture, particularly as farmhands. One participant expressed her desire for more diverse job opportunities, saying, '*any type of job that is not actually agriculture. She would have preferred to work as an official*'. In fact, most women's dream was to work in a government job, particularly in the role of a primary school teacher. Another woman highlighted the restricted scope for income opportunities, stating, '*except for paddy and fish farming, there is no other chance of earning money. This is the only source of income*'.

In contrast, Rupsha slum emerged as a hub for abundant work opportunities. Participants mentioned that the community is rich in job prospects, attracting people to live and work there. However, women also highlighted that the available work opportunities were confined to the low-paying sector. Moreover, a majority of interviewees perceived the slum as a temporary stop to earn money for the purpose of building a better life elsewhere. As one participant expressed, '*they're basically only using this place for making money'*.

When discussing work opportunities for men, women from both settings agreed that men have greater access to employment opportunities. The availability of work for men, particularly as laborers, is more prevalent in both rural and urban contexts.

5.1.3.4 Quality of housing

In the rural area, the general housing situation predominantly consists of mud houses with corrugated iron sheets, though some concrete houses are also present. Families have a kitchen hut located outside, where cooking is done using fire. Additionally, basic sheds for livestock are common, and often, the yard is shared with other relatives. Most households have a pond, and the sanitary facilities are basic and located outside. Due to their ownership of land with fields, there is typically ample space in the rural households.

In the Rupsha slum, the general housing situation is characterised by bamboo and corrugated iron sheet constructions, or brick/concrete houses. The cramped living conditions are evident as most families are confined to a single room. Cooking is done in kitchen huts located outside, which often poses a fire risk. Another significant challenge faced by residents is the limited access to toilets, as one interviewee shared, '*[…] there are 27 families, and they only have two toilets here. So, they have really a problem regarding the sanitation facilities. […] more than 200 people and only two toilets to share'.* When asked what they would like to change in their community, then most women highlighted the urgent need to improve the toilet situation. The insufficient sanitation facilities and the lack of access to clean and hygienic toilets pose significant challenges and health risks for the community members.

Additionally, a surprising observation emerged during the interviews. While most rural participants expressed satisfaction with their housing situations, the majority of urban interviewees were dissatisfied. This finding piqued my curiosity, especially considering that, in many cases, I perceived the housing conditions in the urban area to be superior, offering more amenities and facilities compared to the rural settings. Based on that, it seems that women derive a greater sense of contentment with their overall housing situation when they own the place, they live in. Beneath, the housing situation in the urban setting

(Photograph 5) and the housing situation in the rural area (Photograph 6) are presented, allowing for visualisation and comparison.

Photograph 5: Housing situation in Rupsha slum

Photograph 6: Housing situation in rural area

5.1.4 Environmental driver

The environmental factor encompasses the challenges posed by the environment and the consequential impact on the communities' way of life, in particular the losses and damages caused.

5.1.4.1 Environmental challenges

Women in both the urban and rural settings are facing similar environmental challenges that significantly impact their daily lives. The main threats mentioned by all participants include floods, droughts, storms and salinisation, which have become increasingly severe over the last decade, particularly in the last three years. Many women noted changes in the seasons, with the traditional six seasons being condensed into four. Moreover, a significant increase in heat has been a common complaint among the interviewees. The majority of participants mentioned that there has been less rain over the last years. Though, the severity of the rainfall has increased which led to more floodings, in particular in the urban area. Salinisation was also stated as a problem most interviewees are confronted with. Additionally, the pollution of the river and the pond water (as can be seen in Photograph 7) was mentioned as a severe issue in the urban setting.

Photograph 7: Pollution of the pond in Rupsha slum

These environmental risks have a huge impact on the participants' daily lives. The rise in temperatures has led to drinking water scarcity, as groundwater levels decline. The woman in Photograph 8 reported that '[filling a bucket of water] *basically took five minutes, three to four years ago. So, the time has doubled… to fill up this type of jar it takes 10 minutes now'*. Additionally, she and some other women reported that their wells provide no water for three months a year, with this period steadily increasing annually. As a result, women must walk at least 20 minutes to obtain drinking water and carry heavy jars back home.

Photograph 8: Woman struggling to get drinking water

Due to rising temperatures, women find themselves using fans more frequently to stay cool, resulting in higher electricity bills and added financial burden, especially for those with limited financial resources. Moreover, women in both settings complained about physical discomfort and health issues because of the heat. Women often experience dizziness, tiredness, and heat-related illnesses, making it challenging to carry out their daily activities. The rising heat also poses difficulties for sending children to school and going to work. The extreme temperatures can make it unsafe and uncomfortable for children to walk long distances to school, and for women, it can hinder their ability to commute to work or carry out their work.

Severe rainfall and floods pose significant challenges to women in both urban and rural settings, impacting their mobility, livelihoods, and overall well-being. These floods often inundate the participants' houses and destroy the infrastructure, hindering their ability to carry out daily activities. In the rural area, entire houses

got submerged by floods and some of the families were forced to evacuate to the nearest shelter. The vulnerability of mud-made houses worsens the impact of floods. One participant recounted how their community experienced flooding due to the breaking down of roads, causing water to completely swamp the area and destroy her mud house. For those whose livelihoods depend on agriculture and aquaculture, the floods led to significant losses. Another participant shared her experience of losing all her fishes when her pond was flooded. The floodwaters washed away the fish, impacting the household's income and food security.

In the urban setting, women also had to deal with property damage and other losses due to floods. One participant shared her experience of waking up to find her house completely flooded, with water reaching up to her bed. The floodwaters swept away her stored food supplies, worth a month's food. The woman seen in Photograph 9 described her continuous struggle with flooding, sharing that her house is often the first to be affected by the rising waters. The frequent flooding has damaged many of her appliances, adding to the financial burden and emotional distress caused by these recurrent events.

Apart from property damage, the floods have also led to unhygienic conditions and health issues. The dirty floodwater has caused skin diseases among many women, posing further health risks to already vulnerable communities. In addition to the physical impact, floods also disrupt educational opportunities for children, as impassable roads prevent them from attending classes. Likewise, women's ability to go to work and earn money is severely hindered.

Photograph 9: Woman standing in front of her flooded home

Cyclones and other storms also pose significant environmental concerns for the communities in both urban and rural areas. Many participants in both settings shared stories of storms, describing how their roofs were ripped off by the strong winds. Many participants highlighted the need for evacuation to safer areas, leaving their homes behind exposed to the storm.

The environmental challenges also extend to their work lives. Flooding often prevents women from going to work, as well as their husbands, whose income is frequently dependent on such work. The rural women are particularly affected as the heat and heavy rainfall negatively impact the fertility of their land, resulting in reduced agricultural production. The increased salinity in the river water further compounds the problem, making it unusable for agricultural use and turning the land infertile due to the increased salt content in the soil (as can be seen in Photograph 10). Additionally, salinisation causes damages to their houses and the hight salt content in the water that is used for cleaning and washing results in hair loss. The difficulties posed by environmental challenges have forced women to adapt their lifestyles and livelihoods, using polluted water for cleaning, and reducing water usage for various purposes due to the scarcity of clean water.

Photograph 10: Salinisation of the ground in the rural area

5.1.5 Demographic driver

The demographic characteristics of religion, level of education, and age emerged as indicators in the interviews.

5.1.5.1 Religion

The demographic distribution within the rural and urban areas disclosed interesting insights. In the rural setting, the majority of participants identified as Hindu, a noteworthy observation as most people in Bangladesh are Muslim. However, I also had the opportunity to interview Muslim women and one Catholic woman in the rural area. Interestingly, during my research in the rural area, no conflicts related to religious differences were observed, and the communities seemed to coexist harmoniously, both the minority and majority communities. However, a couple of participants shared that a significant number of Hindus had migrated to India, and there is some sense of insecurity among the remaining Hindu community. As one participant poignantly expressed, *'the Hindu community they actually don't feel secure. So, in the future, they will not stay. The Muslim will take over everything'*. This quote highlights the prevailing unease and apprehension among the Hindu community about their future in the area.

The urban area exhibited a contrasting distribution, with the majority of women identifying as Muslim, a few as Catholic, and one as Hindu. In this case, it was reported that most Hindu families had relocated from the area, possibly indicating some challenges or factors influencing their decision to move. Additionally, the small Catholic community experienced some conflicts, with one household putting up a gate as a protective measure from potential disputes with others. A Catholic woman from the urban area expressed her perception, stating, '*that they have a lot of quarrels with Muslims, and they are the minority, so they are being oppressed*'. Despite these occasional conflicts, the women in the urban Catholic community shared that most arguments were resolved quickly, and they expressed contentment and happiness within their religious community. They acknowledged that they would be a minority regardless of where they lived in Bangladesh.

5.1.5.2 Level of education

The level of education was generally higher in the urban area than it was in the rural region. However, a common trend emerged in both settings: most women had to discontinue their education before reaching tenth grade due to early marriages. When participants were asked to envision where they would be now if they had not been married, they all expressed that they would have completed their education and aspired to work within the government or business sector. This shows the impact that early marriages have on women's educational trajectories. Another factor for dropping out of their studies is the lack of financial

resources. A woman in the slum mentioned that *'[…] if she would have some financial support, she would have completed her study and do some job'.*

The participants shared a common dream for their children, which derives from the desire for a better future. They expressed the hope that their children would have the opportunity to pursue education and fulfil their aspirations before considering marriage. This shift in thinking reflects a growing awareness of the importance of education as they prioritise their children's development over early marriage.

5.1.5.3 Age

In the urban setting, the elderly population showed a strong inclination to remain, while the younger generation displayed a strong desire to move away. This trend was consistent with expectations. However, what was interesting was the difference of tendencies observed in the rural community. Contrary to the urban setting, young people in the rural area also expressed a strong inclination to remain.

5.2 Behavioural response to risk on an individual level

The second sub-question investigates the individual behavioural response of female participants to environmental risks. For this, their risk perception, and their risk tolerance play an important role. In the following, the results for these two indicators are presented.

5.2.1 Risk perception

Many of the participants shared their experiences of facing severe weather events in the past, which left a lasting impact on their lives. The effects of these events were evident in the damages caused to their houses. As already mentioned, some women also had to evacuate to shelters in extreme situations, which was a traumatic experience for them. This further heightens their sense of vulnerability and risk perception.

These traumatic events have left an impact on the women, regardless of their age, level of education, or religious background. Their concerns about environmental threats in the future were clearly visible, as they mentioned the unpredictability and severity of these events. This heightened awareness is reflected in the statement made by one participant who mentioned that '*because of so many events happened, now everyone is more aware'.*

However, interestingly, women from the Catholic community in the slum appeared to be less concerned about environmental threats. They strongly believed that everything is in God's hands, and He will protect

them. This religious perspective and the proximity to their church offered them a sense of comfort and peace amidst the uncertainty and worries surrounding environmental risks.

Furthermore, it was noticeable that the women living in concrete houses seemed to be less concerned about environmental hazards, as they felt safer in their more robust and stable houses. This highlights the role of housing quality in influencing women's perceptions of risk and safety. One of the women said that '[…] *she doesn't evacuate. Some people can also come here for shelter. Her neighbours… sometimes they come to her for shelter'.*

5.2.2 Risk tolerance

To add to their risk perception, most participants have limited capacities to adequately prepare for extreme weather events and to recover from damages afterwards. Women's risk tolerance seems to be primarily influenced by their economic conditions and the quality of their houses. Women that were financially better off indicated that they were comparatively less affected by environmental risks. Their financial capabilities enable them to invest in measures that mitigate potential risks. The lack of resources, but also the lack of knowledge regarding measures to prepare contribute to higher vulnerability to environmental risks among the poor.

Despite these challenges, some women have taken proactive steps to enhance their preparedness and resilience. They shared stories of past evacuations and explained how they now prepare for potential disasters. For instance, one participant keeps a bag packed with essential documents, bank papers, clothes for her family, and dried foods for quick evacuation. As the participant expressed, '[…] *I will carry my daughter in one hand and the bag in the other and I can run away'.* She also mentioned that '*materialistic things are not important. The documents, the papers are more important for her'.*

Additionally, many women have improved the construction of their houses to withstand extreme weather events. They have taken measures like stabilising the roof, elevating the house's foundation to prevent water damage (as can be seen in Photograph 11), and placing bricks under furniture to protect it from floods (as can be seen in Photograph 12). Communication and early warning systems also play a crucial role in their preparedness. Participants mentioned receiving information from national TV, neighbours, and signals by the warning service, helping them stay informed about potential hazards and enabling them to take action in time.

Photograph 11: Elevation of the foundation of her house

Photograph 12: Bricks under furniture for elevation

5.3 Aspirations

When examining women's perceptions of non-migration, a distinct trend emerges, with rural women aspiring to remain and urban women expressing the desire to move elsewhere. The reasons behind these aspirations vary between the two settings.

In the rural area, women are reluctant to move despite environmental risks due to several factors. First and foremost, land ownership plays a crucial role. Many women's families own land in their villages, which serves as a strong anchor tying them to their current location. Leaving would mean giving up their property and their livelihoods. Additionally, the social bonding and close-knit relationships with their relatives and community further discourages them from moving. One participant emphasised her non-migration perception, stating, *'that all of her lands and property is here. So, if she leaves to a different place, she has to leave the land or the property here. And here they have actually the neighbours and they have been living here for so many years. So they have a bonding together so that's why she doesn't want to leave this place'*. For these rural women, their sense of identity and belonging are deeply intertwined with their land and community, making the prospect of leaving intimidating. The participants from the rural setting seem to be content with their living conditions and are less inclined to consider moving.

Conversely, in the urban area, many women expressed a strong desire to move despite having good relations with their relatives and neighbours. Their motivation for wanting to leave is primarily driven by their aspiration for better housing conditions and improved living standards. Living near the river and within the slum exposes them to environmental risks and unpleasant living conditions, pushing them to seek a safer and more fitting environment that offers better opportunities for themselves and their children. As one participant stated, '*if she can afford a better place, then she will, of course, leave'*.

However, it is essential to acknowledge that there are exceptions to the trend. One remarkable exception is observed among all the participants from the Catholic community residing in the Rupsha slum. They share the common aspiration to remain on their missionary land. This strong religious connection and the provision of land by their church creates a unique sense of attachment, leading them to prioritise staying despite the challenging living conditions and environmental risks in the slum. Additionally, there are a couple of women who are in a better economic situation and have achieved property ownership in Rupsha slum. On top of that, the houses that they live in are made out of concrete and can easily withstand the environmental risks that they are exposed to. Due to that, they don't have any aspirations to move and are therefore an exception to the general trend observed in Rupsha slum. These exceptions illustrate the

complexities and nuances in women's perceptions of non-migration and the multiple factors that shape their aspirations to remain in their respective living environments.

5.4 Capabilities

To answer the fourth sub-question, I investigated women's perception on non-migration by looking at their capabilities.

The participants' capabilities to remain in their current living situations are deeply intertwined with their constraints in pursuing migration. One of the primary factors affecting their inability to move is the lack of financial resources. The financial constraints not only hinder them from seeking better living conditions elsewhere but also limit their capacity to build proper protections against environmental hazards. However, it is worth noting that many of the women seem to have adapted to their circumstances and have become resilient in rebuilding their houses after floods or provisionally preparing for environmental challenges. Moreover, the presence of a reliable social network plays a crucial role in enhancing their capabilities to cope with challenges. Having a support system that they can rely on during difficult times provides them with a sense of security and the strength to hold out against environmental hazards.

In the case of the Rupsha slum residents, the desire to move is prevailing, but the lack of a migration strategy poses a barrier. Financial constraints also play a significant role here, as most of the women are unable to save money to fulfil their migration dreams. This is reflected in the quotes of two participants: '*she doesn't really have any plan because everything they earn really gets spend within a month so they can't really save*' and '*they really want to go away from this environment, but they're not capable because of the financial condition'.* However, despite these issues, some women came up with creative ideas for potential solutions. For example, the idea of building an online business to earn additional income shows their resourcefulness and ambition.

Furthermore, the cultural aspect of decision-making within the family has an impact on shaping women's migration plans. The participants mentioned the need to consult with their families before making any decisions about migration, most women adding that their husband is not willing to move. Even though most women emphasised collective decision making within the family, their husband makes the final decision for this matter and thus, represents another obstacle for their migration aspirations.

Overall, the participants' capabilities to remain or migrate are highly influenced by financial resources, social support, resilience, and cultural norms. As discussed above, the interplay of these factors differs depending on women's demographic background and their respective living environment.

Chapter 6: Discussion

The discussion chapter provides a comprehensive summary of the main findings obtained from the study, answering the research's sub-questions. It then establishes connections between these findings and the behavioural expectations outlined in the operationalisation of the variables. Furthermore, the discussion delves into the broader inferences of the results, drawing connections to existing literature and highlighting the study's contribution to the field. The chapter also addresses the limitations of this study and finally, presents the practical implications.

6.1 Discussion of the sub-questions

The results section of this study provides valuable insights into the factors influencing women's living environments in in two specific locations in the urban and the rural area of Bangladesh. By examining five key drivers - social, political, economic, environmental, and demographic - the study sheds light on the complexities of women's experiences and aspirations within their respective communities. Furthermore, it provides a comprehensive understanding of women's perceptions and behavioural responses to environmental risks, and their aspirations and capabilities to migrate or stay put.

The first sub question **"What factors influence women's living environment, and how?"** was explored by analysing the data based on the five factors provided by the analytical framework and their respective impact on women's environment.

The social driver analysis reveals differing dynamics between urban and rural settings. While rural women exhibit strong place attachment to their husband's ancestral land, urban women experience a sense of place dysconnectivity, often due to recent migration and rental agreements. Strong community ties and family support are evident in both settings, although occasional conflicts may arise in urban communities, particularly for the Catholic minority group. Household dynamics differ, with rural women having less freedom in the household decision-making partially due to living with their parents' in-law, while urban women have more financial independence and decision-making autonomy.

Regarding the political driver, inadequate support from government and non-governmental institutions is evident in both urban and rural areas, leading to dissatisfaction among women. However, some urban women received assistance from NGOs, leading to safer and more resilient homes. Trust in the government is generally low in both settings due to the lack of assistance during difficult times in the past. Decisionmaking processes differ, with rural women often excluded from community decisions and urban women facing challenges in having their opinions valued due to corruption and male dominance.

Interestingly, rural women reported greater satisfaction with community decisions compared to the urban participants. While the exact reason for this was not uncovered by the collected data, a potential explanation may be that their lack of involvement in the decision-making process results in less disappointment as they don't feel like their voices are neglected.

The economic driver analysis highlights both urban and rural women's household reliance on their husbands' or sons' earnings, leading to financial instability and limited access to essential services. While property ownership is an aspiration for urban women, land ownership in rural areas provides the foundation for livelihood and economic stability. Work opportunities differ, with urban women having access to more diverse jobs and are therefore less financially dependent on their husband, while rural women lack employment prospects and thus are highly dependent on their husband. The quality of housing also varies, with the rural area featuring mud houses, and the urban setting offering sturdier housing but with many urban women expressing dissatisfaction with their living conditions compared to the rural interviewees.

The environmental driver analysis demonstrates that both urban and rural women face similar environmental challenges, including floods, droughts, storms, and salinisation. These challenges significantly impact their daily lives, affecting access to drinking water, causing health issues, and disrupting livelihoods through floods and salinisation which is particularly challenging for the rural women engaged in agriculture. Cyclones and storms also pose significant environmental concerns, leading to property damage, and hindering mobility and work opportunities.

The demographic driver analysis highlights the religious distribution in both settings, with a majority of rural women identifying as Hindu and most urban women as Muslim. In the rural area, coexistence between the Hindu and Muslim communities is generally harmonious, although some insecurity is felt among the Hindu community due to the growing Muslim population in Bangladesh. The level of education is generally higher in the urban area, but both settings see many women discontinuing their education due to early marriages and financial constraints. Regarding age, urban elderly populations tend to stay, while the younger generation desires to move away, contrary to the rural setting, where young people also express a strong inclination to remain.

To answer the second sub question **_"How does the living environment influence women's behavioural response to environmental risk?"_** the study delves into women's risk perception and risk tolerance.

Women's previous experiences with and the lasting impact of severe environmental events on women's lives heightens their awareness of environmental threats. Thus, women are more concerned about environmental challenges that they might be facing in the future. Women have varied perceptions of risk depending on the type of housing that the live in. Those in sturdier, concrete houses tend to feel safer and more secure during extreme weather events compared to those in more vulnerable mud houses. Housing quality plays a crucial role in shaping their risk perception and response strategies.

Regarding risk tolerance, the study highlights that women's economic conditions, housing quality, and social networks influence their capacities to prepare for and recover from extreme weather events. Economically better-off women are more capable of investing in mitigation measures and have the means to recover faster from environmental hazards. In contrast, poor women face higher vulnerability to environmental risks due to limited resources and lack of knowledge. Despite these challenges, many women take proactive steps to enhance their preparedness and resilience, such as keeping essential documents ready for quick evacuation, and improving their houses' construction.
The presence of strong social support networks within both the rural and urban community also influences how the women can cope with environmental risks. Women with a reliable support system may feel more secure and better equipped to deal with challenges.

Intersectionality plays a crucial role in shaping women's risk perception and their capacities to prepare for and respond to environmental risks. The participants' diverse intersecting identities, such as economic status, housing conditions, and access to resources, influence their risk perception of and their capability to cope with extreme weather events.

The findings on the third sub-question *"How do these factors affect women's aspirations to remain?"* demonstrate that the varying living environments between urban and rural settings significantly influence women's aspirations regarding non-migration.

In the rural area, women express a strong inclination to stay due to several influential factors. First and foremost, the ownership of land holds immense importance for these women, serving as a crucial anchor that ties them to their current location. Their land represents not just their livelihood but also carries cultural significance, reinforcing their sense of identity and belonging to their husband's ancestral land. Additionally, the close-knit community ties in the rural area act as a supportive social network, fostering a strong sense of belonging and making the women less inclined to leave their community. Moreover, the support system in rural areas plays a vital role in shaping women's aspirations to remain. Family and

community support provide a safety net during challenging times, offering emotional and financial assistance, which reinforces their desire to stay and withstand environmental risks together with their community.

In contrast, the urban setting presents a different outlook on aspirations for non-migration. Many urban women express a desire to move to other locations, driven by their aspirations for improved housing conditions and higher living standards. In urban areas, the quality of housing significantly influences women's perceptions of risk and safety. Dissatisfaction with current living conditions and a desire for better facilities and opportunities motivate these women to seek out migration options. Despite this trend in Rupsha slum, there are unique exceptions, such as the Catholic community. The provision of land by the church and religious connections foster a strong sense of place attachment among this community, leading them to prefer staying in their current location despite the challenges they may face.

The response to the fourth sub-question *"How do these factors influence women's capabilities to remain?"* differs between the rural and urban setting and is closely tied to the interplay of economic factors, social support systems, migration strategies, financial constraints, and cultural norms.

Financial resources play a crucial role in shaping women's capabilities to remain in their current living environments. Economic stability empowers women to seek better living conditions elsewhere if necessary or to build protection against environmental risks. Those with greater financial means have the capability to invest in sturdier housing, access to healthcare, and adopt resilience strategies, making them more capable of withstanding environmental challenges. For those with aspirations to move, financial constraints and the lack of a migration strategy serve as significant barriers. Without a clear plan or sufficient financial resources, women may find it challenging to initiate the migration process. Women's financial situation forces women with migration aspirations to remain in vulnerable environments.

Social support networks also significantly impact women's capabilities to cope with challenges and remain in their communities. In both urban and rural areas, strong social support systems act as a safety net, providing emotional and practical assistance during difficult situations. Women with reliable support systems can rely on their communities for help, enhancing their resilience and capacity to overcome environmental hazards. Household dynamics regarding decision-making within the family further influence women's migration plans. In a patriarchal society such as Bangladesh, where men traditionally hold decision-making authority, the women face challenges in pursuing migration even if they aspire relocation.

Such gendered decision-making processes limit the women's autonomy and agency in shaping their living environments.

6.2 Reflection on the results

The findings align with the theoretical background, which incorporates Sen's (1985) capabilities approach, Zickgrafs (2018) approach to non-migration, and the concept of intersectionality. Sen's (1985) capabilities approach emphasises people's agency and freedom to make choices and achieve their preferred functioning. The study's results reflect Sen's perspective that access to essential resources is crucial for people to realise their capabilities. According to Zickgraf's (2018) approach to non-migration. The research explores voluntary non-migration, particularly among rural women who express a desire to stay due to place attachment, community ties, and family support, and involuntary non-migration among urban women who aspire to move but face barriers due to financial constraints.

Overall, the analytical framework used in the study, based on Mallick's (2023) work, effectively captures the multidimensionality of women's living environments and behavioural responses to environmental risks. It highlights the interplay between various drivers and individual aspirations and capabilities, emphasising the importance of understanding women's perspectives in the context of their demographic backgrounds. The study's emphasis on intersectionality is particularly crucial in understanding the complexities of women's migration decisions and vulnerability (Hankivsky, 2014). By considering women's diverse intersecting identities, such as economic status, housing conditions, access to resources, age, and religion the study provides a more nuanced understanding of their experiences.

Most of the findings of this research correspond with the expectations set by the literature review and Mallick's (2023) framework. As anticipated, factors such as place attachment, social networks, and limited decision-making freedom within the household play significant roles in women's preferences for nonmigration (Foresight, 2011; Farbotko, 2018; Mallick, 2023). Similarly, income, property ownership, and housing quality were identified as important factors affecting migration aspirations, which aligns with existing literature on the subject (Mallick, et al., 2011; Assaduzzaman, et al., 2023). The preference of rural residents to remain in their current location and the desire of urban residents to migrate also align with previous research (Tabassum, et al., 2019).

However, the study also revealed some surprising results that deviated from the literature's expectations. Contrary to the expected behavioural response, it was unexpected to find that women in rural areas expressed a desire to stay despite not receiving political support, lacking involvement in decision-making

processes, and lacking faith in the local government. Additionally, the finding that rural women chose to remain despite facing a lack of work opportunities challenges the assumption that employment prospects are a primary driver for migration aspiration. This suggests that the social factors such as place attachment and social network outweigh the importance of political support and work opportunities and therefore can be considered most significant drivers for non-migration preferences in the rural context.

On the other hand, the study found that in the urban setting, the desire to migrate was primarily influenced by housing situations rather than environmental challenges. This suggests that the quality of housing and the pursuit of better living conditions play a more critical role in motivating urban women to seek out migration options than the concern of environmental threats.

Women's meaning of home

The findings reveal that place attachment plays the most crucial role in shaping women's decision to stay in their current location. This aligns with existing literature, which also emphasises the importance of place attachment (Foresight, 2011; Adams, 2016; Farbotko, 2018; Mallick & Schanze, 2020). While the physical aspects of housing, like its quality and facilities, are important, it is the emotional connection and personal feelings that greatly impact whether someone chooses to migrate or stay. For instance, when people have a strong attachment to their community, even if their living conditions are far from perfect, they may not feel the need to move elsewhere. Their emotional ties to their community, along with their social and family connections, make them want to stay despite environmental risks.

This difference between how outsiders may view their living environment based on factual conditions and between their personal perception highlights the significance of studying people's subjective experiences in understanding non-migration decisions. It emphasises the importance of considering the emotional and psychological aspects of individuals' relationship with their home as Czaika and Reinprect (2022) also mentioned. Understanding the meaning of home and its influence on decision-making can lead to more effective policies that address the complex interplay between environmental risks, housing conditions, and people's deep need for a place they can call home.

Women's aspirations in the context of a patriarchal system

The results of this study suggest that women in the rural area fall under the category voluntary nonmigrants as they don't aspire to move, and most women in the urban area might be categorised as involuntary migrants as they have aspirations to migrate but don't have the capabilities to move. The literature often addresses the concept of "gendered immobility," portraying women as voluntary

nonmigrants due to cultural norms and traditional gender roles (Carling, 2005; Lutz, 2010; Jónsson, 2011). However, it is crucial to critically examine the notion of voluntary decision-making in the context of gender inequality (Jónsson, 2011). While some women may express a desire to stay due to factors like place attachment and community ties, it is essential to question to what extent these decisions are genuinely voluntary. Gender inequality, as highlighted in the literature review, restricts women's access to resources, education, and economic opportunities, which limits their capability to migrate even if they desire to do so (UN Women, 2022). Additionally, traditional gender norms and patriarchal power structures restrict their freedom and agency in making migration decisions (Carling 2005; Jónsson, 2011). This raises the question of whether women, in such contexts, have genuine autonomy in choosing non-migration or whether their choices are heavily influenced by societal constraints.

However, it is crucial to acknowledge that despite facing limitations and gender inequality, many women strive to assert their agency and autonomy (Nazneen, 2017). The results show that they find ways to work around their constraints and build resilience against environmental threats by utilising all available means. Thus, the findings highlight the resourcefulness and determination of women to navigate challenging circumstances and achieve their aspirations, including staying despite environmental threats.

Intersectionality lens
The intersectionality lens implemented in the analysis is crucial in understanding the complexities of women's migration decisions and vulnerability. Existing analyses also often overlook the diversity among women, treating them as a homogenous group (UN Women, 2022). The results indicate that women's experiences are shaped by a combination of factors, including gender, poverty, age, and religion, which interact to influence their opportunities and constraints. Generalisations in the literature, such as women are voluntary non-migrants, are misleading and harmful, as they overlook the unique challenges faced by different groups of women and neglect their perspectives and agency (Hankivsky, 2014).

This study shows that, instead of assuming uniform migration preferences based on gender or location, the diverse experiences and aspirations of women need to be considered for adopting gender-sensitive approaches that recognise and address the intersecting factors influencing their migration decisions. Thus, moving forward, it is essential to go beyond the binary definition of gender and instead focus on addressing the distinct challenges faced by different groups of women. This emphasis on intersectionality will be crucial in informing future policy formulation and actions. This involves empowering women economically, socially, and politically to ensure that they have the agency to make genuine choices about migration and non-migration.

6.3 Contribution to the literature

The results of this study contribute valuable insights to the existing literature on environmental nonmigration decision-making, and the impact of environmental hazards in urban and rural settings of Bangladesh. Furthermore, this research goes beyond the binary definition of gender and acknowledges the significance of intersectionality when understanding women's perspectives on non-migration. As a result, the study has filled a gap in knowledge by providing nuanced insights into the diverse experiences and aspirations of women in urban and rural settings in Bangladesh. The research adds depth to the literature on migration and mobility by providing a rich and context-specific understanding of how women navigate and adapt to their living conditions, taking Bangladesh's socio-cultural dynamics into account.

6.4 Limitations

It is important to acknowledge certain limitations in this study. As already mentioned in the methodology section, this study is bound by the typical internal and external validity issues that come with qualitative methods. The researcher bias needs to be taken into consideration when assessing the credibility of the results. As a researcher, I bring my own assumptions, and prior experiences into the study, which might have an influence on the data collection, the analysis, and the interpretation. Additionally, the authenticity of the participants' answers influenced by the translators and might impact the outcomes of this study. While researcher and translator bias are unavoidable, I tried to minimise its impact on the study's credibility.

The generalisability and the diversity of the results is limited by its small sample size. Generalisability is also impacted by the sampling and data collection limitations as the participants who were easily accessible or referred by others may not fully represent the entire population of interest. The small size of the sample in this research means that the participants don't fully represent the diversity and complexity of social identities within the larger population. In a qualitative study like this, where participants' perspectives and experiences are central to understanding the research question, having a diverse and representative sample is crucial to explore the complexities of intersectionality. Despite my efforts to include participants from various backgrounds, it is important to acknowledge that certain marginalised groups or minorities within the larger population are underrepresented or not included at all in the small sample. This may have important implications for the study's findings and conclusions.

It is crucial to acknowledge the practical and cultural challenges, that shaped the research process and influenced the data collected. When interpreting the research results, it is important to consider the impact of cultural norms, particularly the interview dynamics within a patriarchal society. These norms might have

influenced participants' responses, leading to potential hindrance in answering freely and openly, especially during interviews with the male translator. Despite these limitations, the study makes an effort to present the findings within the context of the cultural challenges faced during fieldwork.

Chapter 7: Conclusion

The final chapter of the research paper presents a comprehensive response to the main research question, drawing upon the insights obtained from the results and discussion sections. It concludes by offering practical implications and recommendations based on the findings.

7.1 Answer to the main research question

The purpose of this research is to gain a comprehensive understanding of how women perceive nonmigration decision-making in the context of environmental risks in Bangladesh. This involves examining the living environments of women in both urban and rural settings, their behavioural responses to environmental risks, and their aspirations and capabilities to either migrate or stay. To achieve this goal, the study conducted twenty-three interviews and utilised observations and visual methods to collect data. Thematic analysis of the data allowed for insights into the research questions.

Based on the findings provided, the main research question **"What are women's perspectives on nonmigration decision-making processes concerning climate change-induced risks in Bangladesh?"** can be answered as follows:

The results of this study suggest that women in both urban and rural areas of Bangladesh have distinct perspectives on non-migration decision-making processes concerning climate change-induced risks. These perspectives are shaped directly and indirectly by various social, political, economic, environmental, and demographic factors. As the two individual case studies reveal, the differences in living environments between the urban and the rural setting play a crucial role in shaping the varying aspirations of women concerning migration. In the rural area, women express a strong attachment to their land and community, leading them to prioritise remaining despite environmental challenges. Their emotional connection to their husband's ancestral homes and land ownership fosters a sense of belonging and identity, making the prospect of migration less desirable. In contrast, women in the urban area demonstrate a greater inclination towards migration, primarily driven by the aspiration for improved living conditions and better opportunities. Furthermore, women in the slum express a lack of connection to the place, which can be attributed to their recent migration from their village homes that were adversely affected by environmental hazards. They also conveyed a desire for a safer and more suitable environments for themselves and their families as living in the slum near the river exposes them to heightened environmental risks. Though, the findings indicate that migration decisions in the urban region are primarily influenced by the lack of socio-economic development.

Women's decision-making processes are also influenced by cultural norms and gender dynamics, where men often hold the final say in migration decisions and women don't have full autonomy over their own lives. Additionally, social identities, such as class, religion, level of education, and age intersect with gender to shape women's experiences and decision-making processes. One notable finding is that financially welloff women are less inclined to migrate, as they exhibit a higher risk tolerance. This could be attributed to their living conditions in concrete houses, which offer better protection against environmental risks, and their access to financial resources, allowing them to adequately prepare for potential challenges. Another remarkable finding is the Catholic community in the slum expresses a preference to remain. This inclination is influenced by the provision of land by the church and their strong religious connection to both their community and the land they occupy. These results highlight the need for a complex and inclusive approach.

In conclusion, the discussion highlights the need to challenge assumptions about women's migration decisions and recognise the complexities of gendered immobility in contexts of gender inequality. It underscores the importance of supporting women's agency and resilience while acknowledging the intersecting factors that shape their vulnerability. A more nuanced understanding of women's experiences and aspirations will lead to more effective policies that promote gender equality, reduce vulnerability, and address climate change impacts on women in both rural and urban settings.

7.2 Practical implications

The practical implications of this study can be beneficial for various stakeholders involved in climate change adaptation and women's empowerment in Bangladesh. The study's findings offer valuable insights for policymakers and practitioners working on issues related to environmental non-migration. The results suggest that gender-transformative policies and interventions in climate change adaptation strategies and migration are necessary. Policymakers can use this information to design programmes that address the specific needs and challenges faced by women in both urban and rural areas. By considering women's perspectives on non-migration, policies can be more effective in building resilience and enhancing adaptive capacities in vulnerable communities.

While this individual study may not have direct impact on its own, it is part of a larger process of knowledge building that can lead to positive change and increased awareness about the importance of considering women's perspectives in climate change adaptation and resilience-building efforts. By raising awareness

about the specific challenges faced by women and the role of gender in climate change, research can foster a more inclusive and gender-sensitive approach to climate action.

7.3 Recommendation for future research

A potential research recommendation is to conduct a survey with a larger sample size as it would enhance the representativeness and generalisability of the findings. By including a more extensive and diverse group of women from various settings, researchers can capture a wider range of experiences, aspirations, and challenges related to (non-)migration decision-making. This broader scope would allow for stronger comparisons between different contexts, shedding light on the variations in women's responses to climate change-induced risks based on their living environments. A survey approach can also serve for collecting quantitative data, complementing the qualitative insights gained from in-depth interviews.

Additionally, exploring urban areas beyond the slum can reveal how women in different socio-economic conditions and housing types perceive and respond to environmental hazards. For example, understanding the perspectives of women living in formal housing, such as apartment buildings or residential areas, would help uncover how factors like housing quality and access to services influence their (non-)migration decision-making processes. This knowledge would be valuable for developing policies that address the specific needs and vulnerabilities of women in different urban settings.

Another valuable recommendation for future research is to incorporate longitudinal data in studying women's non-migration decision-making processes concerning climate change-induced risks. By using longitudinal data, researchers can capture the temporal dimension of women's decision-making processes and adaptability to environmental challenges. This approach would offer a more dynamic and nuanced understanding of how women's living environments and aspirations transform over time. It would allow researchers to identify trends and potential turning points in women's migration preferences and risk perceptions. For instance, the study could track changes in women's risk perception, risk tolerance, and desire to remain or migrate as climate-related hazards become more frequent and severe. As climate change is expected to intensify environmental risks, understanding how women's experiences and perceptions evolve in response to these changes becomes crucial. Additionally, longitudinal data would help explore the long-term impact of policy interventions and adaptation strategies on women's decisionmaking processes. Researchers could analyse how specific initiatives aimed at enhancing women's resilience and coping capacities have influenced their perspectives on non-migration. Understanding the effectiveness of such interventions can inform the development of more targeted policies in the future.

References

Adams, H. (2016). Why populations persist: mobility, place attachment and climate change. *Population and Environment,* 37, 429-448.

Agrawala, S., Ota, T., Ahmed, A. U., Smith, J., & Van Aalst, M. (2003). *Development and climate change in Bangladesh: focus on coastal flooding and the Sundarbans*. Paris: OECD.

Ali, S. M. (2022, September 15). Bangladesh's Declining Democracy. *Newlines Institute.* https://newlinesinstitute.org/south-asia/bangladeshs-declining-democracy/

Asia & Pacific Office. (2022). State of Gender Equality and Climate Change in Bangladesh. *United Nations Development Programme.* https://wedocs.unep.org/20.500.11822/40845.

Asian Development Bank. (ADB). (2023). Poverty Data: Bangladesh. https://www.adb.org/countries/bangladesh/poverty

Assaduzzaman, M., Filatova, T., Coenen, F., & Lovett, J. (2020). Freedom of choice to migrate: adaptation to climate change in Bangladesh. *International Journal of Sustainable Development & World Ecology*, 27(7), 652-661.

Assaduzzaman, M., Filatova, T., Lovett, J. C., & Coenen, F. H. (2023). Gender-Ethnicity Intersectionality in Climate Change Adaptation in the Coastal Areas of Bangladesh. *Sustainability*, 15(4), 3744.

Balgah, R. A., & Kimengsi, J. N. (2022). A review of drivers of environmental non-migration decisions in Africa. *Regional Environmental Change*, 22(4), 125. https://doi.org/10.1007/s10113-022-01970-8

Bangladesh Bureau of Statistics. (2018). Bangladesh Statistics 2018. http://bbs.portal.gov.bd/sites/default/files/files/bbs.portal.gov.bd/page/a1d32f13_8553_44f1_92e6_8ff80a4ff82e/Bangladesh%20%20Statistics-2018.pdf

Blue Gold Program. (2016). Final Report on Environmental Impact Assessment (EIA) on Rehabilitation of Polder 26. http://bluegoldbd.org/wordpress/wp-content/uploads/2016/06/EIA-Report-of-Polder-26.pdf
Carling, J. (2002). Migration in the age of involuntary immobility: Theoretical reflections and Cape Verdean experiences. *Journal of ethnic and migration studies*, 28(1), 5-42.

Carling, J. (2005). Gender dimensions of international migration. *Global migration perspectives,* 35(1), 1-26.

Crowe, S., Cresswell, K., Robertson, A., Huby, G., Avery, A., & Sheikh, A. (2011). The case study approach. *BMC medical research methodology*, 11(1), 1-9.

Czaika, M., & Reinprecht, C. (2022). Why do people stay put in environmentally stressful regions? Cognitive bias and heuristics in migration decision-making. *Regional Environmental Change*, 22(3), 84.

Eckstein, D., Künzel, V., & Schäfer, L. (2021). *The global climate risk index 2021*. Bonn: Germanwatch.

Farbotko, C. (2018). Voluntary immobility: Indigenous voices in the Pacific. *Forced Migration Review*, (57).

Fleury, A. (2016). Understanding women and migration: A literature review. *Washington, DC*, 55.

Foresight. (2011). *Migration and Global Environmental Change*. The Government Office for Science, London.
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_dat a/file/287717/11-1116-migration-and-global-environmental-change.pdf

Google Maps. (n.d.). [Locations of interviews in the rural area]. Retrieved July 19, 2023, from https://www.google.com/maps/@22.7630448,89.3845709,13.15z?entry=ttu

Google Maps. (n.d.). [Locations of interviews in the urbanl area]. Retrieved July 19, 2023, from https://www.google.com/maps/@22.8058533,89.5770931,16.22z?entry=ttu

Hankivsky, O. (2014). Intersectionality 101. Institute for Intersectionality Research & Policy, SFU. https://womensstudies.colostate.edu/wp-content/uploads/sites/66/2021/06/Intersectionality-101.pdf

Haque, M., Islam, T. M., Tareque, M. I., & Mostofa, M. (2011). Women empowerment or autonomy: A comparative view in Bangladesh context. *Bangladesh e-journal of Sociology,* 8(2), 17-30.

Haque, M. N., Saroar, M., Fattah, M. A., Morshed, S. R., & Fatema, N. (2022). Access to basic services during the transition from MDGs to SDGs: more rhetoric than reality in a Bangladesh slum. *Journal of Humanities and Applied Social Sciences*, 4(1), 57-75.

Hennink, M., Hutter, I., & Bailey, A. (2020). Qualitative research methods. *Sage.*

Hunter, L. M., Luna, J. K., & Norton, R. M. (2015). Environmental dimensions of migration. *Annual Review of Sociology,* 41, 377-397.

Husain, S. S., & Tinker, H. R. (2023, May 17). Bangladesh. *Encyclopedia Britannica.*
https://www.britannica.com/place/Bangladesh

International Organization for Migration. (2018). *World Migration Report.*
https://publications.iom.int/fr/system/files/pdf/wmr_2018_en_chapter7.pdf

International Organisation for Migration. (2023). Gender, migration, environment and climate change.
https://environmentalmigration.iom.int/gender-migration-environment-and-climate-change

Irwin, M., Blanchard, T., Tolbert, C., Nucci, A., & Lyson, T. (2004). Why people stay: The impact of community context on nonmigration in the USA. *Population*, 59(5), 567-592.

Jónsson, G. (2011). Non-migrant, sedentary, immobile, or 'left behind'? Reflections on the absence of migration.

Journey Plus. (n.d). Khulna Division: Land of the largest mangrove forest on earth.
https://www.journeyplus.com/destinations/khulna-south-west.html

Kabeer, N. (1988). Subordination and struggle: Women in Bangladesh. *New left review*, 168(1), 95-121.

Lubkemann, S. C. (2008). Involuntary immobility: on a theoretical invisibility in forced migration studies. *Journal of Refugee Studies,* 21(4), 454-475.

Lutz, H. (2010). Gender in the migratory process*. Journal of ethnic and migration studies*, 36(10), 16471663.
Mallick, B., & Schanze, J. (2020). Trapped or voluntary? Non-migration despite climate risks. *Sustainability (Switzerland).* https://doi.org/10.3390/su12114718

Mallick, B., Rogers, K. G., & Sultana, Z. (2021). In harm's way: Non-migration decisions of people at risk of slow-onset coastal hazards in Bangladesh. *Ambio*, 51(1), 114–134. https://doi.org/10.1007/s13280-02101552-8

Mallick, B. (2023). Environmental non-migration: Analysis of drivers, factors, and their significance. *World Development Perspectives,* 29, 100475.

McAuliffe, M., & Ruhs, M. (2017). World migration report 2018. Geneva: *International Organization for Migration*, 1-32.

Naser, M. M., Mallick, B., Priodarshini, R., Huq, S., & Bailey, A. (2023). Policy challenges and responses to environmental non-migration. *npj Climate Action*, 2(1), 5.

Nazneen, S. (2017). Gender Relations in Bangladesh: The Household and Beyond Dowry, Women's Property Rights and Salish.

Neumayer, E. & Plümper, T. (2007). The gendered nature of natural disasters: the impact of catastrophic events on the gender gap in life expectancy, 1981–2002. Annals of the Association of American Geographers, 97(3), 551–566.

Ranjan, A. (2016). Bangladesh liberation war of 1971: Narratives, impacts and the actors. *India Quarterly*, 72(2), 132-145.

Reggers, A. (2019). Climate change is not gender neutral: gender inequality, rights and vulnerabilities in Bangladesh. *In Confronting climate change in Bangladesh: policy strategies for adaptation and resilience* (pp. 103-118). Cham: Springer International Publishing.

Robeyns, I., & Byskov, M. F. (2023). The Capability Approach. In E. N. Zalta & U. Nodelman (Eds.), The Stanford Encyclopedia of Philosophy (Summer 2023 Edition). https://plato.stanford.edu/archives/sum2023/entries/capability-approach/

Sakellari, M. (2022). Media coverage of climate change induced migration: Implications for meaningful media discourse. *Global Media and Communication*, 18(1), 67-89.

Sen, A. (1985). Well-being, agency and freedom: The Dewey lectures 1984. *The journal of philosophy*, 82(4), 169-221.

Sengupta, A., & Samanta, G. (2022). Understanding immobility of a highly vulnerable coastal village in the Indian Sundarban. *Regional Environmental Change*, 22(3), 90.

Sultana, A. (2010). Patriarchy and women's subordination: a theoretical analysis. *Arts Faculty Journal*, 1-18.

Tabassum, M., Begum, N., Rana, M. S., Faruk, M. O., & Miah, M. M. (2019). Factors influencing Women's empowerment in Bangladesh. *Sci Technol Public Policy*, 3(1), 1-7.

Tanny, N., & Rahman, M. W. (2016). Climate change vulnerabilities of woman in Bangladesh. *The Agriculturists*, 14(2), 113-123.

The Global Economy. (2013). Bangladesh: People practicing Hinduism as percent of the population. https://www.theglobaleconomy.com/Bangladesh/hindu/

Tripathy Furlong, B., Adams, H., Boas, I., Warner, J., & Van Dijk, H. (2022). Gendered (im) mobility: emotional decisions of staying in the context of climate risks in Bangladesh. *Regional Environmental Change,* 22(4), 123.

United Nations Development Programme. (UNDP). (2020). The next frontier-Human development and the Anthropocene. *Human Development Report 2020*. New York.

United Nations Environment Programme (2019). *Global Environment Outlook – GEO-6: Healthy Planet, Healthy People*. https://wedocs.unep.org/20.500.11822/27539.

UN Women. (2022, February 28). *Explainer: How gender inequality and climate change are interconnected*. https://www.unwomen.org/en/news-stories/explainer/2022/02/explainer-how-gender-inequality-andclimate-change-are-interconnected.

United States Agency for International Development (USAID). (2023). Gender Equality and Women's Empowerment in Bangladesh. Retrieved from https://www.usaid.gov/bangladesh/gender-equality-andwomens-empowerment

Van Hear, N., Bakewell, O., & Long, K. (2018). Push-pull plus: reconsidering the drivers of migration. *Journal of ethnic and migration studies*, 44(6), 927-944.

Vince, G. (2022, August 18). The century of climate migration: why we need to plan for the great upheaval. *The Guardian.* https://www.theguardian.com/news/2022/aug/18/century-climate-crisis-migration-whywe-need-plan-great-upheaval.

Wiegel, H., Warner, J., Boas, I., & Lamers, M. (2021). Safe from what? Understanding environmental nonmigration in Chilean Patagonia through ontological security and risk perceptions. *Regional Environmental Change*, 21(2), 43.

Williams, D. J., & Noyes, J. M. (2007). How does our perception of risk influence decision-making? Implications for the design of risk information. *Theoretical issues in ergonomics science*, 8(1), 1-35.

World Bank Group. (2021). Poverty and Equity Brief. Bangladesh. https://databankfiles.worldbank.org/public/ddpext_download/poverty/33EF03BB-9722-4AE2-ABC7AA2972D68AFE/Global_POVEQ_BGD.pdf

Zickgraf, C. (2018). Immobility. *In Routledge handbook of environmental displacement and migration* (pp. 71-84). Routledge.

Appendices

Appendix A: Interview guide

Introduction
Informed consent form is being shared in an oral manner, asked for recording permission
General introduction of myself and the research, my experience in Bangladesh

Demographic information How
old are you?

What religion do you belong to? What religion do most people in your community/area belong to?

What is your level of education? Where did you go to high school/college/university? How long ago was your graduation?

How many people live in your household?

Who is the head of your household?

Have you ever migrated in your life?

What was the reason for your migration?

Environmental factor

1. Environment

Can you describe the natural environment of the community you live in?

What are some environmental challenges that you face?
Probe: floods, cyclone, droughts, salination

What changes in the environment have you noticed over the last years? 10 years?
Probe: heat, salination, land fertility, changes in season, animals and vegetation, frequency and severity of extreme events

2. Impact on life

How did those changes in the environment impact your daily life?
Probe: access to drinking water and food, mobility, infrastructure such as roads and electricity, education for children, diseases

How did those changes in the environment impact your work life?
Probe: work availability, impact on agriculture and aquaculture

Risk perception

Have you ever had to deal with property damage or other negative consequences from extreme weather events? If so, how did you respond?

How do you perceive the risk of extreme weather events in your area, and how concerned are you about them?

Risk tolerance

How do you prepare for extreme weather events?

Probe: stocking up on supplies, work diversification, evacuating (distance to shelter), buying insurance, making structural improvements to your home

How confident do you feel in your ability to respond to extreme weather events?

What barriers do you face in preparing for extreme weather events?

Probe: lack of resources, knowledge about how to prepare, lack of support from government

Social factor

1. Place attachment

How long have you and your family been living here?

Probe: number of generations

Can you describe what 'home' means to you in five words?

What are some specific things about your home that you feel attached to?

2. Marriage/household relation

How do you feel about your relationship with other members of the household?

Probe: arranged marriage, love marriage, husband, mother-in-law, sisters/brothers in law

How would you describe your freedom for decision making in the household?

If you weren't married, where would you see yourself now?

3. Social network/community feeling

How many of your relatives live within your community?

How would you describe your relationship to your relatives/neighbours/other people in your community?

Probe: parents, emotional support, financial help, practical help (childcare, work, market), free time entertainment

How would you describe the overall unity/cohesion in your village?

In which ways is the community granting you to practice your religion or other cultural traditions?

Is there anything you would like to change about the community?

4. Experience with migration

How many people close to you have migrated from your family, and community?

Who were those people?

Probe: gender, age, relationship, education

What was the reason for their migration?

How do the migrated people describe their new situation compared to their life before?

How do you feel about their migration?

Political factor

1. Trust in government

Can you describe the decision-making processes in your village?

How do you feel about the level of transparency in the decision-making processes?

Have you ever been involved in the decision-making processes in your village? If so, can you describe your experience?

How do you feel about the outcomes of the decision-making processes? *Probe:* accountability, fairness, satisfaction

2. Support from government

What kind of support do you receive from the government or other organisations in your community?

Probe: financial, infrastructural

What role do you think these services play within your community and your own life?

Do you believe that the government will help you out in difficult times? Why, why not?

Economic situation

1. Occupation and income

What is your main occupation? Do you have any other occupations?

What is your household's main source of income?

What is your household's average monthly income?

How much financial support do you receive from relatives? Is there any other financial support?

Would you describe your occupation/income as stable?

Would you describe your income as sufficient for you and your family?

Would you say that you have enough opportunities for work in your area?
Probe: opportunities for women vs. men

How does your economic situation impact your access to healthcare and education?

2. Land ownership

How much land do you or your family own?

What do you use this land for?
Probe: House, agriculture, fishing

What is your main water source? How would you describe your access to the water? *Probe:*
Well, pond, river, tap water

How do you feel about your general housing situation?

Non-migration perception

Do you have any aspirations to migrate in the future? If not, why don't you want to migrate?

If yes, what is your migration strategy now? Can you also take such migratory decision alone – or do you need to discuss it in the family first?

Do you think people should not migrate? If yes, why do you think so?

Closing questions

What do you hope the future of your children will look like?

Appendix B: Coding tree