

*Climate change, human security, and unstable migration in  
Bangladesh.*

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such tragedy could happen in a country like Britain and still justice hasn't been served to those responsible. I just want to let Friedl Dicker-Brandes and Firdows Kedir know that my heart aches for them every day, I think of them always.

## What has motivated me to choose this topic for my PhD research

I grew up hearing rather a profoundly moving story from my parents about 1991's Bangladesh. In 1991 my uncle was a newly commissioned naval officer in Bangladesh Navy stationed in Chittagong cantonment. Then on 29 April, a devastating cyclone hit Bangladesh' port city Chittagong that killed more than 135,000 people and caused damage worth more than 1.5 billion US dollar. Bangladeshi government couldn't warn people in advance due to lack of electronic and print media and furthermore the government couldn't arrange appropriate evacuation due to inadequate institutional capacity. My grandparents lost contact with my uncle who was on active military duty on that day. My uncle later described his account of the one of the worst natural disasters in the history of Bangladesh when the Bay-of-Bengal washed away people's family, houses, businesses, domestic animals, and everything. Affected local communities still recall that horrendous event with deep sorrow.

My direct first encounter with climate change influenced disaster was in 1998 flood. That flood lasted for more than a month making 25 million people homeless. I remember vividly that all roads around our house submerged under water, and we had to buy a boat for commuting. My school was closed as it was

made an emergency shelter for homeless families. Local people used to guard to local embankment at night just to make sure that they can warn people in cause the river overflows it and breaks into people's home. Finally, the flood was over, but I reminisce that apart from providing early warning, the incumbent government did very little to help people. I again witnessed flood in 2004 that submerged almost half of the country and made vast number of people homeless and paralysed road and rail-transport link of the entire country. I remember that I was coming for vacation from Sylhet Cadet College to Dhaka by train, a journey that should normally take 4 hours but that day it took almost 10 hours since rail-tracks were submerged under water. I along with other cadets were under strict supervision of the military staffs not to loiter around the train or to stand anywhere near the door looking outside as it was too risky and traumatising. I remember that it was flood water miles after miles with traces of seldom people's half-ruined homes and submerged local markets throughout that journey. This sobering picture of people's anguish in the face of flood has been engraved in my memories till today. When I reached to my designated train station after almost 10 hours of traumatic, I was shocked to see homeless families with their young children sleeping on station platform frustrated and confused about the overall situation and their future. I often wondered the political optics of climate change influenced events.

My experience with climate change related calamities is a common story in Bangladesh, India, Pakistan, and households of many other climate change vulnerable countries. However, I have observed that media, politicians, bureaucrats, and other relevant organisations spend ample amount of time discussing this important topic superficially and sometime by shifting blame to each other without suggesting a multifaceted pragmatic solution. Furthermore, I also think there is lack of incentive among the academics and academic institutions in the Global South to investigate the political and socio-economic dimension of climate change. I am rather cynical to call for Western solution for all Eastern problems. It is no doubt that the scholars, experts, and relevant institutions in the Global North are carrying out a noble and fascinating task related to climate change, but I am not totally convinced that the challenges faced the developing countries in the Global South can be solved without understanding the local context including geographical and cultural background of the affected countries wholeheartedly. For instance, observations and analysis related to climate change events like flood, cyclones, and others from the perspective of Europe may not be effective for countries like Bangladesh or India or Indonesia. Similarly, America's disaster management strategy related to cyclones may not be suitable for Sri Lanka or Indonesia or Thailand. Challenges

faced by individuals relocating from Florida to Washington D.C., after cyclone may be different from individuals internally migrating from Pune to Mumbai to avoid flood. The challenges related to climate change may be same, but the practical struggles are different. I have always been keen to tell the stories of these solemn struggles of climate change vulnerable communities to the world and to do anything for them from my humble capacity. I am immensely delighted to be able to do my PhD on a topic which is so close to my heart.



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# Chapter One

## Abstract

This research examines how unstable internal migration to large cities in developing countries caused by climate change events is a security threat, hypothesising that the human security paradigm is more fitted to understand such threat than the realist security paradigm. Dhaka, the capital of Bangladesh has been used as a case study since Bangladesh is considered as one of the worst affected climate change vulnerable countries. I used qualitative data that I collected by interviewing 31 eco-migrants extensively from Dhaka city to test my hypothesis. This research shows that eco-migrants in large cities of developing countries face hardship and have limited access to various basic rights including adequate housing, jobs and economic opportunities, education, and public healthcare. They also may not have enough political agency to escalate their concerns as citizens to relevant government authorities. This research highlights that internal migration associated with climate change in developing countries is not always circular but rather permanent to certain extent and contextual to climate change events that can ultimately put huge pressure on already oversubscribed and under-resourced public services in large cities of developing

countries creating a security risk that has been developed from within states and being felt both at national and individual level. This research underscores that this new form of security threat exhibited by unstable internal eco-migration in climate change affected developing countries is better understood and apprehended by human security apparatus than realist security apparatus that is military centric primarily focusing on external threats or under-appreciating the importance of shifting the frame of security reference from state to individuals to understand this threat. Furthermore, I hypothesised that in a democratic-society citizens would normally protest to demonstrate their disenchantment against their government if it fails to handle citizens expectation to provide them with basic citizens' rights including housing, economic opportunities, education, and healthcare. However, findings of this research show that citizens' disenchantment doesn't always result in protest or civil disobedience because of the fear of being prosecuted by political elites and government law-enforcement agencies.

**Keywords: climate change; unstable migration; human security; civil unrest; national security, developing countries.**

## Thesis overview

This thesis has been divided into 7 chapters.

**Chapter one** consists of an abstract, hypothesis, causal pathway & research aims, and introduction. This chapter provides readers with a brief understanding of the topic climate change, unstable migration, human security from the context of developing countries.

**Chapter two** is **Literature Review** chapter that discusses the unstable internal migration caused by climate change in developing countries. It highlights how unstable eco-migration is a human security threat. Furthermore, it discusses the challenges faced by eco-migrants in large cities of developing countries.

**Chapter three** is a **Theory** chapter that compares realism and human security in their suitability to explain security threat exhibited by unstable eco-migration in developing countries.

**Chapter four** provides important supplemental background information by primarily focusing Bangladesh as a case study. It also highlights the precarious living conditions of eco-migrant to Dhaka.

**Chapter five** discusses the research methodology used to test the hypothesis.

This section also discusses the reasons of choosing process-tracing technique for the qualitative research method used for this thesis and what was the motivation for the case selection. This section has also discussed in detail about how the interviewees were selected, challenges faced during conducting those interviews during Covid-19 pandemic and so on. This chapter has also highlighted how this research has its uniqueness in data collection in comparison to other similar types of research i.e., lengthy candid direct interview of eco-migrants.

**Chapter six is Result Analysis and Discussion chapter** . Analysis of survey results has been a very important part of this thesis. It has mainly featured analysis of the qualitative data collected through interviews. This section has also highlighted important remarks from the interviewees. This section has been arranged based on the causal link highlighted in the research question section.

The discussion chapter has highlighted important takeaway from the result analysis chapter and how the findings help to understand the scholarly gap by contemplating climate change induced unstable internal eco-migration in the developing countries and human security threat at an individual level due to unstable eco-migration.

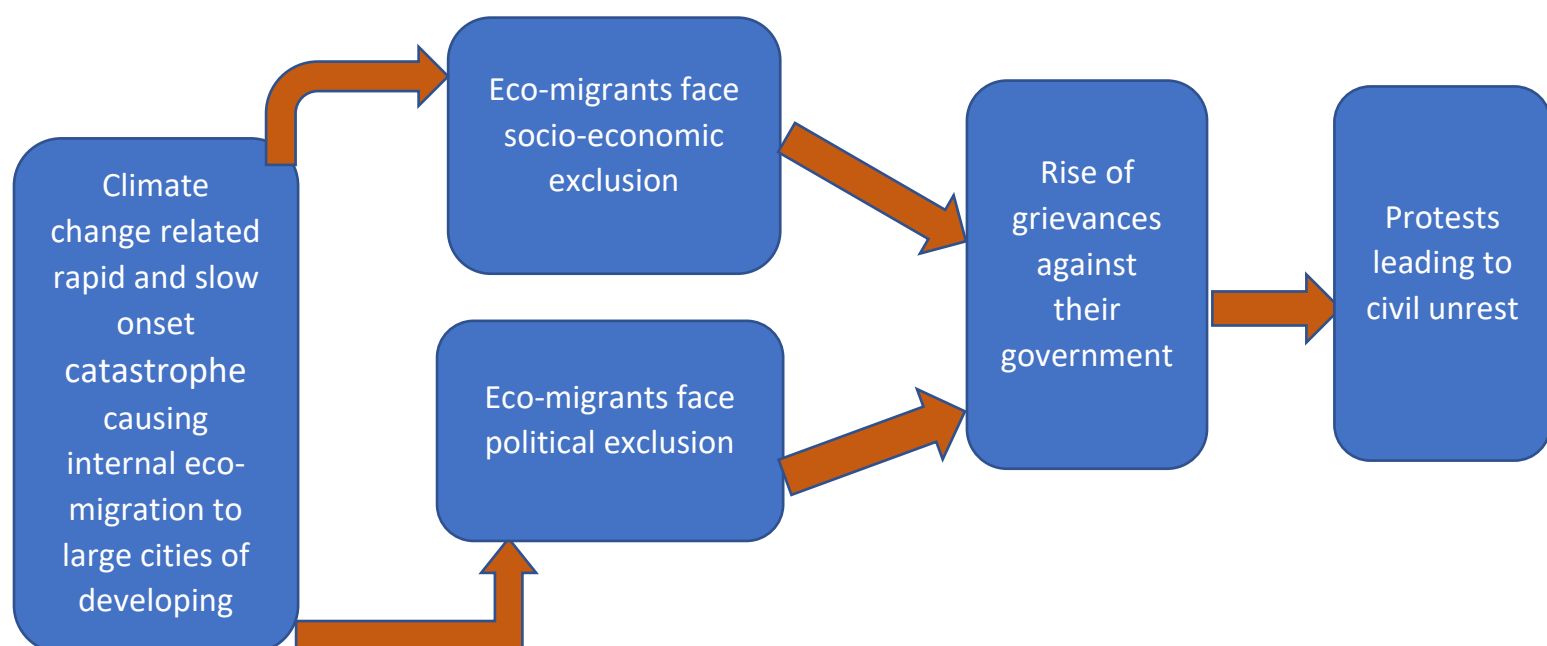
**Chapter seven** presents **Policy Recommendation, Future Research, and Conclusion** chapter. This chapter provides a series of policy recommendation based on the findings of this research. It also provides a comparison on how other comparative actors are doing and what organisational structural changes can be brought about in Bangladesh so that more can be done and what one can learn from each other for a more pragmatic policy frontier. Future research discusses about the scope for future research by highlighting shortcomings. Conclusion chapter draws the conclusion by reiterating the main findings of this research.

## Main Hypothesis

Climate change is causing unstable level of internal migration in developing countries. This is overstressing the limited resources of the large cities that receive them by putting huge pressure on public services. Eco-migrants themselves also face significant socio-economic hardship after being displaced internally to those large cities. Additionally, they may not have the adequate and effective political agency to escalate their concerns to right authority for help. This may result in the rise of citizens' grievances against their governments that may lead to civil unrest. Given the variety of social, economic, and political strains places on a country by climate-induced migration, a useful theoretical lens to understand these effects is human security apparatus as the conventional realist apparatus struggle to grapple with it, under-appreciating or outright ignoring climate change in favour of threats from other states.

## Main Causal Pathway

Climate change related rapid and slow onset catastrophes causing internal migration to large cities in developing countries> Socio-economic and political exclusion faced by the eco-migrants > Rise of grievances against the government> Protests leading to civil unrest.



**The main purposes of this research are as below;**

1. To investigate the socio-economic challenges faced by domestic eco-migrants in large cities of developing countries,
2. To investigate the political exclusion faced by domestic eco-migrants in large cities of developing countries,



3. To investigate if eco-migrants may develop disenchantment against their own government,
4. To investigate if disenchantment can lead to protest leading to civil unrest.

## Introduction

“We didn’t want to leave our area Munshiganj even when flood and river-erosion took away our home and land, but we had no alternative as we were living under open sky. I moved to Dhaka 18 years ago and have been living in slum. We don’t have any electricity and drinking water supply for days in our slum and we have no one to complain to”~ comment from an interviewee.

Climate change has caused mass migration in developing countries. Climate disasters displaces more people than conflicts often forcing them to be relocated internally to large cities in developing countries (IPCC, 2022). Eco-migrants are forced to lead very precarious lives in large cities of developing countries with limited access basic amenities. Furthermore, mass internal eco-migration can put huge strain on the limited resources of developing countries

to provide its citizens with adequate housing facilities, job & economic prosperity, access to education and healthcare and other citizens' rights.

Migration may be an adaptation strategy by the affected communities, but unstable level of migration can make under-resourced public services oversubscribed in developing countries. For instance, every year almost half-a-million people from coastal districts and rural areas of Bangladesh move to its capital Dhaka, most notably after being affected by climate change (Sun, 2022). Everyday some 2,000 people settle in Dhaka, many of which are co-migrants from climate change affected areas (McPherson, 2015). Dhaka is already the world's most densely populated city with almost 45,400 people living per square kilometres (Dhaka Tribune, 2018). An additional half million people- roughly the entire population of Washington, D.C, move to Dhaka every year. This unstable level of influx puts huge pressure on Dhaka's public services. Developing countries have limited resources to help eco-migrants settle in their new destination with access to these pre-requisites of human security. Developing countries struggle to provide its eco-migrants with basics. Rapidly growing big cities in the developing countries are already experiencing socio-political tensions, strained public services, and widening economic inequality (Zurich, 2023). Overpopulation in large cities of developing countries has been further

intensified by public policy favouring larger cities (Zurich, 2023). The urban areas in developing countries have grown disproportionately in size without planning and adequate physical development forces (Jedwab, et al., 2021). Unstable level of internal migration instituted by climate change puts additional pressure on public services of those unplanned cities risking critical infrastructures including transportation networks, electric power supply distribution, communication infrastructure, water supply and sewage that are important for social inclusion and economic opportunity (Zurich, 2023). This rapid urbanisation often fuelled by eco-migration also causes strains to public healthcare through a combination of high population density, lack of infrastructure and poverty. For instance, poor sanitation system in Mumbai leads to about 4,000 cases of typhoid and diphtheria everyday putting additional stress on the public services and leaving common people's healthcare in limbo (The BBC, 2020). Unplanned rapid urbanisation furthers widening economic inequalities in developing countries. This can stroke social unrest and social fractionalization by a combination of weak city-governance, scarce resources, and ineffective regulatory framework for public services (Hove & Muchemwa, 2013). Further, eco-migrants may further face political exclusion.

Eco-migrants often live in overcrowded slums that have very limited basic services including accommodation, education, healthcare, and other facilities. As for example, Mumbai has been one of the epicentres of eco-migration in India, where 40% of Mumbai's population lives in squatter settlement (Rossett Geography Department, 2021). In Mumbai's Dharavi slum about 1 million people live in 2.39 sq. kilometres making it one of the largest slums in the world with very limited supply of clean water, electricity, and sewage facilities (Rossett Geography Department, 2021). Eco-migrants rely on public healthcare and government funded education which are too often under resourced and overstrained in large cities of developing countries.

Given the variety of social, economic, and political strains places on a country by climate-induced migration and the challenges faced by eco-migrants in their own country a useful theoretical lens to understand these effects is human security. The United Nations' Sustainable Development Goals (SDGs) are cemented around poverty eradication, access to healthcare, quality education, economic opportunities and so on for the citizens. Human security discourse is better suited apparatus to accommodate UN's SDGs and to deal with challenges faced by eco-migrants by emphasising freedom from want and fear (Hanlon & Christie, 2016). The core concept of human security is to enhance freedoms

promoting long-term human prosperity and protection from varieties of threats connected with safety and well-being, which is aligned with UN's Sustainable Development Goals. Furthermore, human security is people-centric whereas traditional security is state-centric focusing threat-defence dynamics (Lindstaedt, 2022). It prioritises human needs so that they can lead a fulfilling life. Additionally, human security keeps human as the primary referent of development (Nunes & Singh, 2016). This discourse was advanced initially through the 1994 UNDP Human Development Report that seeks to orient security around the wellbeing of people rather than state based on military deterrence. The challenges faced by eco-migrants in large cities of developing countries can be eased by governments through socio-economic assistance. UN's SDGs are aligned with those socio-economic assistance that can be better conceptualised by human security paradigm.

Human security paradigm is a better-suited analytical framework to understand security threat evolving from unstable internal eco-migration to large cities both at state and personal level. People's well-being and long-term prosperity is endangered here by unstable level of eco-migration. Human security framework is befitting here because it concentrates on the safety and well-being of the individual whereas traditional security focuses on the state-centric military

aspect (Nunes & Singh, 2016). Furthermore, this security framework is also appropriate to deal with this variety of security threat originating from within states as it concentrates on people's well-being advocating the government to provide the citizens with adequate housing, economic opportunities, education, and public healthcare. Besides, developing countries experiencing huge influx of internal eco-migration and those countries are not engaged with any military conflicts or don't face any imminent threat from external adversaries may not find the traditional neo-realist state-centric national security as an appropriate framework but human security can be a useful framework for these countries in this context.

The security threat resulting from climate change is a complex phenomenon, but traditional realist theories struggle to grapple with it, under-appreciating or outright ignoring climate change in favour of threats from other states. Neo-realist scholars have long argued that the biggest security threats emanate from other states and advocate that states should grow and modernize their military power to maintain territorial integrity and dominance in an anarchic world. While climate change does not necessarily threaten states directly (as a military invasion would), extreme climate events can wreak devastation similar to armed conflict. Where neo-realist theories recognize the climate threat, they see it

only as a threat multiplier, heightening pre-existing conflict between states. However, it also poses a significant threat to human security. Indeed, for many countries around the world, particularly developing countries, climate change is by far its biggest security threat.

While Neo-realist scholars emphasize large states' security through militarisation, they misunderstand the security challenges faced by climate - vulnerable developing countries who are not involved with any interstate conflict. Even in developing countries, climate change is seen as an ecological issue rather than a security issue. Climate change can push citizens to relocate themselves internally on a large scale. However, this huge internal migration created by climate change in developing countries is a security threat that can alter political and socio-economic stability. Human security theory is much more suitable to understand the threats created climate change in these contexts because it people-centric and it offers a comprehensive, integrated strategies that simultaneously addresses social, economic, and environmental consequences to defuse threats originated from within a state, rather than from the outside enemy states.

Using the case of Bangladesh, this study demonstrates how climate change affects human security, forcing citizens to migrate internally from their homes to big cities, and generating new threats as they face difficult living conditions in overcrowded urban slums without substantial support. Furthermore, by using data collected from interviewing 31 eco-migrants from Bangladesh in 2021 this study shows how climate change fostered unstable patterns of internal migration and what human security threats eco-migrants face in the aftermath that may subsequently raise national security concern. It demonstrates that eco-migrants are being pushed to leave their place of origin and moved to large cities and face various socio-economic hardships upon arrival, with limited assistance from government and political leaders. However, although they are disappointed with the overall situation, I found that they were nonetheless unlikely to stage protest that can lead to civil unrest due to various case-specific factors including political pluralism, level-playing field for opposition and adequate fair cooperation from law-enforcement agencies.

Ultimately, this research demonstrates that human security theory is more suitable to comprehend the challenges faced by eco-migration in developing countries. Realist theory of security deals with national security by assuming security threats generate from outside adversaries and it can be treated by military means. However, the security threats developing from within states due



to unstable level of eco-migration in developing countries is beyond the comprehension of realism. Military centred security may not be sufficient for to ensure security for millions of eco-migrants that suffer in their own countries. Furthermore, this research reveals that, despite dire life circumstances, displaced migrants may not always demonstrate their dissatisfaction, leading to instability. Additionally, this research highlights that developing countries should provide eco-migrants and climate vulnerable communities with adequate amenities so that they can lead a fulfilling life.

## Chapter Two- Literature Review

### Climate Change is Causing Unstable Internal Migration in Developing Countries

Climate change affected local communities are forced to migrate frequently leading to unstable migration in developing countries. UNHCR has reported that between 2008 to 2016, on an average about 21.5 million people were displaced every year facing climate calamities (The White House, 2021). Unstable migration induced by climate change has become a matter of concern for the developing countries reshaping their political and economic discourses (Blondel, 2012). The percentage of international migration has increased gradually due to the advancement of technology, socio-economic transformation, and globalisation but still the number of people migrating internally has become almost thrice in comparison to international migration (International Organisation for Migration, 2020). As of 2020, 281 million people, that is about 3.6% of the total global population consists of international migrants whereas the total number of internal migrants were about 763 million (The United Nations, 2020). Climate change has been identified as a major source of internal migration for the developing countries (Blondel, 2012). It is predicated that by 2050, one in every 45 people in the world will become eco-migrants that means

almost another additional 200 million climate change migrants across the world (Clement, et al., 2021). The rate of climate change induced migration has increased drastically since 1990, for instance, about 25 million people have migrated by year 2001 and 50 million by year 2010 due to climate change (International Organization for Migration, 2008). In South-Asia alone, Internal rural to urban migration has increased from 3.9 million per year in 2008-2010 to 6.4 million per year in 2019-2021 (Soo-Chen & McCoy, 2023). This is expected to escalate further, and 40 million people may be displaced internally by in total 2050 (Kugelman, 2020). South-Asian countries including India, Pakistan, Bangladesh, Sri Lanka, Nepal, Bhutan, and Maldives all these have been facing climate change calamities on a regular basis (The New York Times, 2006). Coastal flooding and cyclones induced by climate change has been a huge risk for South-East Asia coastal communities (Asian Development Bank, 2012). Indonesia, Myanmar, Philippines, and Vietnam have also been constantly facing climate change imposed economic wretchedness, loss of agricultural corps, resource scarcity that are influencing affected communities to migrate to large cities in this area to escape the climate change impact. For instance, in Indonesia flood displaced about 110,000 people internally in 2006 forcing them to migrate to large cities (The New York Times, 2006). This pattern of migration has been a

cause for concern for many developing countries with climate change vulnerabilities.

Climate change has dramatically and disproportionately affected farming communities in developing countries and is pushing them to migrate internally. African farming communities have been migrating to more habitable areas to escape from climate related events including drought, flood, water scarcity and sea-level rise. Although Africa only produces 7.1% of the overall global greenhouse gas but it has been experiencing substantial threats from climate change induced calamities (Teye & Nikoi, 2022). Regular cyclones have been causing both economic turmoil and human tragedy for the farmers in Sub-Saharan region. For example, farming communities in Kenya, Somalia and Ethiopia have been facing significant food-security concern as crops production has declined due to climate change events (FAO, 2021). Landless farming communities in the Sub-Saharan African countries are highly vulnerable to climate change induced events e.g., flood, drought, sea-level rise and so on (Waldinger, 2015). Affected farming communities often migrate internally to large cities. For instance, about 200,000 people migrated internally in Kenya per year due to climate change (The International Federation of Red Cross, 2023). Migrating internally to large cities permanently has increased among the

farming communities in the West-Africa too since their livelihood of the communities has been severely affected by heavy rainfall and sea-level rise. For example, about half a million people in this region were affected by flood in 2007 and about a million people were directly affected by flood and heavy rain in 2009 that damaged agricultural crops production, houses and livelihood of the vulnerable farming communities and subsequently forced these communities to migrate internally to large cities (Herbling, 2021). Among West African countries, Ghana, Mali, Burkina Faso, Leone have been affected by climate change more than others. Internal migration among farming communities have increased significantly in this region (Elagib, et al., 2021). Furthermore, the Sahel region that is comprised of northern Senegal, southern Mauritania, central Mali, Niger and north of Nigeria have also been encountering colossal internal migration caused by both regular flood and frequent drought (Herbling, 2021). South-Asian farming communities also have been migrating internally to large cities since they have been facing regular climate change calamities. Torrential rain, regular flooding, droughts, river erosion and sea-level rise have been happening on a regular basis in this region forcing affected communities, primarily farming communities to migrate since their livelihood has been several affected. Migration from farming communities trend to grow significantly even further in this region (Soo-Chen & McCoy, 2023). According to the Asian

Development Bank (2012), by 2050 about 1.4 billion Indians will be living in areas that are highly exposed to climate change impacts. Similarly, about 250 million people in Pakistan and Bangladesh will be living at the hotbeds of several climate change incidents that would affect their livelihood, forcing many of them to migrate internally (Asian Development Bank, 2012). Farming communities make up most of the displaced people since their incomes are disproportionately affected by climate change events. Empirical evidence demonstrates that farming communities are subject to more regular internal migration than other communities (Waldinger, 2015).

### Prescribing Medication Without Thorough Diagnosis

People's choice to migrate is a delicate and complicated process. The current scholarly literatures on climate change to migration need to provide distinction between voluntary and forced migration. Recent scholarly studies have suggested that people's decision for migration due to climate change can be diverse based on their economic circumstances (Waldinger, 2015); (Zickgraf, 2021); and (Nabong, et al., 2023). Furthermore, these studies have also suggested that since cities can offer better economic prosperity, therefore, it is natural for rural communities to migrate to large cities in the developing

countries. Additionally, recent studies related also suggested that the affected communities trend to migrate within close proximity and their displacement is circular and they often return to their original home (Schafer, et al., 2020); (Sherbinin, et al., 2022). Furthermore, these scholarly studies have also highlighted that temporary movement have been beneficial for those individuals' economic circumstances. Although it may be accurate to state that people's decision to migrate depends on their personal circumstances and cities may offer better jobs, however, it is important to consider adequately how different types of climate change events may change people's personal circumstances and intensified affected people's decision to migrate differently by affecting their income sources. Furthermore, it is also natural that one must have adequate skill sets or social capital to avail a decent job in large cities (Mbaye & Zimmermann, 2016). Economic opportunities don't flow naturally without adequate calibre. Additionally, rural communities may not necessarily always decide to migrate to large cities even if those cities can offer better economic prosperity considering the social and cultural bonding with their place of origins unless they are forced considerably by climate change calamities. Besides, eco-migrants may be prepared to travel to comparatively large cities within their countries despite long distance from their places of origin<sup>1</sup>. Eco-

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<sup>1</sup> Eco-migrants trend to move to large cities permanently even if those cities are not in their close proximity if their place of origins are subject to regular climate change events (Asian Development Bank, 2012)

migratory pattern in South Asia, East-Asia and Sub-Sahara countries is a good example where eco-migrants seem to travel far from their localities. Furthermore, eco-migrants may prefer to migrate permanently or long-term, rather than short-term. The rapid unplanned growth of large cities in developing countries reflects this. Eco-migrants those who migrate only provisionally to avoid seasonal temporary climate change related shock<sup>2</sup> may be classified as economic migrants rather than eco-migrants for transparency and policy formulization.

The impact of rapid and slow-onset events on people's decision to migration hasn't been distinguished adequately in the current climate change related migration scholar literatures. Recent studies show that both rapid and slow-onset disasters orchestrate economic and social impacts that often lead to both voluntary and forced migration in developing countries (Martin, 2010) and (Amin, et al., 2021) and flow of migration depends on the ability of the households to migrate (Dimitrova, et al., 2020); (Kaczan & Orgill-Meyer, 2020) and (Ghosh & Orchiston, 2022). However, the difference of migratory pattern due to rapid, and onset slow events hasn't been underlined as meticulously as it should have been both at an individual level and national level through these

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<sup>2</sup> Drought affected communities seem to migrate temporarily until situation improves but long-term drought may cause permanent migration (Rose, 2015)



studies. For example, an individual decision to migration may vary based on whether they have faced slow onset or rapid climate change calamities. As for example, individuals being affected by frequent flooding, which is a rapid climate change event, may feel more need to migrate than individuals being affected by slow onset climate change events like sea-level rise. Drought and river-erosion are both slow onset climate change calamities, but they can have different magnitude on people's decision to migrate since the impact on affected communities is different. Furthermore, climate change developing countries experiencing frequent rapid climate change events including flood and cyclones may observe different level of migration than developing countries witnessing more on-set slow climate change events like sea-level rise (Waldinger, 2015). For example, frequent rapid climate change events like flood and cyclones have far greater intense direct impact on a country than slow on-set events because flood and other rapid disasters damage both physical infrastructures and affect regular income and future economic prosperity, which may cause more migration (Mbaye & Zimmermann, 2016). Additionally, recent studies have added that the flow of migration varies as a function of the severity of the climate change events (Abel, et al., 2019) and (Clement, et al., 2021). However, such observation may seem a simplistic panacea unless it can provide with a through climate change related events based analysis on permanent and

temporary domestic eco-migration. For instance, river-erosion can have instant and higher magnitude impact on permanent domestic eco-migration than drought, although both are considered as slow onset climate change event. Drought affected domestic displacement may be temporary as affected communities are often inclined to return to their place of origin when situation improves (Rose, 2015). Young people often migrate to regional urban areas to seek temporary employment in West African Sahel region to avoid the dry season that affects their income opportunities. However, frequent drought causes permanent displacement as it orchestrates frequent and permanent income loss. Furthermore, sea-level rise and river erosion trend to create more permanent displacement due to its long-lasting impact (Internal Displacement Monitoring Centre, 2018). Besides, the argument from the current scholarly conversation regarding households' ability to migrate may seem immaterial since migrating from rural areas to urban areas in the developing countries may not be extravagant, rather a necessity in the face of climate change and low-cost considering the eco-migrants often occupy the poor urban neighbourhood in the large cities of developing countries. There needs to be more in-depth understanding in the current scholarly conversation of how migratory pattern may unfold differently based on the severity climate change events otherwise policymakers won't be able to formulate and implement a comprehensive

strategy to tackle unstable eco-migration.

The role of government interference for both rapid and slow on-set events to deter internal eco-migration has not been featured coherently in the current scholarly conversation related to eco-migration in developing countries. Recent studies have highlighted that climate change influenced rapid events like flood and cyclones are limited to a specific geographical area with major damage within a very short space of time and in contrast slow on-set events like sea-level rise have gradual impact for a longer period of time over a larger geographical area (Scheffran, et al., 2012); (Matias, et al., 2021); (Adamo, et al., 2021); (Pavel, et al., 2023) and (Sarker, et al., 2023). However, these studies haven't paid enough attention on the role of governments' intervention to those impact as a deterrence to internal migration. Rapid climate change events have a clearly identifiable beginning and ending whereas slow onset events lack a clearly identifiable commencement or ending exhibiting a gradual manifestation (Kaczan & Orgill-Meyer, 2020). Therefore, governments normally get more time to act upon to mitigate the consequences of the slow onset events and as a result the pace of migration may be halted. Similarly, governments may response effectively to minimise the damage caused by rapid climate change

event as the timeline for such events is precise<sup>3</sup>.

The role of push and pull factor has been over generalised in the current scholarly conversation related to climate change-migration. Developing countries are gradually transitioning from agriculturally based economy to production or manufacture based economy. Large cities in the developing countries have been the epicentre of such economic manoeuvres. Rural populations incline to move to large cities in developing countries since large cities can provide with more economic and job opportunities. This particular effect of cities economic dominance on an individual's decision to migrate to cities is known as pull-factors. The rate of migration can be influenced by both push and pull factor. Push-pull is grounded on the framework where negative factor in the place of origin that force people away and then pull factors that attract people to move to new destination. Push factors consist of low-wages, poverty, lack of opportunities, conflict and environmental factor and pull factors consist of higher wages, better public services and social security and family connection. Climate change related events can worsen the situation at the peripheral level pushing communities to migrate. Mohamed and Abdul-Talib (2020), Ghosh (2023) and Majumdar and Rahman (2022) highlighted that

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<sup>3</sup> For instance, flood is common during rainy season.

climate change related events can worsen poverty, make economic opportunities scarcer pushing people to migrate. However, their observation seems overgeneralised without considering number of variables appropriately including economic resilience, gender, and professional background of an individual. As for example, although climate change influenced events may act as push factor for migration in general, but a businessman may react differently to this push factor as a landless farmer. Similarly, an elderly woman may react differently to this push factor than a young day labourer. Besides, this push-factor may be intensified based on the category of climate change events. As for slow on-set climate change events like sea-level rise, drought may play a rather complicated and long-term role by deteriorating the elements of push factor making it difficult to understand its severity migration. Their studies don't provide enough commentary based on the category of climate change events.

Eco-migration and economic migration haven't been distinguished adequately in the current climate change-migration literature from the context of developing countries. People may migrate due to substantive economic opportunities and, social safety in the large cities of the developing countries and often domestic migration is temporary and circular in pattern (Kaczan &

Orgill-Meyer, 2020); (Davary, et al., 2023). Rural to urban migration is a common norm in the developing countries. However, current scholarly studies confuse climate change migration with economic migration. Furthermore, eco-migration has rarely been temporary recently. Permanent internal migration due to climate change has been in rise in the climate change affected developing countries like India, Bangladesh, Pakistan, Nepal, Indonesia, Vietnam, and others. Furthermore, eco-migrants may have very limited options other than migrating internally to large cities in the developing countries as they may have been pushed by the consequences of the climate change calamities whereas economic migrants may have been pulled by various factors including better job and economic prosperity in the large cities. Furthermore, the current literature related to political economy of migration has highlighted that internal migration has been a useful tool for the economic development of developing countries and migration to large cities internally have helped those individuals to prosper their economic situation (Beine, et al., 2019) and (Thorn, et al., 2022). However, this observation hasn't provided an understanding on how one's educational background may be a critical factor behind their economic success in migrating to large cities in developing countries. Eco-migrants may not be as educated and upskilled as economic migrants. Acquiring formal employment with substantial economic benefit would require reasonable educational background. Economic

migrants those who migrate internally from rural areas to urban centres in the developing countries often have adequate education and skill-sets necessary for getting a better job and to have more economic prosperity. Climate change related disasters affects the elements of push factors directly or indirectly or both forcing people to migrate. The elements of pull factor may remain more subservient in people's decision to migrate when they are less educated. This is a major distinction between economic migration and climate change migration which should be scrutinised further by climate change-migration literature.

Resource scarcity leading to conflict and subsequently internal migration is presented as a simple issue in the current climate change-migration scholarly literature. It shows that resource scarcity caused by climate change has been led to civil unrest, and intrastate conflict in the developing and under-developed countries like Angola, Nigeria, Liberia, Congo and so on, which has instigated migration further in those developing countries resource scarcity caused by climate change has led to civil unrest, and intrastate conflict in the developing and under-developed countries in Africa, which has instigated migration further in those countries including Nigeria and others (Raleigh & Urdal, 2007) and (Link, et al., 2016) and (Madu & Nwankwo, 2020). Furthermore, Urbanski (2022), Dinc & Eklund (2023) and Daoudy (2020) have suggested that natural resource

scarcity due to climate change has caused conflict at the peripheral level in the countries like Syria, Ethiopia, Mozambique, and Cameroon and caused internal migration. However, resource scarcity leading to conflict and subsequently internal migration is a complex issue. Their observations have not included that climate change induced natural resource scarcity may intensify tension among communities but there are other variables including ethnic and religious division and weaker governmental institutions that lay the foundation for such intrastate conflict. Under certain socio-economic and political conditions, resource scarcity induced by climate change can lead to civil unrest and socio-economic instability, as for example, developing countries with significant dependencies on natural resources with higher population density and growing urbanisation may be more prone to intrastate conflict due to resource scarcity (Blondel, 2012). Furthermore, their studies may not be applicable for South Asian and East Asian countries as these regions have stable governments, regional cooperative organisations, and firmer economic stability. Therefore, intervening variables, for instance, equitable distribution of natural resources, and democratic institutions can downplay any civil disorder threat influenced by climate change in this region (Johansmeyer, 2022). Besides, these regions don't have as much ethnic and religious divisions as Sub-Saharan and other African regions. Developing countries may share similar economic character with each other but



not similar societal and political characteristics. More for instance, Sub-Saharan and North-African developing countries have different societal, political, and cultural composites than South-Asian and East Asian climate change vulnerable developing countries. Therefore, drawing same connection on the premises that resource scarcity caused by climate change leading to conflict in vulnerable developing countries seem presumptuous. Resource scarcity caused by climate change leading to conflict is rather a complicated matter from the context of the developing countries that requires other underlining factors like weak government, poor economic resilience and already existing social fraction and resentment among the common people against their government. Therefore, analysis from African countries may not be applicable for these regions.

The current literature on climate change to migration doesn't make enough distinction between voluntary and forced migration. Furthermore, the impact of rapid and slow-onset events on people's decision to migration hasn't been distinguished adequately in the current climate change related migration scholar literatures. Additionally, the role of government interference for both rapid and slow on-set events to deter internal eco-migration has not been featured coherently in the current scholarly conversation related to eco-migration in developing countries. Besides, the role of push and pull factor has

been over generalised in the current scholarly conversation related to climate change-migration. Eco-migration and economic migration haven't been distinguished adequately in the current climate change-migration literature from the context of developing countries. Finally, resource scarcity leading to conflict and subsequently internal migration is presented as a simple issue in the current climate change-migration scholarly literature.

### Unstable internal migration caused by climate change is a human security threat

Human security is a comprehensive security paradigm that shifts the security reference from state to individual solidifying the wellbeing of citizens by understanding their socio-economic and political needs in a modern globalised world. Human security discourse has been advanced initially through UNDP Human Development Report that seeks to originate security around the wellbeing of people that would ultimately ensure the security of state (Gomez & Gasper, 2022). Human security paradigm focuses on attaining social, political, environmental, and economic conditions conducive to live in freedom and dignity (Jolly & Ray, 2006). This security paradigm concentrates on not only the achievement of minimal levels of material needs, but also the absence of severe

economic insecurity or political injustice. For instance, human security prioritises on job security, income security, health security, environmental security, and security from crime (United Nations Trust Fund for Human Security, 2016). Ensuing these securities helps citizens to have a prosperous and fulfilling life that ultimately lead to prosperity and peace. According to Sen (2003), human security is concerned with reducing and when possible, removing the insecurities that can cause havoc to human lives (UNDP, 2022). Additionally, human security in its broadest sense embraces far more than just the absence of violent conflict. It encompasses human rights, good governance, access to education and health care, and ensuring that everyone has access to the basic economic opportunities and life choices to fulfil their potential. These are important elements of an economically and socially prosperous society. Furthermore, human security is based on freedom from want, freedom from fear and human dignity (Alkire, 2003). The core element of human security is to ensure protection of lives from physical violence, safeguarding freedom from fear and want, access to healthcare, and education, prevention from poverty, hunger, disease, and repression (Lindstaedt, 2022). All these elements help citizens to lead their life in a peaceful manner where they have the tools necessary to advance themselves socially, economically, and politically.

Unstable internal eco-migration in large cities of developing countries put huge pressure on important public services necessary to attain human security but the current literature overgeneralises the pressure placed upon public services due to migration. As for example, Barnett and Adger (2007), Riberia (2021) suggested that rural-to-urban migration can put pressure on necessary services that are essential to contour life and Shaikh & Nabi (2017) Ferris & Weerasinghe (2020) subsequently recommended that if there has been an adequate framework for climate change related migration then countries would be better prepared to deal with the challenges. However, their observations haven't distinguished enough about the pattern of climate change influenced migration i.e., internal or cross-countries. Besides, these studies haven't paid due attention to the fact that forming migratory framework may be easier for developed countries but developing countries have institutional shortcomings which may prevent them to formulate and execute a firm framework to deal with this concern timely. Furthermore, the role of internal climate change-migration hasn't been given proportionate attention.

Human security challenges faced by citizens in large cities in developing countries is presented by current literature as consequences of inadequate urban planning in developing countries without connecting the impact of

climate change-migration. Recent studies show that cities in developing countries are rapidly growing in an insubstantial situation and developing countries often lack the institutional and financial capability to implement sound urbanisation (Brueckner, 2013); (Ribeiro, 2021) and (Molla, 2023). However, these studies haven't fully incorporated the connection of climate change associated migration to already oversubscribed public services in large cities of developing countries. Cities in the developing countries are already struggling to cope up with the extra demand for fresh-water, housing, other basic amenities, and public due to climate change-migration (Asian Development Bank, 2012). Climate change influenced internal migration to large cities may hinder access to basic necessities of human security like accommodation, education, and public healthcare in developing countries further. Developing countries don't have the economic resources and institutional capability to support the eco-migrants by ensuring their equal access to education, housing, healthcare, and economic opportunities, which are core elements of human security (Reid, 2014) but these recent studies miss these important points.

The current literature also doesn't provide through understanding on how human security is threaten at an individual level due to internal migration pushed by climate change events. Climate change to human security literature

is primarily focused on how climate change weakens a state's capacity to provide its citizens with the means of human security including various social security as climate change can damage those sustainable development goals (Morton, et al., 2019). Additionally, the current scholarly conversation focuses more on the resource scarcity caused by climate change leading to conflict and how that would subsequently impact the physical well-being of affected communities. Physical well-being is an important element of human security paradigm. For instance, Dabelko & Conca (2019), Chilunjika & Gumede (2021) have emphasised that climate change has a direct link with human security since climate change related events like flood, sea-level rise and others affects human security through human health, food production and physical damages. Although their observation may be accurate, these studies don't pay adequate attention to the challenges faced by the eco-migrants at an individual level in developing countries upon migrating internally. Developing countries have limited resources for ensuing human security for eco-migrants. Furthermore, though they have highlighted the connection between climate change and human security at a national level and peripheral level, but their studies haven't concentrated on the challenges faced by eco-migrants in developing countries and how climate influenced migration puts extra pressure on cities' capacity to ensure elements of human security. Besides, their studies haven't

conceptualised that mass eco-migration can overwhelmingly impact human security by escalating rapid unplanned urbanisation and slum proliferation without ensuring basic amenities for the displaced people. Unstable internal eco-migration in the developing countries can underestimate the core elements of human security paradigm by weakening security of survival, security of livelihood and human dignity. Decent housing, access to public healthcare and public services including fresh water, electricity and transport links are important element for human survival (Zurich, 2023). Besides, having equitable access to financial opportunities including job facilities, trainings, education is interlinked with security of livelihood (The International Federation of Red Cross, 2023). Migration may represent a coping mechanism and survival strategy for the affected communities in some developing countries, but unstable level of internal eco-migration may damage core elements of human security paradigm and increases the vulnerability at an individual level and therefore, more attention should be given to this narrative.

The current literature has featured the shortcomings of city-states in providing basic amenities to its residents but the role of internal eco-migration in deteriorating this situation further hasn't been featured adequately. Recent studies have underscored that cities in developing countries often struggle to provide its residents with basic amenities as a result of haphazard urbanisation

and institutional shortcomings (Chilunjika & Gumede, 2021) and (Kolahi, et al., 2021). But these studies could have also incorporated the impact of unstable level of internal eco-migration in deteriorating this situation. Furthermore, Rose, et al., (2015) have observed that climate change is rather a socio-economic issue where large-scale displacement is expected. However, they haven't discussed in detail how large-scale displacement can turn into a human security issue at an individual level. Unstable level of eco-migrants threatens the material aspects of livelihood security, which are important for security from fear and want. The direct and material aspects of livelihood security include access to food, housing, clean water, employment, and public healthcare (World Health Organization- WHO, 2019). Eco-migration places extreme demand on urban services and various entitlements such as housing, education, public health care and law and order in large cities of the developing countries. Current scholarly discussion often doesn't provide enough connection among all these interconnected subjects.

Summarily, the current literature overgeneralises the pressure placed upon public services due to migration. Human security challenges faced by citizens in large cities in developing countries is presented by current literature as consequences of inadequate urban planning in developing countries without



connecting the impact of climate change-migration. Furthermore, the current literature doesn't provide through understanding on how human security is threaten at an individual level due to eco-migration. Finally, the current literature has featured the shortcomings of city-states in providing basic amenities to its residents but the role of internal eco-migration in deteriorating this situation further hasn't been featured adequately.

Eco-migrants in large cities may not have access to basic and critical public services associated with human security paradigm. Those basic and public services are included adequate housing, access to public healthcare and equitable access to economic and job opportunities. Having access to these basic rights is critical to ensuring human security. Climate change affected developing countries seem to struggle to provide with the below listed basic elements related to human security.

### Access to Adequate Housing

Eco-migrants may be deprived from having access to equitable housing in large cities of their own countries. Housing is an important aspect of human security paradigm. Having equitable access to adequate housing is not only a basic

human right but also a necessary foundation for human prosperity (UNDP, 2020). Right to adequate housing ensures affordable housing with tenure security and safety, availability of services including safe drinking water, proper sanitation, and energy supply for cooking and other uses. This right also ensures freedom from any form of discrimination and freedom from arbitrary interference with one's home that includes privacy and protection against forced eviction (United Nations Human Rights, 2021). Cities in developing countries often fall short to meet these conditions to provide adequate housing for the eco-migrants. In a nutshell, climate change influenced internal migration threatens the housing dimension of human security in two fronts; firstly by driving unplanned urban growth in the developing countries that ultimately puts huge pressure on cities housing capacity and secondly by placing eco-migrants under precarious housing condition that is consistently uninhabitable.

Climate change driven unstable migration has been driving unplanned urbanisation in the developing countries causing substantial urban sprawl. As for example; Jakarta, Dhaka, Delhi have grown by 85%, 50% and 90% respectively over the 10 years (Ribeiro, 2021). This significant expansion requires additional investment from both government and private developers to ensure adequate housing for all and it puts huge pressure on those cities already scarce

public services. However, developing countries often lack the financial means require to support such initiative. They also have limitations in terms of governance and use of land in the large cities to ensure affordable houses for all (Shaikh & Nabi, 2017). City authorities in the developing countries often sit on idle land instead of making best of it to ensure affordable housing for the poor. The price of building materials is another concern in the large cities of the developing countries like India, Indonesia, Bangladesh, Pakistan, and many other South-Asian and East-Asian countries (World Bank Group, 2016). Developed countries have well-structured and financially empowered city governments that have important stake in managing the housing development of the cities. As for example, New York, London, Paris, and many others have strong city-governments but that hasn't been the case for climate change affected developing countries. Cities in the developing countries have huge housing deficit. As for example, only in Pakistan there has been a deficit of about 10 million units of houses, and it is further growing due to huge influx of climate change influenced migration (Shaikh & Nabi, 2017). There needs to be a joint effort from the central government, city-government, and private ventures to minimise this shortage. However, banks and traditional housing development companies seem adverse in providing credit for developing houses that may not have high return rate. Additionally, affordable housing for the slum-dwellers or

informal settlers doesn't get proportionate response from the developers that leads to further deficit and more expansion of urban sprawl and informal settlements including slums (Brueckner, 2013). All these cumulative negative factors result in more housing crisis and expansion of slums.

Eco-migrants frequently live under precarious housing condition in the large cities of developing countries that are consistently uninhabitable. This can threaten adequate housing dimension of human security threat at an individual level. Eco-migrants often live in slums as there is deficit of adequate housing in the large cities of the developing countries and they are unable to afford adequate housing. Houses in those urban slums often lack the basic facilities. As for example, there are about 4 million slum-dwellers in Dhaka, where three in four slum households live in one room (Dhaka Tribune, 2022). Those slums often lack access to clean water, electricity, and safe sanitation. There has been shortage of acute infrastructures including adequate transport link, pedestrian sidewalks and gas and electricity supply. Additionally, although there are city-governments to assist the slum residents with their difficulties but often those slums are governed through informal structure without any coherent legal jurisdictions (Mohsin, 2023). Slums in the large cities of the developing countries are often built without following any safety and building code that renders

additional safety concern for the residents of those slums. Unplanned housing development in the large cities of the climate change affected developing countries often put huge pressure on its scarce natural resources. As for example, Bangalore that was once known as the “garden city of India” faces unprecedented level of water crisis. Before the current unplanned expansion of Bangalore due to internal eco-migration and industrialisation, it had an intricate network of water infrastructure that was expanded through artificial wetlands environment, lakes, canals, and reservoirs that potentially reduce water depletion. However, since Bangalore has expanded by almost 584% due to influx of internal migration often influenced by eco-migration and industrialisation, the natural vegetation has declined by almost 66% causing huge water crisis (Ribeiro, 2021). Bangalore has ranked the second most likely city that may run out of drinking water in sooner future. Wetlands areas have been significantly decreased in Dhaka due to unprecedented level of internal migration. As for example, Dhaka’s wetlands have gone down by almost 71.84% by 2016 since 1988 (Molla, 2023). This has considerably affected Dhaka’s water supply. Jakarta has been facing similar difficulties of supplying drinking water to its more than 10 million people (Water in the World, 2022). In most Pakistani cities, only 50-55% of the overall urban population is covered by water supply where they get water supply for 4 to 16 hours a day (Shaikh & Nabi, 2017). This situation leaves

urban eco-migrants at the bottom of the priority. Besides putting pressure on water supply, unplanned urbanisation puts huge pressure on electricity supply in the climate affected developing countries. Slum-dwellers often depend on charcoal, kerosene, and LPG for cooking and other necessary household errands since the slums don't always have electricity coverage (Clancy, 2006). As for example, slum-dwellers in Nairobi, Kenya depends on mainly on charcoal for cooking. Similarly in Bamako, Mali about 63.5% slum-dwellers don't have access to regular supply of electricity, therefore they depend on wood for cooking and heating. The price of utilities is also increasing making it unaffordable for many (Kumssa & Jones, 2010). About 76 million people out of whole 217.6 million urban population of India are extremely poor who depend on firewood and dung-cake to fulfil for their energy needs at their households (Deapartment for International Development, 2015). They rely on kerosene too for their household uses. Slum-dwellers in the climate change affected countries not only have regular reliable supply of electricity but they also face power outages. Dhaka's slum-dwellers often face electricity load-shedding even during sizzling heat in summer. Furthermore, eco-migrants are more exposed to cities' fragilities and further environmental hazards. As for example, 40% eco-migrants in Dakar (Senegal) lives in areas of higher flood susceptibility (The Government office for Science, 2011). Similar situation has been faced by the eco-migrants in

Kenya, Nicaragua and many other parts of Africa, Asia, and South America (Rose, 2015). Summarily, eco-migrants live under a very precarious condition in large cities of their own countries.

## Access to Public Healthcare

Unstable internal migration to large cities due to climate change puts additional pressure to already overstressed and under-resourced public healthcare system of the cities in developing countries. Public healthcare is an important element of human security apparatus. Ensuring access to adequate and modern public healthcare is a very important variable to ensure human security (World Health Organisation, 2010). Climate change has overall serious negative impact on public healthcare system of the developing countries as it works as an amplifier for waterborne, foodborne, and vector-borne diseases (Wu, et al., 2016). Public healthcare system in the large cities of developing countries are already oversubscribed. Climate change affected developing countries have scarce resources to adequately fund the oversubscribed public healthcare in large cities (Cohen, 2006). Urban population in the climate change affected developing countries are often exposed to new types of health threats that puts additional pressure on already overstressed public healthcare system. Furthermore, non-

communicable diseases have increased significantly in Africa due to over-densely population in the large cities of the climate change affected countries (McMichael, 2000). Cancers, diabetes, and chronic respiratory diseases are few of the NCDs that have been in rise among the poor urban communities in the developing countries. Climate change affected African countries like Ghana, Gambia, Zimbabwe, Nigeria, and many others have been experiencing a steep rise of NCDs among their urban poor population (Intergovernmental Panel on Climate Change, 2020). There has been an upsurge of water-borne diseases, heat stress with associated cardio-vascular diseases, vector-borne diseases e.g., Malaria, Dengue fever and other diseases in large cities of developing countries because of climate change (Kurane, 2010). This would further deteriorate the overall public healthcare system of large cities of climate change affected developing countries by putting additional stress.

Urban poor population in the climate change affected developing countries are being affected disproportionately due to this adverse situation. As for example, the mortality rate is at 72.7% among the urban poor those who live in slums that is significantly higher than the urban average of 51.9% (Brueckner, 2013). Urban slum-dwellers in climate change affected developing countries like Kenya are frequented by water borne diseases like Typhoid, Cholera and Diarrhoea



(Herman, 2017). Lack of access to pure drinking water and sanitation is contributing further to deteriorate the situation in slums of developing countries. As for example, in South-Asia about 134 million people still do not have access to improved drinking water and between 68 to 84 percent water sources are contaminated (UNICEF, 2022). For example, about 90 percent of water supply schemes are unsafe for drinking in Pakistani cities (Rashid, et al., 2017). A lack of clean drinking water remains a major contributor to the high mortality rate of children under five years old in large cities of Pakistan. The World Bank estimates that poor sanitation costs Pakistan around 3.9 percent of its total GDP; diarrhoea-related death and disease among children under five being the largest contributors (UNDP, 2019). In general, under-5 mortality at 72.7 percent among the urban poor that is significantly higher than the urban average of 51.9 and furthermore, urban poor are worse off than their non-poor counterparts in terms of complete immunization, and nutritional status among children, and anaemia among women (UNDP, 2019). Overall, in developing countries, climate change and its associated eco-migration have overall negative impact on public healthcare system both at national level and on individual level.

## Access to Jobs and Economic Opportunities

Eco-migrants may have limited access to jobs and economic opportunities in

large of their own countries. Human security enshrines on freedom from want and fear. Having equitable access to jobs and economic opportunities is a core element to ensure freedom from want. Climate change influenced migration in the large cities of the developing countries challenges the freedom from want narrative of human security (Reid, 2014). Dumont (2015) argues that urban residents have been benefitted from mass industrial development in developed countries like Canada, Australia, New Zealand, however, this economic development has been contrasted from the perspective of developing countries stating that the relative poverty has increased among urban poor population in developed countries. As for example, in Pabna, Bangladesh the urban poor, many of which are eco-migrants, finds it difficult to meet their basic day to day needs (Bapari, et al., 2016). Extreme inequalities between the urban poor and rich is ever so increasing in the developing countries (Bolay, 2016). Climate change influenced internal migration in South Asia, Southeast Asia and Sub-Saharan region is increasing, and so does the urban poverty (Manou, et al., 2017). In Pakistan alone, one in eight urban dwellers, those who are mainly eco-migrants, live below the poverty line (Hasan & Arif, 2018). Similar trend is found in other South Asian countries. Although South Asia's urban population has grown by almost 130 million from 2001 to 2021 and it is expected to grow by 250 million in next 15 years but South Asia's share in the global economy

remains still strikingly low. South Asia's urban economy produces only 8% of the total global GDP with a share of 16% of the overall global urban population (World Bank Group, 2016). The World Bank (2016) identifies that the messy and hidden urbanisation in South-Asia without proper plan and strategy is acting as a hindrance to reap the benefit of urbanisation and that leaves many poor residents under relative poverty. In contrast to South-Asia, China and Brazil have reaped the benefits of planned urbanisation by increasing their urban economic output and their stakes in the global economy (Floater & Rode, 2014).

Eco-migrants often don't have access to formal employment. Since the slum-dwellers are involved with informal employment, therefore, their average income is below those who are in formal contract (OECD, 2004). Women from slums are more likely to get an informal job but still they face higher risk of poverty than men (Rockefeller Foundation, 2013). Youth population also face higher rate of unemployment than others. They are at least three times more likely than other groups to remain unemployed. As for example, unemployment rate among young people in Nairobi's slums is almost 46% that is almost twice higher than other groups (UN Habitat, 2013). Furthermore, relative poverty among urban population has increased among climate change affected countries. For instance, urban poverty has increased from 9% to 12% in Nigeria

since unemployment has been increasing (Federal Republic of Nigeria, 2022). Intensive urban growth has led greater poverty among disadvantaged people in the climate change affected developing countries in Africa. Urban poor in the climate change affected developing countries are often forced to take-up informal unskilled and semi-skilled jobs due to rising urban unemployment and increasing poverty. The wages from these sectors are normally low and insufficient against the inflation to lead a moderately fulfilling life in large cities of the developing countries (Dumont, 2015). Businesses based in slums face unique challenges with their survival and growth. Small businesses based on slums struggles to get credit from banks and other conventional financial institutions (Rockefeller Foundation, 2013).

## Chapter Three- Theory chapter

Security has become an important element of today's political conversation. Proving security to its citizens has been an important role for government. Today's security threats are interconnected with each other due to globalisation, technological advancement, and communication. Hence, the complexities related to security has been widen over time. The landscape of security has evolved over time and the need to include the new dimensions of

security has been felt by the political leaders and security experts. The scope and approaches of security strategy must be modified to include all those diverse and interconnected security threats. Environmental threat related to climate change has been one of those threats that is interconnected with other security threats and act in a complicated manner. Political leaders and security experts have started realising the importance of including this new and complicated security threat as part of modern security strategy.

Neo-realist security scholars prioritise military centric security assuming that we live in an anarchic world where a state is primarily responsible for security (Bajpai, 2003). Liberal- realist scholars have considered the inclusion of climate change related security threats. However, their priority still remains addressing the national security issue evolving from climate change, but they miss the security threat that may evolve from unstable level of eco-migration in the developing countries and the security threat that may originate from the disenchantment of eco-migrants from the perspective of developing countries. Human security apparatus is more equipped to understand these varieties of security threat originated from climate change in developing countries.

## What is Security?

The concept and definition of security has evolved over time with the change of both domestic and international political dynamics. Security was fundamentally military-focused and state-centric during the Cold War era (Jervis, 2001). Neo-realist scholars from that period have primarily concentrated on state centric security paradigm where security is measured in terms of military capability (Roberts, 2007). Furthermore, they have conceptualised macro issues including political and militaristic dimension as to define security. According to prominent realist Kenneth scholar security is directly allied with the national interest of a country which can only be protected through military might (Baldwin, 1997). He also emphasised that national security is maintained by protecting the territorial integrity by strengthening the military power, then the security of its citizens will intuitively follow (Richards, 2012). Additionally, he has stressed that survival of the state is the main primacy of the state security and once the survival is ensured then the state can concentrate on others matters including social security, economic emancipation, and peace (Richards, 2012).

According to realist scholars, the state is the primary provider of security. In their view, as there is no central command to govern the nations, we live in anarchic

international environment (Hobson, 2012); (Tallberg & Zurn, 2019). Prominent realist scholar Mearsheimer has suggested that it is primarily a state's responsibility to protect its sovereign territory from invasion by building a powerful military force (Degaut, 2015). Summarily, realist scholars have emphasised that security should be conceptualised by concentrating on the survival of state against any adversaries through military competition.

The realist concept of survival of state through military power in today's world needs further clarification as the landscape of security has changed. Realist scholars like Kenneth Waltz (1997) have not clearly defined the variables on which the survival would depend and how military power helps to protect those variables. Castree (2020) and Nielsen (2022) have underscored that a country may face regular climate change related calamities like cyclones, droughts and floods that can deteriorate the geographical veracity and overall condition of a nation, but neo-realist scholars haven't clarified if this would be considered as a variable for survival and how military power may protect this variable and ensure survival of state. Similarly, Covid-19 pandemic has caused deaths to many people and ravaged global economy where every country has been affected. Neo-realism notion of survival of state doesn't provide any clarity whether this is a risk for survival of state and military power can protect the

survival of a state under such global pandemic (Johnston, 2020). Furthermore, Bajpai (2003) and Johnson (2020) have criticised that neo-realist survival premise falls short in discussing how a country alone be able to withstand global challenges including climate change and pandemic.

Neo-realist scholars have emphasised that states are considered as competitors to each other in achieving security (Degaut, 2015). However, Collins, et al., (2016) and Elliott (2023) have highlighted that under this notion of competition, more security of one state can be regarded as security threat by their neighbouring states. Therefore, one's gain through competition can be viewed as loss for another (Degaut, 2015). This zero-sum game may make the states feel less secured and peace among nations could be ultimately endangered (Bajpai, 2003). For instance, North Korea's nuclear programme to test long-range missiles to achieve its security can be seen as security threat for its neighbours in the pacific region and this may further cause agitation and retaliation. To encounter such threats, Japan, South Korea, and the USA have jointly decided to beef up their deterrence and enabling their military further in the Indo-Pacific region against any threats exhibited by North-Korea (2022). Similar metaphor can be used regarding Iran's nuclear program for Israel and Middle East. Both Pakistan and India have developed nuclear weapons at the same time as part of



military competition. However, it is not clear if such nuclear weapon development made peace more prosperous as they have engaged on number of military fights in recent years (Al Jazeera, 2023). This makes us wonder if expanding military hegemony through competition may make the possibility of war less prosperous.

The concept of security has been broadened with time. Security experts have emphasised that inclusion of non-military elements is necessary to maintain a peaceful and prosperous society. The landscape of security has changed, and new security threats have evolved over time including non-military elements like poverty, climate change, inequality, and other socio-economic aspects as part of the security threat (Youngs, 2015). Poverty, inequality, economic downturns, environmental degradation, and natural disasters are barriers for security, peace, and prosperous society (Alkire, 2003). These new security threats can develop and react with each other in a complicated manner that may jeopardise both peace and security (Raleigh & Urdal, 2007); (Link, et al., 2016). Hence, additional forms of security including economic security, environmental security and social security have become important elements with the changing of world circumstances. The idea of security, the threats to security and means of achieving security have evolved and changed over time (Bajpai, 2003). Besides,

the referent<sup>4</sup> object of security has been contested over time (Johnston, 2020). New security threats have emerged whilst the longstanding ones have become diluted. Security experts have realised that new threats may not be neutralised by using old tactics, that means military threats are not the only danger we face, and military power cannot be the only defiance against all threats (Oels, 2013); (Dinc & Eklund, 2023). Non-military threats can also threaten our ways of life, acquired values and quality of life and policy choices (Johnston, 2020). Therefore, it is paramount to include those threats in security conceptualisation.

Human security apparatus provides with a broader definition of security by including elements from wider perspective. Human security doesn't underestimate the importance of maintaining territorial sovereignty. It rather helps to understand how security can be achieved by investing in people by including the new security threats including climate change associated consequences. Security experts have acknowledged that since the scope and perspective of security are evolving, therefore, the very definition of security needs to be readjusted by including new elements (Adger & Pulhin, 2014). New security threats need to be added as part of security strategy (Chilunjika &

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<sup>4</sup> Referent in neo-realism means state, whereas referent in human security means individual **Invalid source specified.**

Gumede, 2021); (Bajpai, 2003); (Johnston, 2020) and (Eklund, et al., 2022). Human security apparatus is people centric that emphasises economic security, political security, and environmental security (Mason, 2015). It is capable of dealing with complicated and multifarious security threats (Alkire, 2003). Human security and prosperity depend largely on the provision of combining the effort to bridge between the actions to ensure freedom from fear and want (Bajpai, 2003). Human security framework provides a powerful mechanism that interconnects various important components in a comprehensive and meticulous way to ensure security (Johnston, 2020). Human security experts define security as the protection of core values of our life including freedom against fear, violence and want. Their aim is to ensure relatively peaceful and prosperous societies by deteriorating the negative variables to security (Adger & Pulhin, 2014). Human security prioritises the well-being of individuals by ensuring freedom from want, fear and conflict. Human security apparatus seems a modern way of dealing with security threats.

## Climate Change as a Security Threat

Climate change can act as a security threat. Rose (2015) argues that climate change can act as a security threat under certain circumstances. For example,

climate change can threaten security by two fronts. Firstly, climate change can threaten the well-being of societies by affecting economic and agricultural outcome and individuals and secondly, it can act as a threat multiplier for potential violent conflict by diminishing natural resources like water (Ferris & Weerasinghe, 2020). Furthermore, climate change threatens people's livelihood, physical properties including houses and business establishments (Kumssa, 2010). It can threaten food security, economic situation, and political stability of a country (Reid, 2014); (Morton, et al., 2016). Additionally, climate change can threaten people's health and mental well-being. These elements are important for a peaceful and prosperous society. Decay of these vital elements can bring negative impact on a society.

Under human security theory's conception of security, climate change threatens security by affecting both freedom from want and freedom from fear. Extreme climate events like drought, floods, cyclones, forest-fires have been causing deaths to people and will do so in near too, which is clearly a concern for fear for the vulnerable community (Elliott, 2023). Climate change severely and adversely impacts the freedom from want of people living in agricultural communities. As their crop production drops, the physical infrastructure removed by climate disasters, the lack the ability to provide enough for

subsistence levels, let alone for economic prosperity (Degaut, 2015). Additionally, climate change can potentially push almost 20 million people into poverty trap in the developing countries by affecting their livelihood and economic prospect (Youngs, 2015). Besides, climate change can possibly drive about 15-20 per cent more people into hunger in the developing countries by 2050 (Morton, et al., 2016). All these impacts collectively can threaten both freedom from want and freedom from fear.

Extreme climate events drive unstable level of internal migration that can be a security threat. Climate change can lead to unstable level of internal migration that can endanger a state's capacity to provide its citizen with basic amenities (Eklund, et al., 2022); (Dinc, 2023). Besides, citizens after being displaced by climate change events internally may not have equitable access to decent housing, job and business prosperity, access to public education and public health (Chilunjika & Gumede, 2021). Therefore, climate change driven migration can be security threat for both the state and the eco-migrants.

## Environmental Security Through the Prism of Neo-realism

Neo-realism school of thought seem incapable to understand the security threat

exhibited by climate change. Neo-realist scholars have suggested that security is achieved by ensuring territorial sovereignty through military power. Neo-realist scholars like Waltz (1997) and Mearsheimer (2015) argued that the biggest threats emanate from other states and modernizing military power in an anarchic world would help to ensure security. Furthermore, neo-realist scholars have stated that the biggest threat comes from other states (Lacy, 2016). Climate change does not necessarily threaten states directly as a military invasion would, but it poses a significant threat to aspects of human security, and additionally can also act as a threat multiplier (Alkire, 2003).

Expanding military power doesn't apprehend climate change related threats. Neo-realist scholars believe that the military power can only mitigate any security threats. However, military might seem frail to tackle threats exhibited by climate change since it develops in a complicated way. Critics of neo-realism have highlighted that military power is inadequate in tackling non-conventional security threats like climate change including unstable level of migration and the challenges faced by the eco-migrants upon migrating internally to large cities in developing countries (Adger & Pulhin, 2014). It is important to have a well-structured military but military power alone can't tackle security threats originated from climate change related threats including economic damages,

unstable eco-migration and food security (Trombetta, 2019); (Gellers, 2021). Neo-realist scholars have emphasized the expansion of military as a solution to all threats (Bajpai, 2003). However, Reid (Reid, 2014) and Johnston (2020) have contested that security threats in today's world are not always based on threat and conflict including climate change. Military expansion based on threat and conflict doesn't address multi-dimensional security threats exhibited by climate change including unstable internal migration, economic loss, damages of physical infrastructures, food security and so on (Eklund, et al., 2022).

Military power is incapable to deal with unstable internal eco-migration. Military power is ineffective to deal with unstable level of internal eco-migration and other threats associated with it (McDonald, 2013) and (Scheffran, 2009). This claim has further supported by Meibauer (2021). They have underscored that military resilience is incomprehensible to deal with non-military asymmetric threats including mass eco-migration, inequality, and other human security issue. The challenges faced by developing countries to deal with unstable level of eco-migration is not a threat exhibited by external enemy state, rather a domestic issue (Degaut, 2015). Expanding military power doesn't address this domestic issue.

Neo-realist scholars ignore the security threat domestically originated climate change influenced internal migration. Environmental security threats including unstable level of internal eco-migration are often being originated from within a state, rather than from outside. For example, continuous flooding, river erosion and cyclones damage the physical infrastructures of a country and livelihood of the people, but this is a threat originated within a state rather from an enemy state (McDonald, 2013). Furthermore, mass internal migration caused and perpetuated by climate change events is a security threat that originates from within a state (Bajpai, 2018). Critics of neo-realism including Reid (2014) and Meibauer (2021) emphasized that neo-realist scholars focuses on threats originated from outside of the state, rather than threats originated from within state. Addressing these threats originated from within state is important to maintain the political stability and sovereignty.

## Environmental Security in the Prism of Liberal-realism

Liberal realist scholars have advocated the inclusion of environmental and economic security as part of broadening the concept of security. In contrast to this, neo-realist scholars have previously emphasized that only way to preserve



security is exclusively through military prowess (Adger & Pulhin, 2014). Liberal realist scholars have realist that traditional view of attaining security through power maximization in an anarchic world limits the realist concept of security (Gellers, 2021). Therefore, they argue for stretching the conceptual limit of realism to include climate change. For instance, Sofer (2015) and Lieven (2020) have underscored that climate change can cause economic turmoil leading to political stability of a country. They stated that unemployment may rise among farming community due agricultural crops production loss because of climate change. The lack of economic prosperity may disrupt the existing political vulnerability without a strong provision to support the affected people (Lieven, 2020). Hence climate change should be incorporated as part of widening security.

Liberal realist experts have advocated to incorporate environmental threat in security apparatus as it can undermine the legitimacy of states and weaken a state's capacity to survive. Climate change can pose threat to elements necessary for survival of state by damaging the economic outcome of a country (Brown, et al., 2007) ; (Mitchell & Carpenter, 2019). Furthermore, liberal realist scholars have highlighted that extreme climate change disasters can damage important resources that are necessary to provide citizens with basic amenities

including food, water, and other essentials and subsequently it can challenge the political status quo (Harrington, 2023); (Gellers, 2021). Liberal realist scholars have underscored that if these events are not managed effectively then that can undermine the legitimacy of states (Lieven, 2020). Considering all these, liberal realist experts suggested that climate change related threats should be incorporated as part of widening the concept of security.

## Understanding the Challenges Faced by Eco-migrants Through the Prism of Liberal-realism

The challenges faced by eco-migrants are not conceptualised by liberal realist scholars<sup>5</sup>. Although liberal realist scholars have advocated to add climate change as part of widening the concept of security, but challenges faced by eco-migrants are yet to be grasped by realism school of thought (Bajpai, 2003). Liberal realist scholars differ from human security scholars in terms of three fundamental questions from the perspective of environmental security: 1) security for whom, 2) security from what and 3) security by what means.

While liberal-realist scholars think security for states, human security theories

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<sup>5</sup> Liberal realist scholars have advocated to add new security threats including climate change, economic performance and so on along with external military threat from enemy states.

think security for people. State remains as the referent of environmental security by liberal security experts (Elliott, 2023). Therefore, liberal realist scholars focus on ensuring security of nation from climate change associated threats, rather than ensuring security for individuals from climate change associated threats. Rose (2015) and Chilunjika & Gumede (2021) have highlighted that this has been a fundamentally departing point between liberal-realism and human security paradigm. The challenges faced by eco-migrants in the large cities of the developing countries is rather conceptualised as “low political issue” by liberal realist scholars rather than a security issue (Gellers, 2021). Liberal realist scholars have advocated to add climate change related security threats but the challenges face by eco-migrants aren’t conceptualised yet.

The referent object of security remains as state instead of individual in liberal realism. Adger & Pulhin (2014) and Ferris & Weerasinghe (2020) argued that this means the parameter of security conversation has been widening but state still remains as the referent of security. Although liberal-realist scholars have considered climate change as a security threat but like neo-realist scholars, they too have considered state as the referent of security (Bajpai, 2003). Critics including Morton, et al., (2016) and Johnston (2020) criticised that although

liberal realist scholars have advocated broadening the concept of security by including climate change, however that inclusion is based on survival and conflict. Therefore, the possibility of conflict from resource scarcity caused by climate change and political instability caused by climate change related events have been included in the security conceptualisation. However, since the referent of security remains as state, therefore, Individuals' hardship including the challenges faced by the eco-migrants aren't enlisted as part of survival and conflict narrative (Chilunjika & Gumede, 2021). Furthermore, Bajpai (2018) and Johnston (2020) criticised that liberal realist scholars have considered climate change associated consequences at a national level as part of the widening agenda, therefore, they have prioritised diffusing those risks at national level, not at an individual level. The challenges faced by the city-states of the developing countries upon experiencing unstable level of eco-migrants and challenges faced by the eco-migrants aren't considered by the liberal-realist scholars as part of the political instability exhibited by climate change associated threat (Chilunjika & Gumede, 2021).

By focusing on states, liberal realist theorists remain focused on conflict and miss the security threat exhibited by unstable internal eco-migration and security threat originated from the dissatisfaction of eco-migrants for their

government. For example, they considered climate change as a threat multiplier that can create or exacerbate political instability of a state that can subsequently cause violence (Reid, 2014); (Degaut, 2015) but they are yet to consider the challenges faced by eco-migrants in the large cities of developing countries. Additionally, climate change associated internal eco-migration can overstress the public services of the large cities in the developing countries that can ultimately affect citizens' disenchantment towards the government (Centre for Geopolitics and Security in Relism Studies, 2015). Eco-migrants upon experiencing discrimination to have access to basic human rights including adequate housing, economic opportunities and access to education and public healthcare may feel discontented against the government (Harrington, 2023) but liberal realist security scholars haven't been considering this as part of new security threat. Liberal-realist scholars have considered political economy of climate change at a national level but that doesn't contemplate the economic challenges faced by the eco-migrants at their personal level (Dinc, 2023).

While liberal realist scholars have prioritised conflict narrative as means to achieve security, human security scholars use investing in humans as means to achieve security. Liberal-realist scholars have advocated that the security against climate change associated threats can be achieved by diffusing conflict

related risk (Sofer, 2015) and (Lieven, 2020). That means although liberal realist scholars differ from the neo-realist scholars about climate change, but they both have suggested almost identical solution to climate change exhibited security threat (Brown, et al., 2007); (Degaut, 2015) and (Harrington, 2023). Using military to prevent international forced migration due to climate change has been featured heavily as part of liberal-realist' military strategy but other security challenges included economic challenges, human security challenges, political instability concerns originated from climate change haven't been prioritised. Unlike neo-realist scholars, liberal-realist scholars have emphasised the use of military force under slightly more extreme conditions (Lacy, 2016). However, Dinc (2023) and Elliott (2023) have argued that climate change associated security concerns including unstable level of internal migration and challenges faced by eco-migrants upon migrating to large cities in developing countries remains ignored by liberal realist scholars (Dinc, 2023); (Elliott, 2023). Furthermore, liberal realist scholars have reinforced climate change related threats through state as a referent and military securitisation as means (Chilunjika & Gumede, 2021). But change is a non-traditional security threat that would require non-traditional security response by being sensible to multiple interlocking variables. Liberal realist scholars should rather change referent from state to individual and they should depart from military means for security

to human centric apparatus and include adequate housing, economic progress, access to education and public healthcare and political representation as means to achieve security. Summarily, considering all the shortcomings of liberal realism, it can be observed that challenges related to domestic eco-migration and simultaneously challenges faced by eco-migrants are incomprehensible by both neo-realism and liberal realism.

## Why Human Security is More Suitable to Analyse Environmental Security

Human security apparatus is more suitable to understand and apprehend security threats related to unstable internal eco-migration in large cities of developing countries . Human security takes individual as the security referent. Human security paradigm departs from the conventional security threat that takes state as security referent (Alkire, 2003). Human security emphasises that security can be achieved by concentrating on the well-being and security of the individuals (Bajpai, 2018). Human security scholars including Ferris & Weerasinghe (2020), Chilunjika & Gumede (2021) and Gellers (2021) have highlighted that dominance of traditional national security having state as the referent has never been adequately justified. Security of individuals depends on

the security of state; however, individual security can't be purely coterminous (Elliott, 2023). Therefore, state as a referent can't suffice individuals' security. Individuals' challenges associated with eco-migration is a good example. Johnston (2020) and Harrington (2023) have highlighted that since individual is referent for human security apparatus, therefore, it is more suited to understand and apprehend environmental security related to climate change induced internal migration from eco-migrants perspective. Human security experts including Richard (2012) and Bajpai (2018) have emphasised that policymakers should focus on the insecurities that the eco-migrants themselves face after migration instead of militarising eco-migration. For instance, relocating to large cities internally can generate number of insecurities for the eco-migrants including loss of income and future economic prospect, loss of social capital and disruption of traditional adaptation strategy (Gellers, 2021). Human security scholars have recommended that these insecurities should be incorporated in the security strategy.

Human security paradigm incorporates the challenges faced by the eco-migrants at an individual level by repositioning individual as referent to ensure security. Human security scholars have highlighted that climate change migrants may face various socio-economic challenges including adequate housing, access to



education and public healthcare and economic opportunities at their new location (Elliott, 2023). Furthermore, human security apparatus highlights that the vulnerability of the marginalised groups including the poor and women may deteriorate further after migration (Oels, 2013). Therefore, human security experts recommend that primary focus of security should be those affected individuals or individuals vulnerable to be affected by these issues. Dinc (2023) argued that state security remains as an important and relevant element of security conversation, however, challenges faced by eco-migrants at their new location can be apprehended by taking individuals as referent, not state as referent. Furthermore, Bajpai (2018) and Eklund (2023) have pointed that state can be taken as referent for some special occasions, but they have emphasised that insecurity exhibited by climate change related migration is resonated at an individual level, therefore, individuals, in this case eco-migrants should be taken as a security referent.

Human security apparatus focuses on security from fear and want. It focuses on values rather than territorial issues (Adger & Pulhin, 2014). Human security scholars prioritise citizens' safety and well-being (Chilunjika & Gumede, 2021). Gellers (2021) and Elliott (2023) have mentioned that human security apparatus focuses on economic prosperity, food security, health, education, and all other

overreaching variables that can ensure individual safety and well-being. Human security experts have also emphasised on dignity of citizens as part of the security strategy (Kumssa, 2010). Additionally, they have highlighted that dignity can be achieved by ensuring a sense of surety about the future, a sense of personal empowerment and political security of the citizens (Degaut, 2015).

McDonald (2013) and Eklund, et al., (2022) have argued that the primary objective of human security apparatus is to ensure basic needs of the citizens including their fundamental freedom, human rights, socio-economic emancipation, social equity, rule of law, political representation, and good governance. Climate change associated events challenges these norms. Human security apparatus acknowledges and attempts to apprehend these issues. The challenges eco-migrants may face personally in large cities may resonate some the mentioned challenges. Since human security apparatus primarily focuses to tackle some of those challenges, therefore, human security seems more fit to deal with environmental security.

Human security scholars have recommended non-traditional security means for gaining threat against environmental security risks. Rose (2015) and Elliott (2023) have criticised liberal realism's securitisation of environmental threat

stating that environmental security threats cannot be addressed by military means. Human security scholars have highlighted that climate change related security threats can be neutralised by focusing more on individuals' economic resilience, adaptation, disasters risk management and by emphasising on long-term sustainable plans (Ferris & Weerasinghe, 2020). Additionally, human security experts have advocated for greater assistance to eco-migrants so that they can adapt with new environment in their new location (Chilunjika & Gumede, 2021). Furthermore, Bajpai (2018) and Mitchell & Carpenter (2019) recommended that the host communities for ecomigrants should be supported financially and institutionally so that those communities can strengthening resilience and adaptive capacity for oversubscribed public sources.

Human security scholars have advocated that security threat from climate change related migration internally can be addressed by encompassing such migration as part of adaptation and resilience issue, rather than a military threat (Elliott, 2023). Furthermore, they have highlighted that to ensure security, human development and adaptation strategy can be key factors. Lacy (2016) Bajpai (2018) have argued that security experts should prioritised the importance of good governance and transparency as means to achieve security. Additionally, human security scholars have highlighted that economic equality,

strong governmental institutions and political polarity can be means for strong security against climate change related security threat (Johnston, 2020). Therefore, considering at the advantages stated above, human security apparatus seem more suitable to comprehend climate change related security threats including unstable level of internal eco-migration and challenges faced by both city-states and eco-migrants themselves.

## A New Security Threat Evolving From Unstable Internal Eco-migration

Unstable eco-migration in large cities of developing countries is a security threat evolving from within states. Citizens after being displaced internally from rural areas to large cities in developing countries due to climate change related events may grow disenchantment towards their governments if the governments are unable to provide them with basic socio-economic facilities and political representation. Poverty, socio-economic inequalities, and political underrepresentation may influence citizens to protest against their government (Parry, 2021). People protests to influence public opinion, draw attention to injustice and to express their frustration to certain matters (Amnesty International, 2019). If eco-migrants aren't adequately supported by their

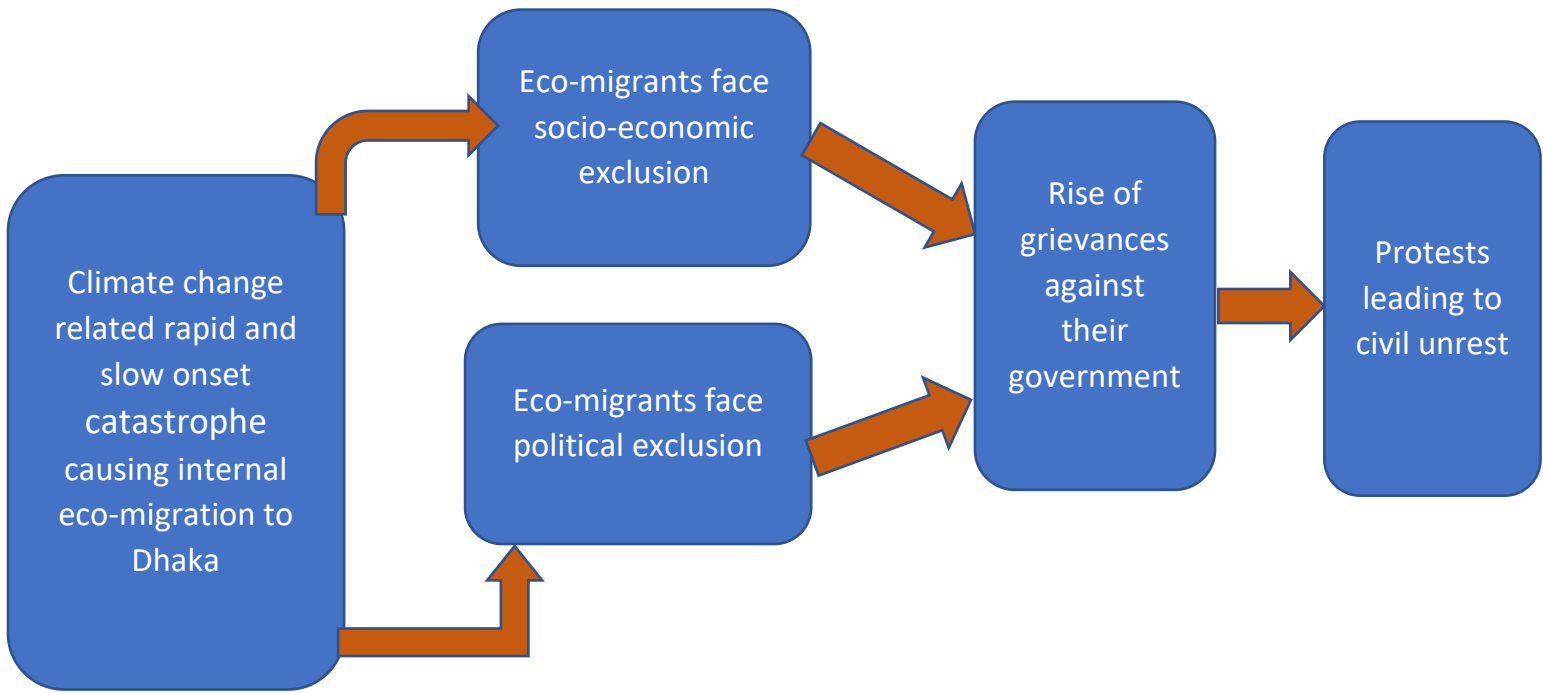
governments, then they may organise protest that can subsequently lead to severe civil unrest. Eco-migrants may protest to expose the injustices that they are being subject to in large cities of their own country. Furthermore, it may be a tool for eco-migrants to demand more accountability from politicians and government so that they uphold their responsibilities. They may consider both non-violent and violent protests as a tool to bring changes and to achieve their goals to avail their rights to basic rights as citizen. Government can neutralise this security threat by providing adequate assistance to its citizens. Government should implement inclusive development programme for eco-migrants in developing countries otherwise it may affect the political stability. They should provide necessarily assistance to eco-migrants in regards to adequate housing, jobs and economic opportunities, access to education and public healthcare so that eco-migrants will feel adequately supported and therefore less motivated to cause any political instability. Failure to do so may create a new form of security threat from unstable eco-migration in developing countries.

I have hypothesised in this research that climate change is causing unstable level of internal eco-migration in large cities of developing countries taking Dhaka, Bangladesh as a case study. As part of this hypothesis, I have anticipated that eco-migrants may face socio-economic exclusion in large cities of developing

countries as cities in developing countries have limited resources to support the influx of internal migration since public services are scarcer. Additionally, eco-migrants need their governments to support them by providing them with the basics including adequate housing, healthcare, education, economic opportunities, and political representation to lead a fulfilling life. Furthermore, eco-migrants may not have the political agency to escalate their concerns to relevant government authorities. This may result in the rise of citizens' grievances against their governments that may lead to civil unrest. I have underscored that this new form of security concern which can be better understood through human security paradigm, not by realism.

I anticipated in my hypothesis that in a democratic society, citizens- here eco-migrants, would express their disenchantment through protests if they are deprived from basic rights and subsequently don't have the adequate and proportionate political means to escalate their concerns.

Climate change related rapid and slow onset catastrophes causing internal migration to Dhaka> Socio-economic and political exclusion faced by the eco-migrants in Dhaka> Rise of grievances against the government> Protests leading to civil unrest.



## Chapter Four

### Case-study: Bangladesh

Bangladesh has been selected as a case study for this research to test the hypothesis if climate change driven unstable migration can be a human security threat. Bangladesh has been selected as a case study in conjunction with the

theory for several pertinent reasons: firstly, Bangladesh is a developing country with unique socio-economic morphology; secondly, Bangladesh has been identified as one of the most climate change vulnerable countries; thirdly, Bangladesh has hybrid political regime that is another important criteria to select Bangladesh as a case study; and finally, Bangladesh has been experiencing huge internal migration influenced by both push and pull factors. Considering all these options, Bangladesh has been considered as a case study to test the hypothesis.

## Climate Change and Migration from the Perspective of Bangladesh

Bangladesh has been experiencing unprecedented level of internal migration due to climate change. It has ranked seventh most vulnerable climate change countries (Rojas, 2021). According to USAID, more than 50% of the total population of Bangladesh are exposed to climate change related events including cyclones, river erosion, drought, flood and many more (Ministry of Environment, Forest and Climate change, 2022). Such high vulnerability is ultimately instituting unstable migration in Bangladesh and will demonstrate more in future. Such mass migration will worsen the unstable internal migration even further. Intergovernmental panel on climate change, (IPCC) have already



warned that the severest consequences of climate change may be on human displacement as millions of people would lose their home and livelihood by shoreline erosion, coastal flooding, and severe drought (Brown, 2019). Almost 700,000 people in Bangladesh were displaced on an average each year by various natural disasters influenced by climate change in the past decades (National Geographic, 2019). By 2050, it has been predicted that about 13.3 million people may be displaced due to climate change, making it number one driver for internal migration for Bangladesh (The World Bank, 2022). Both slow and rapid climate change related events e.g., floodings, cyclones, droughts, river-erosion have been major driving factors behind internal mass migration in Bangladesh. Floods, cyclones, river-erosion, alteration of the salinity increase, frequent droughts are considered as primary reasons for internal migration in Bangladesh. Poor people consider migration as their only alternative when they experience climate change influenced natural hazards like cyclones (Mustafa, et al., 2023). For instance, almost half a million people migrate from just the coastal rural areas that are vulnerable to frequent floodings, cyclones and sea-level rise to large cities every year in Bangladesh (Siddiqui, et al., 2017). Additionally, tropical cyclones also have been causing economic havoc and human misery to the coastal communities of Bangladesh acting as a push factor for internal migration. Since 1965, around 479,490 people died from 12 major tropical

cyclones in Bangladesh (Dhaka Tribune, 2017). Due to the geographical vulnerability and limited economic capacity, coastal communities of Bangladesh are more exposed to cyclones and forced displacement (Afroz, et al., 2018). Frequent cyclones influence people's decision to migrate both temporarily and permanently. Furthermore, about 50,000 to 200,000 people are being displaced every year by only riverbank erosion in Bangladesh (Islam, 2016).

Farming communities tend to migrate more frequently internally. For example, the Southern coastal region and the Northern region of Bangladesh have experienced more internal migration as these regions are economically dependent on agricultural sector. Climate change exhibited environmental stress is felt more acutely by these regions and subsequently by the farming communities when the soil quality deteriorates due to water salinity, or land is lost permanently due to flooding and river-erosion (Brown, 2008). Drought or lack of rainfall due to climate change poses a huge challenge to agricultural crops production in Northern Bangladesh. Agricultural production mainly depends on rainfall due to lack of widespread availability of irrigation. Thus, shortage of rainfall and variation of rainfall have direct effect on food production and people's livelihood. Furthermore, radical changes in rainfall patterns disturb the

agricultural practices that have been in practice for many years and are thus perceived as a severe risk. About 65% of all households in the Northern Bangladesh depend on agricultural and fisheries-based livelihood (Ministry of Planning, 2019). Thus, they feel more urged to migrate to big cities when they endure frequent climate change influenced calamities. Coastal farming communities are more exposed to climate change vulnerability than others. About one third of the total population of Bangladesh lives in the coastal area, that means with a projected 50cm rise of the sea-level, one in every seven persons will be internally displaced by sea-level rise alone (Amin, 2010). Sea-level rise, frequent flooding and cyclones are common climate change events faced by the coastal communities in Bangladesh. This impacts agricultural crops production heavily forcing millions of small farmers and day labourers to migrate to big cities for survival (Ahsan, et al., 2011). Although the Bangladeshi government has taken number of initiatives as a mitigation and adaptation strategy, but unpredicted slow and rapid climate change associated events make it difficult for the country to cope up with limited economic resources influencing affected communities to migrate internally.

Drought has been a significant factor behind the internal human displacement in Bangladesh. A list of droughts and its impact on people in general have been

listed below;

## Ramifications of Droughts in Bangladesh

<b>Year</b>	<b>Impact of drought in Bangladesh</b>
1791	Affected area- Jessore.  Impact- Prices of commodities doubled or tripled.
1865	Affected area- Dhaka  Impact- Famine.
1866	Affected area- Bogra.  Impact- Rice production reduced significantly, and prices of food products tripled.
1872	Affected area- Barishal and Khulna.  Impact- Crops production reduced remarkably.
1874	Affected area-Bogra.  Impact- Reduced crop production failure.
1951	Affected area- Northwest region of Bangladesh.  Impact-substantially reduced rice production
<b>Year</b>	<b>Impact of drought in Bangladesh</b>
1973-1975	Affected area- Northern Bangladesh.

	<p>Impact- Droughts in 1973 &amp; 1974 have been described as one of the most severe droughts in the history of Bangladesh. 1974 famine is known as the most notorious droughts in Bangladesh. Prices of food products increased significant. There were number of civil unrests throughout 1973, 1974 and 1975. During that period drought affected almost 47 percent area of the country and more than half of the total population were directly affected by droughts. Bangladesh just got independence from Pakistan in 1971. The newly formed government didn't have the economic and institutional settings to tackle such climate change influenced calamity. Economically Bangladesh was at the very lower end of the global economic ranking, and it had very limited economic capacity. There was huge political turmoil during that time. Many political leaders were killed along with their families and new political parties came into existence and finally the military took over the government.</p>
<b>Year</b>	<b>Impact of drought in Bangladesh</b>
1978-79	Affected area- Northern districts of Bangladesh.

	<p>Impact-It had widespread damage to overall crops production as 42 percent of the cultivated land was affected. The overall rice production was reduced by about 2 million tonnes. Droughts during this period affected almost 44 percent of the total population economically.</p>
1981-1982	<p>Affected area-Nationwide.</p> <p>Impact-Severe drought adversely affected overall crops production countrywide. Rice is the staple food of Bangladesh and rice production was reduced by almost 53,000 tonnes during this period.</p>
1989	<p>Affected area- Northwest Bangladesh with, including Naogaon, Nawabganj, Nilpahamari and Thakurgaon.</p> <p>Impact- Drought dried up most of the rivers in Bangladesh causing severe water shortage for farming communities.</p> <p>Dust storms in several districts affected public health and infrastructure.</p>
<b>Year</b>	<b>Impact of drought in Bangladesh</b>
1994-95	Affected area- Northwest Bangladesh.

	Impact- The most persistent drought in recent times, it caused immense crop damage, especially to and rice and jute, the main crops of
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Flood caused by heavy and unpredicted monsoon is another reason of internal migration in Bangladesh. Flood has been causing both economic and human tragedy in Bangladesh. For instance, almost one quarter of the country was underwater during the recent 2020 flood and nearly 1.3 million homes were damaged forcing hundreds of people to relocate (Sengupta & Manik, 2020). The geographical location of Bangladesh has been both a blessing and curse as about 230 rivers have crisscrossed Bangladesh carrying about 1-1.4 billion tonnes of fertile silt making Bangladesh as one of the most fertile lands on earth but simultaneously causing regular flooding making Bangladesh as one of the worst climate change vulnerable countries (Samaranayake, 2014).

Southern coastal communities in Bangladesh trends to migrate to large cities internally more than other areas. The coastal area of Bangladesh accommodates about 60 million people, of which two-thirds are poor and constantly battle with slow and rapid climate change influenced events including extreme flood, storm surges, river erosion, sea-level rise, water salinity and so on (Bernzen, et al.,

2019). As for example, the 1991 cyclone that hit Chittagong (Bangladesh) killed more than 140,000 people and made more than 10 million people homeless (History, 2019). However, due to the advancement of the technology and communication tools, the preparedness and response of the natural disasters have improved and therefore the number of human casualties has decreased considerably in Bangladesh but still the physical property damage due to natural calamities including storms, cyclone and flood influenced by climate change has increased radically in the context of Bangladesh (Biswas, et al., 2019). Increase of water salinity in the southwest coastal region of Bangladesh remains another foremost environmental challenge. This would mean more internal eco-migration in Bangladesh.

### Climate Change Migrants Lead Precarious Life in Dhaka Slums and are Deprived of Basic Rights

Dhaka has been experiencing unstable level of internal eco-migration. On an average, 2000 people move to Dhaka city everyday permanently after facing some forms of climate change related adversities (McPherson, 2015). Dhaka, the capital of Bangladesh that is only 325 sq. kilometres with population of about 17 million people and it has been estimated that by next two decades Dhaka's population could double to 30 million (McPherson, 2015). Additional population



to Dhaka city has already been causing additional stress on already limited resources of the city's public services and amenities including transport, housing, economic opportunities, public healthcare, and other amenities. Dhaka has increased in population size by 966 percent between 1970 and 2010 making it one of the most unliveable cities in the world (Environmental Justice Foundation, 2020). This unstable migration has significantly affected Dhaka's living conditions and has put huge pressure on its public services. Dhaka has been ranked as the second worst city for living after war-torn Damascus (The Daily Star, 2018). Inadequate infrastructure, uncontrolled urban sprawl and vast number of urban slums have been detrimental to healthy growth of Dhaka's society. Additional internal migration to Dhaka influenced by climate change will impair the overall living condition even further. About 70% slum-dwellers move to Dhaka city after experiencing environmental hardship. About 3.5 million people that accounts for about 25% of Dhaka city's population are slum-dwellers mainly arriving from climate change affected areas (McPherson, 2015). About 20% of the total slum-dwellers of Dhaka city come from only from Barishal and about 50% of the total migrants to Dhaka city comes from areas including Bhola, Barishal and Potuakhali; three districts that have been heavily affected by climate change e.g., cyclones, floodings, sea-level rise, increase of water salinity and so on (Mcdonnell, 2019). Dhaka has been historically the epicentre of human

displacement in Bangladesh. From 1984 to 2010, the permanent rural–urban migration rate per decade has increased from 1.2 to 22.5 percent in Bangladesh (Bernzen, et al., 2019). However, such additional population has been causing additional stress on already limited resources of the city authority.

Climate change migrants to Dhaka face acute humanitarian crisis due to lack of social security provided by the government and Dhaka city corporations. They live in a precarious condition without adequate infrastructure or the prospect of regular work. Although about two-third slum dwellers of Dhaka are climate change migrants but too often they are neglected from urban planning, resource distribution, social security schemes and access to public services (Rana & Ilina, 2021). Climate change migrants lead impoverished life in the large cities like Dhaka. They also face economic disparity and are too often subject to exploitation of cheap labour. For instance, more than 65% residents living in those urban slums in Khulna and Dhaka do not have any sanitation facilities, 45% of slum dwellers do not have a fixed place to dispose of their garbage, and 35% are outside of the garbage collection system (Ahsan, 2018). Furthermore, climate change migrants often can't access standard education, accommodation, health care and other amenities in Dhaka, Bangladesh. Furthermore, climate change migrants don't have access to affordable standard

housing. Additionally, it has been observed over time that climate change migrant cannot access to established urban slums unless they have strong social connection or relative living in the slum. As a result of the constrains placed upon the climate change migrants due to adverse situation, sometimes they tend to live in slums beside the highways, low-lying areas, and culverts with a poor living condition. Slums are over congested and deprived from any 21st century amenities (Uddin, 2018). Climate change migrants in Dhaka also have no access or very limited access to any existing training facilities. Therefore, too often it has been found that they work as street sweepers, rickshaw driver, domestic workers, and other nominal jobs. Furthermore, climate change migrants to Dhaka often don't have any access to electricity and other basic necessary amenities. Furthermore, after moving to Dhaka for stable economic and social security, many ecomigrants in fact find themselves exposed new risk and vulnerabilities.

## Chapter Five- Research Methodology

### Reasons for Using Qualitative Research

Is unstable migration driven by the climate change a threat to the human

security? To test the main hypothesis, I interviewed eco-migrants to Dhaka, Bangladesh to gather information to understand the causes of migration and how the variables of human security e.g., accommodation, job security, access to public health and education are being affected on an individual level. Using qualitative research, this study investigates people's beliefs and attitudes, to gain an in-depth understanding of an experience or situation (Punton & Katharina, 2015). Therefore, using qualitative research is an effective way to understand the personal experience of the eco-migrants to Dhaka. Using qualitative research also helps to understand if the participants have been feeling isolated about their overall experience in Dhaka. This research seeks to understand if participants have grievances against the government and intend to express that frustration via protest. Qualitative methods have been shown to be more effective in understanding such inquest (Agius, 2018). Furthermore, this inductive research was intended to test the hypothesis by systematically identifying participants i.e., eco-migrants that exhibited pertinent characteristics relevant to the thesis. Qualitative methodology has been referred as an effective tool in such scenario (Mohajan, 2018). Additionally qualitative method has been described as an effective apparatus to gather information through observation or semi-structured open-ended questions in a natural settings to test hypothesis (Ahmed, 2021). Therefore, using qualitative

research to test the hypothesis if climate change influenced unstable migration can be human security threat was plausible decision considering it required data to be collected through semi-structured interviews of the eco-migrants in a forthright natural way.

Additionally, quantitative research relying on secondary data may not be suitable in this context of Bangladesh because of the credibility of the available secondary data. Firstly, it has been observed that for a developing country like Bangladesh, it has been difficult to collect research data that is based on standard and coherent incentive data collection mechanism (The OECD, 2019). Secondly, it requires time, resources, and continuous multi-disciplinary efforts to build data-governance that is of international standard. Bangladesh, like other developing countries is yet to have the necessary data-governance for research and public policy (The OECD, 2019). Bangladesh is yet to develop a good data ethics that is independent, transparent, and free from any government interference (Mohajan, 2018). It goes without saying that poor quality data would lead to poor quality data analysis (Sakib, 2021). The main causal link of this research intends to address two main questions. The first question connected to the causal link is to find out the overall socio-economic experience of climate change migrants in Dhaka i.e., human security deterrent.

The second question relates to the causal link to explore if they intend to organise any protest if they don't have any political means to escalate their concerns, either in violent or in non-violent form. Both questions resemble keen interest to understand the in-depth experience of the climate change migrants in Dhaka. As stated before, qualitative research has been proven to be effective in such situations (Mohajan, 2018).

## Shortcomings of Using Qualitative Methods and Subsequent Actions for Remedy

Qualitative research has many advantages and disadvantages; however, adequate measures have been taken to overcome those shortcomings. One of the fundamental drawbacks of the qualitative methodologies is that it may be difficult to replicate result as the research is fundamentally based on individual's own perspectives (Hammerberg, et al., 2016). Such perspective is often fluid, and it may change over time. Therefore, drawing a conclusion on a topic is exceptionally difficult. This also raises another fundamental question related to the inclusivity of the contradicting ideas that would eventually raises another concern related to the biasness of the researcher's own experience. Both conscious and unconscious biasness can be an influential factor for qualitative

method. Nonetheless, this can be mitigated by introducing definite controls. To avoid, any forms of biases for this research, the questionnaire was framed in a way that would have reflected the neutrality of the researcher. Objective questioning techniques, proportionate allocation of time for each question, and the candid nature of conversation were used to mitigate this concern. The questionnaire was validated by the supervisors who are experts in both quantitative and qualitative methods.

Qualitative research only provides data from one perspective, not all perspectives on a topic (Punton & Katharina, 2015). Therefore, comprehending a holistic conclusion of the situation may not be always possible. However, efforts have been made to overcome this shortcoming by framing the questionnaire in a way that can provide rather a sophisticated and proportionate understanding on the chosen topic. This research aims to understand individual's story, their day-to-day life, their satisfaction, or frustration about the certain socio-economic and political issue. The need for statistical data seems to be redundant in this situation. Furthermore, the results analysis chapter has laid out discussion of all perspectives based on collected data in a proportionate way. To capture different perspectives requires proportionate and adequate response also require time and effort which opens

to another concern regarding qualitative methodology, that is time consumption. It has been noted by the experts that qualitative research requires more time to conduct the investigation in comparison to the quantitative method (Hammerberg, et al., 2016). This has been true in this case as well. Conducting interviews took longer than I anticipated. Since, this research was about understanding the experience of the climate change migrants to Dhaka city, it was therefore, important to listen to their stories and experiences carefully. However, within limited resources and time constraint, often it was extremely difficult to accommodate the total experience within such short space of time although all attempts were taken to ensure that due attention was given to those participants. As stated previously, participants of this research had very limited literacy levels, which made the situation even more challenging.

Rigidity is another concern of the qualitative methods (Simister & Scholz, 2017). It has been observed that people do change their mind on a matter over time. Therefore, the firmness of the collected data and method that has been used to collect that data can be confronted. However, such issue can be subjugated by introducing through variables. As for example, it was informed to the participants at the beginning of the interviews that their forthright opinion and



true account of their experience were important for this research. Establishing trust and transparency by explaining the objective of this research aided to build trust between both the interviewer (myself in this situation) and interviewees. Such trustworthiness worked as a preventive measure to halt any form of exaggeration by the interviewees.

The data analysis technique used for this research has been process tracing. Process tracing is a qualitative data analysis methodology that intends to establish how a particular change or series of changes can be influenced by a potential cause or causes (Simister & Scholz, 2017). Process tracing technique has been an effective tool for this research since the hypothesis of this research is based on chain of events and associated variables. Furthermore, to ensure that none of the participants face any forms of hostility from anyone, utmost privacy was ensured throughout the conversation. Reflecting the political situation of Bangladesh, ensuring no political hindrance on the participants and local contact was an additional incumbrance. The participants had very limited educational qualification and literacy levels. It was very problematic and time consuming to explain to them the technicalities, objectives and relevant keywords associated with this research. However, due consideration was given so that the participants understood the main objective of the research and their

involvement in it. Explaining the main objective of this research to participants was crucial as they had to comprehend that they were not under any form of pressure to participate in this survey.

In conclusion, despite all shortcomings and challenges, due process was followed, and adequate attention was given to important aspects connected with this research. All procedures were adequately followed, and subsequently expert advice was sought from the supervisors as they are senior academics with expertise on both qualitative and quantitative research. Moreover, the detailed proposal of the fieldwork was submitted and endorsed by the University Research and Ethics committee.

A direct interview method was used to gather qualitative data. Direct interview technique has helped in two fronts; firstly, direct interview has helped to comprehend the true feelings of the eco-migrants and secondly it has effectively redundant concerns related to the secondary quantitative data as there was concern about the quality and credibility of the available secondary data. Independent research depends on reliable data sources (Lisman, et al., 2018). Although there have been serious and sincere efforts from both the Bangladeshi governments and other appropriate organisation to improve the quality of the research data, it would require far more rigorous and long-term effort to

improve the quality of data and extend the access to it by various interested groups. For credible research, it is important to have details of data collection, data management and other related procedural decisions to be transparent (Hammerberg, et al., 2016). Furthermore, every major decision within the process should be adequately justified and explained while conducting research. However, considering the perspective of Bangladesh, it has been found that these important dimensions are not always adequately maintained (Ahmed, 2021). The basic skill sets to carry out independent research would require sufficient research skill sets, resources, and funding (Simister & Scholz, 2017). But there have been a lack of research incentives and initiatives in both public and private universities in Bangladesh. It has been found that in Bangladesh only 1% of the total budget of the public universities has been used for research, that is significantly lower in comparison to other countries (Ahmed, 2021). Lack of research funding, incentives and skill set raises question about both the quality of research, credibility, and trustworthiness of the data (Ahmed, 2021). It has been observed that nominal research is conducted in most of the higher education institutions in Bangladesh (Alam, 2017). It has been noted that in Bangladesh there hasn't been enough research budget for researchers in general that includes both private and public sectors. This situation has further deteriorated due to the lack of infrastructure and facilities for research and

provision of scholarships at graduate level. It has also been emphasised that the research initiative among academics in Bangladesh has been far from ideal (Tamim, 2021).

Using direct interview method was the most meticulous way to capture participants' reaction to their current situation, government's support scheme for relocation and political representation in a candid way. Information gathered through direct interviews was used as part of the account evidence and sequence evidence. Subsequently, inductive reasoning was used to draw the general principle that climate change derived unstable migration can threaten human security in Bangladesh and other developing countries with similar levels of climate vulnerability.

The conducted interviews have had mainly three types of evidence: account evidence, trace evidence and sequence evidence. Account evidence has mainly provided with the content of the conducted interviews that were the oral account of the climate change migrants to Dhaka. Additionally, it has been anticipated that there would be evidence from the interviews that can be categorized as trace evidence which may demonstrate that a part of the causal link exists, as for example, climate change migrants face socio-economic and

political exclusion in Dhaka (outcome of this hypothesis has been featured in the result analysis chapter). Furthermore, considering the main hypothesis of this research, it has been expected that sequence evidence would also be available. Sequence evidence provides us with the option to comprehend the likely outcome of a hypothesis based on the chronology of temporal spatial evidence (Lisman, et al., 2018).

Process tracing technique has been used for data analysis too. Process tracing is suitable for this research as process tracing helps to gather evidence to generate sufficient confidence that a hypothesis in social science is likely to be proven accurate. Process tracing succours to demonstrate that one or a set of changes can be influenced by a cause or number of causes (Simister & Scholz, 2017). Furthermore, process tracing is well-known for exhibiting plausible explanation in social science (Punton & Katharina, 2015). Additionally, process tracing focuses on why a change has taken place and how (Lisman, et al., 2018). Moreover, process tracing is the fitting data analysis technique as process tracing can support to validate theoretical predictions and hypotheses based on small sample size by emphasizing that the causal process can cause or expedite certain outcomes (Punton & Katharina, 2015). As the main hypothesis of this research is that a certain set of events are interconnected with each other,

process tracing method is the most feasible data analysis method for this research.

The data sample size is normally small for the qualitative research (Punton & Katharina, 2015), but the adequacy of sample size in qualitative research has been much debated in academia (Shetty, 2023). In this study 31 participants were interviewed for this research, which is justifiable considering the nature and length of the conducted interviews. Previous researchers have conducted similarly sized qualitative research and have primarily relied on secondary literatures e.g., newspapers, books, articles instead of conducting direct interviews. A study titled, “Politics of Natural Disaster: how governments maintain legitimacy in the wake of major disasters,1990-2010” relied on analysis of newspaper articles to see the disenchantment of ordinary affected people in Bangladesh and India in the wake of natural disasters. The sample size consists of 31 participants represents varieties of climate change induced natural disasters from the context of Bangladesh i.e., flood, river-erosion, cyclone, drought, sea-level rise. Experts have also noted that the saturation level of the data sample size for qualitative research can be reached at a relatively small sample size, such as 9-17 interviews or 4-8 focus group discussions on an average (Hennink & Kaiser, 2022). To highlight the sample size saturation

further, Hennink and Kaiser stated “ Saturation is considered the cornerstone of rigour in determining sample size in qualitative research, yet there is little guidance on its operationalisation outside of the grounded theory.....We describe an array of approaches to access saturation that demonstrate saturation can be achieved in a narrow range of interviews (9-17) or focus group discussions (4-8), particularly in studies with relatively homogenous study populations and narrowly defined objective”.

The participants for this research belong to homogenous study population i.e., eco-migrants and the object of this research is also very narrow i.e., is climate change influenced unstable migration a human security threat for Bangladesh. Considering this research fulfils both conditions mentioned by Hennink and Kaiser, 31 participants seem an adequate sample size.

## How Participants were Recruited

The participants for this research were selected through a rigorous process i.e., ensuring that they represent different age groups and gender. Furthermore, the participants come from different climate change affected vulnerable areas of

Bangladesh representing diverse range of climate change induced events including flood, river-erosion, cyclones, droughts, water salinity and so on. Initially I planned to visit Bangladesh as part of the research field visit. However, Bangladesh was listed among travel red list countries by the British authorities during the peak time of Covid-19. Bangladesh authorities also imposed several restrictions for travellers from the UK, which were not removed until the end of the 2021 (Sakib, 2021). The research field work has also been restricted by the University of Essex as part of the covid-19 emergency measure, where external research was completely restricted by the university. Therefore, due to the nature of the Covid-19 pandemic, the interviews were unable to take place in person, instead interviews were conducted remotely via Skype. I used a local contact in Bangladesh to recruit participants and coordinate those interviews. My local contact was a highly educated individual with years of experience working with NGOs in Bangladesh. He has also worked with number of well-reputed both local and international organisations including USAID, World Vision, The Practical Action, BRAC and many more in various roles. He has excellent knowledge in this topic and in conducting surveys in a professional manner. I sought expert opinion from my supervisors and the University regarding his credentials and experience.



The Research and Enterprise team at the University of Essex helped me to draft a contract with my local contact in Dhaka, myself, and the University of Essex as signatories. This contract laid out the main responsibility of my contact and other relevant and important terms and conditions related to this research. This contract was then signed by myself, my local contact, and the University of Essex. I have also filled up the Research Risk Assessment forms that explained all formalities and details of the recruitment process, role of my local contact, research fieldwork strategy, risk assessment and mitigation tactics and special measures related to Covid-19 emergency. My fieldwork research strategy and other related documents were formally approved by the Ethics Committee before I initiated any further step related to conducting interview.

Covid-19 pandemic acted as a challenging factor for this research. It was painstaking for both me and my local contact to recruit participants/volunteers for survey fulfilling all the set criteria and to facilitate interviews as there were number of covid-19 restrictions in place and both the available resources and time were limited. Furthermore, the 6 hours' time difference between the U.K. and Bangladesh was another considerable challenging factor. Interested

participants in Dhaka were only available in the early morning as they had to go to work afterwards.

## Criteria for Participants

**1. Place of origin-** Participants of this research come from various districts of Bangladesh to Dhaka. They all currently (at the time of the interview) live in poorer areas of Dhaka. However, individuals from certain districts (places of origin) have been given priority in the pursuance of ensuring that a diverse range of climate change influenced calamities i.e., flood, cyclone, drought, sea-level rise/water salinity are accommodated. The objective for doing such thing was to accommodate the most common climate change induced events of Bangladesh that varies from areas to areas due to geographical exposure i.e., coastal districts are more exposed to sea-level rise and districts close to rivers are more exposed to flooding and river-erosion. Furthermore, I wanted to gather enough information to analyse if the experience and expectation of these climate change migrants vary based on the nature of calamities.

**2. Sexual orientation-** Male, Female, and others. However, I have ensured that there has been a fine balance between number of men and women among the participants.

**3. Age-** 18+ years. However, I have ensured that different age groups are well-represented in my sample.

My local facilitator helped me in identifying more than 40 potential participants initially after visiting 5/6 slums located at different parts of Dhaka to recruit participants those who were relocated to Dhaka. Those slums were in the central and North Dhaka. It is to mention that historically these slums have been heavily inhabited by the climate change migrants. He initially visited those 5/6 slums to identify potential participants. We targeted teashops during lunchtime and rickshaw garages in the late afternoon to locate potential participants, as these are common social gathering places for slum residents. The first criteria to be enlisted as a potential interviewee was to be a migrant to Dhaka and then my local contact explained them the aim and background of this research and my credentials. People who met this first condition were enlisted as a potential interviewee if they agree to participate. My facilitator explained the benefits and risks of taking part in this interview and then gather name contact details and availability, which we used to arrange times to meet with participants in their homes. 31 participants were selected for one-to-one interviews via Zoom, which I conducted from the UK remotely. The interviews were conducted in the early hours of the morning due to participants need to

leave for work. Those interviews lasted approximately 30/35 minutes on an average. My facilitator followed COVID-19 restrictions set by the Bangladeshi government during every step of this recruitment and interview process. Two risk assessment forms were submitted with the main ethics application. All those documents were checked and signed by the senior academics of the University of Essex.

## Data Collection

Participants were selected based on the set criterias and subsequently those selected participants were interviewed by me via Zoom video call from the UK. As mentioned previously that owing to Covid-19 travel restrictions imposed by the University of Essex, the participants were recruited by my local contact in Dhaka, Bangladesh. He was not a government official, neither an official from any NGOs. He merely assisted me in recruiting participants from the designated locations in Dhaka and facilitating those interviews.

Although the questionnaire was drafted in English, I translated it into interviewees' native Bengali. Before conducting interviews, I took verbal consent from every participant after explaining the objective and background of this research. All interviews were conducted in Bangla and were subsequently

translated into English. The responses of those participants were recorded with their permission for analysis. The recorded interviews were then transcribed for analysing the collected data to test my hypothesis and to comprehend the result section of my PhD thesis. The details of every participant were anonymized. The interview recordings were saved in my hard-drive, and it was protected by strong password. Furthermore, the main questionnaire does not include any individual's name, address, and contact details.

Participants were asked 23 questions designed to test the main hypothesis of this research that is if unstable internal migration in Dhaka caused by climate change a human security risk for Bangladesh. These 23 questions can be classified into four categories:

1. Why have they moved to Dhaka? Is it climate change or any other reason
2. What sort of support was provided by the government of Bangladesh to these migrants? Here government of Bangladesh includes the central government and Dhaka City Corporation. Support includes housing, education & training, job opportunities and so on.
3. Do the migrants have access to various social and economic opportunities? Are they represented adequately by the political system?

4.If the answers to question number 3 and 4 are no then what the migrants intend to do express their frustration?

Question category 1 helps to test the first clue of the of the causal link. The first causal link is to find out if the participants migrated to Dhaka and the cause of their migration to Dhaka. It also helps to test if there any impact of climate change related events to that decision. Question category 2 and 3 helps to test the second clue in the causal link that if the participants (if they were eco-migrants) have had adequate support from the government once they moved to Dhaka and if the participants have equal access to the socio-economic opportunity offered by Dhaka city. These two question categories are directly linked with human security dimension of climate change (if the participants were eco-migrants), therefore, these help to test if the unstable migration to Dhaka has any impact on human security. Unstable migration aspect has been discussed in case study chapter. Question 4 category helps to test the final clue in the causal link that is whether the participants have any resentment against the government and if the answer is yes then how they intend to expresses such resentment.

*Causal model: Climate change induced migrants to Dhaka > Socio-economic and political exclusion faced by the climate change migrants in the Dhaka city > Rise*

## Sample and Interview Characteristics

It has been ensured that the interviewees represented diverse backgrounds in terms of their place of origin i.e., districts, age, and climate change events (if they were affected by any) to ensure better rigidity and credibility of the qualitative data. The participants have mainly come from Barishal, Vhola, Pirujpur, Satkhira, Netrokona, Sirajgonj, Kurigram, Chadpur and Rangpur. There were more than 3 participants from Vhola, Chadpur and Netrokona. These districts are heavily affected by climate change related both slow and rapid events (Huq, 2022).

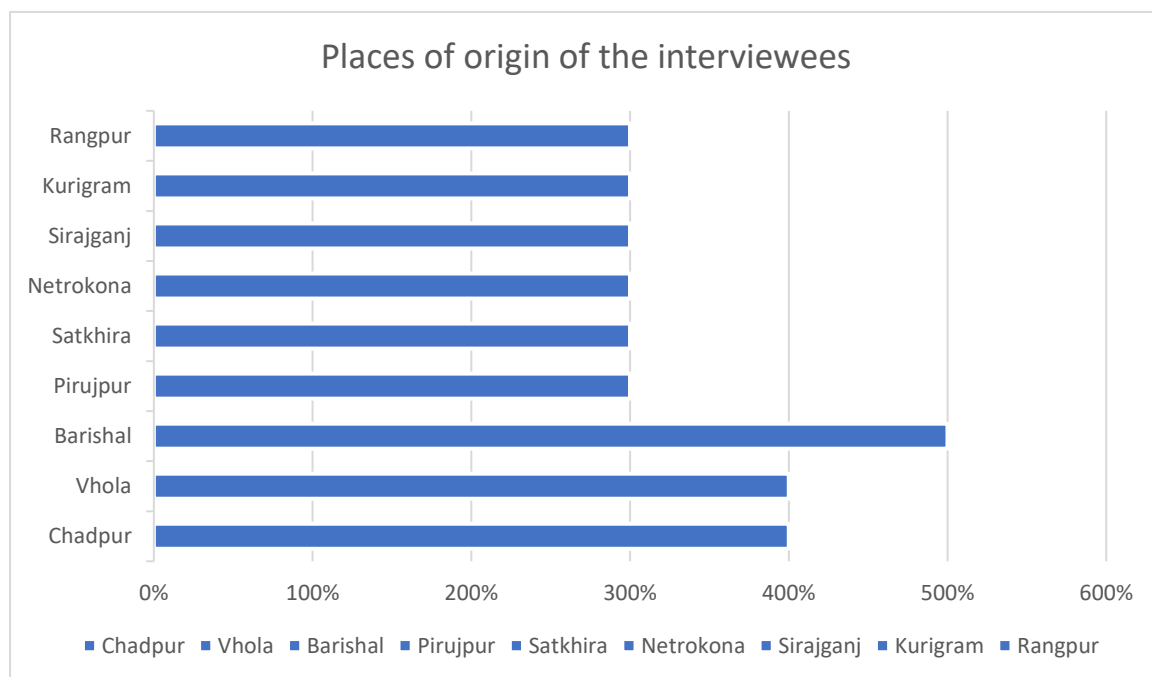


Figure- Places of origin of the interviewees.

Both men and women were represented through participants sample size.

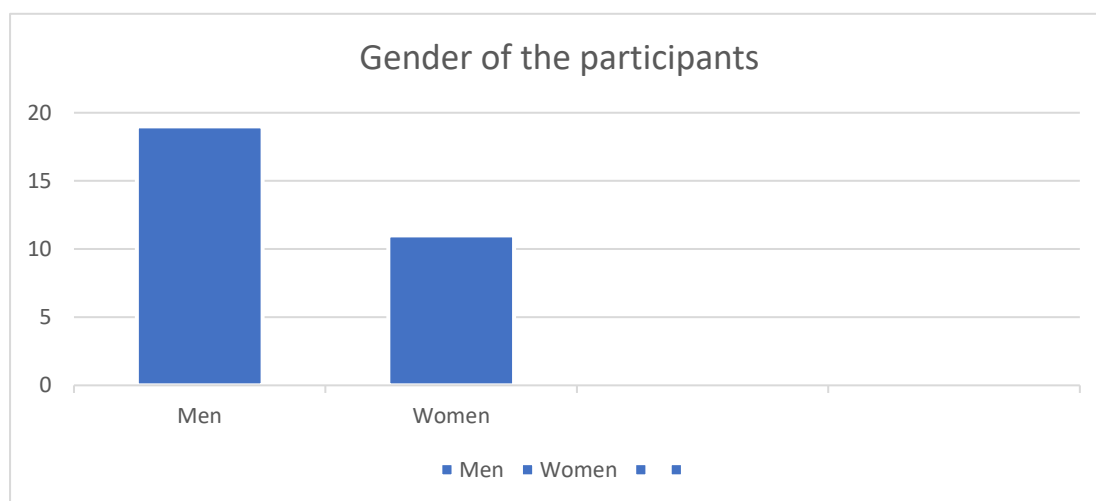


Figure-: Gender of the participants.

However, among the interviewees the number of men were higher than women.

The main criteria to be included as participant was to be a migrant in Dhaka.

That could be either economic- migrants or and eco-migrants. However, while conducting interviews, it was found that most of the participants moved to Dhaka city as their local areas were heavily affected by climate change related slow or and rapid climate change events including flooding, river-erosion, sea-level rise, drought and so on.

Some participants have been affected by more than one climate change events



i.e., flood and river-erosion, flood and sea-level rise and flood and drought.

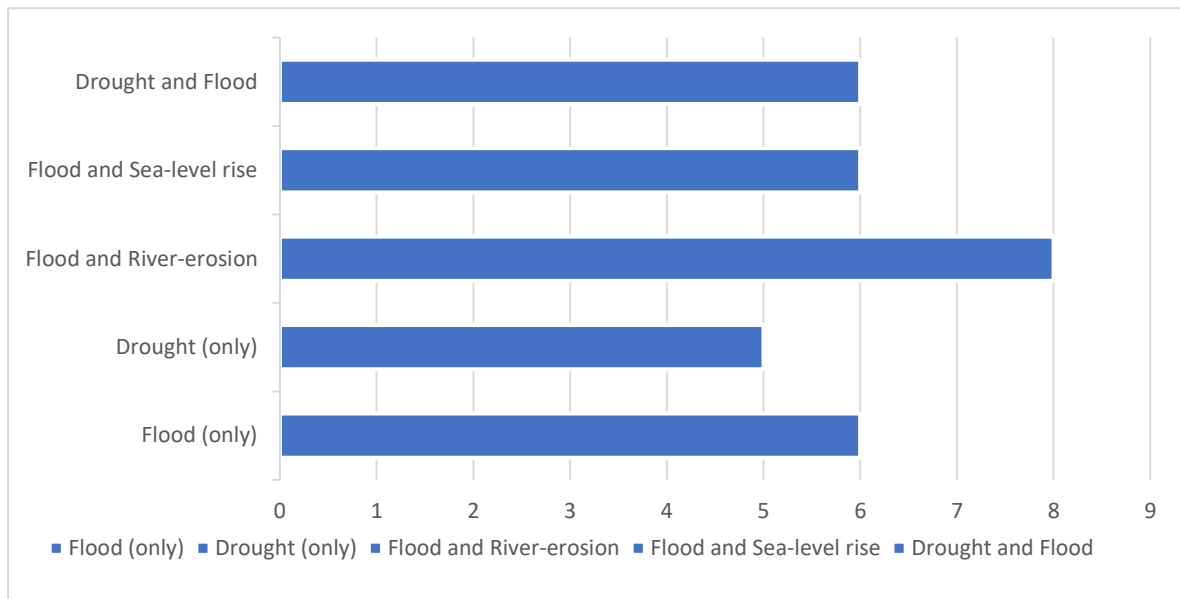


Figure-3: Climate change events Vs number of participants.

The mean of the total interview time was 36.67 minutes.

In summary, despite the difficulties imposed by the Covid-19 pandemic, all attempts were made to overcome any shortcomings associated with qualitative data and to ensure the credibility of the data.

## Chapter Six- Result Analysis

The main hypothesis of this research is to test if climate-change-driven unstable internal migration to large cities in the developing countries can threaten human security. Dhaka, the capital of Bangladesh; a developing country with significant climate change vulnerability, has been chosen as a case study for this research.

The main hypothesis of this research has been divided into three causal links to comprehend the notion. The summary based on the causal links are discussed below as to; a) How does climate change impact people's decision to migrate, b) Is human security being threatened by climate change driven unstable migration, c) How do the eco-migrants react when they are deprived from their basic citizens' right. The following conclusions could be drawn based on the investigation;

**Why have they (the interviewees) moved to Dhaka city? Is it climate change or something else?**

Climate change leading to migration is a well-documented but oversimplified phenomenon. There are few fundamental questions that ought to be asked

before drawing generic conclusion in conjunction to climate change influenced migration. These are; does climate change influenced natural calamities always lead to mass internal migration? Even if it is so, how does this trend differ between developed countries and developing countries? What are the intervening variables, like governmental interventions and other socio-economic and cultural elements, that can intercept this phenomenon? How does climate change affect people's decision to migrate for a country like Bangladesh? Does the impact of climate change on people's decision to migrate differ depending on the nature of climate change events i.e., rapid (flood), sea-level rise (slow/on-set event) that the people encounter? Does natural resource scarcity caused by climate change always lead to conflict at the peripheral level?

The first causal link of this research helps to answer few of these important concerns. It shows that climate change impacts people decision to migrate profoundly and disproportionately. Landless farmers and low-skilled populations seem to be affected disproportionately by climate change events and are more inclined to migrate internally to big cities to escape economic destitute. Furthermore, people's decision to migrate after being affected by the climate change events varies depending on the types of climate change events

that they encounter. For example, interviewed participants those who have been affected by frequent floodings at their place of origin have exhibited more keenness to migrate to big cities than those who have been affected by sea-level rise. Additionally, push factor aka adversities faced by the climate change vulnerable communities has more influence on their decision to migrate internally than pull factor aka better socio-economic opportunities in the cities.

The first causal link also shows that climate change caused natural resource scarcity can lead to conflict is rather oversimplified from the context of the developing countries like Bangladesh. It can certainly be a contributing factor or a threat multiplier for such conflicts at the peripheral level but there are many crucial factors that can build the foundation for such conflicts to proliferate. As for example, religious fragmentation, ethnic division, cultural divergence and so on are critical factors behind the origination and proliferation of such conflict. Climate change is depleting natural resources in Bangladesh (Zanten, 2021). For example, water scarcity and increase of water salinity due to sea-level rise have frequented in Bangladesh (Bagri, 2017). But that hasn't led to any substantial conflicts like many African countries with climate change vulnerabilities (Sultana & Thompson, 2017). This research shows that climate vulnerable communities

in Bangladesh migrate to big cities internally primarily to escape the economic destitute caused by climate change, they don't migrate to big cities to avert conflict originated by climate change caused resource scarcity. I have comprehended these summaries based on my through and lengthy interviews with eco-migrants from Dhaka city.

As part of my investigation, I have interviewed 31 slum-dwellers from Dhaka city as part of this research to understand their journey to Dhaka, the current situation that are in and the subsequent consequences and course of actions by them . Initially, I tried to find out why they have migrated to Dhaka at first place. I was also keen to find out if there was any impact of climate change in their decision and even if there's any then to what magnitude. Almost every one of the interviewees responded that their livelihood, houses, and social life has been affected by climate change related events e.g., flood, river erosion, rise of sea-level and drought. Some of them also explained their desperation of moving to Dhaka stating that they had no option but to move there. It seems that they have been uprooted for no fault of their own but due to climate change calamities. Some of the comments made by the participants are stated as below

for further conversation;

### Comments from participants about their motive to relocate to Dhaka

**1(a): “Within a week his entire village was taken away by river. The Meghna River has taken his village and many other villages. Many people of his area faced the same situation”.**

**1(b): “We have river erosion and flood. We can’t move from one place to another place because of flood. All our crops are taken away by flood. So, we had no option but to move to Dhaka”.**

**1 (c):“I moved to Dhaka with my five children as the river Meghna took away everything from us. I moved twice in my local area to protect my family from the Meghna River erosion but then finally I had to move to Dhaka”.**

**1(d): “River erosion, flood and cyclones are common in my area Bhola. It caused me many issues. There are more job opportunities in Dhaka but it’s difficult to avail such opportunities”.**

The average interview lasted for around 30/35 minutes. However, there were few interviews lasted for more than an hour. There was one interviewee who migrated from the district Bhola fleeing climate change shocks including cyclones, floodings and sea-level rise. Bhola is a coastal district in Bangladesh that is located at a very close proximity of the Bay-of-Bengal. The interviewee was a seasonal farmer and fisherman. Interview lasted for 1 hour 2 minutes and 10 seconds. He made few comments regarding his personal circumstances that were very remarkable. He made the following comment:

*“Flood always take our land and crops. There is no job opportunity in my area. Unfortunately, we always have some issues like flood or cyclones during crops collection. River took our house; the government promised to rebuild our homes, but we never received any help as the local leaders demanded money and they only helped people who could bribe them. I hope this conversation is confidential. If this video is leaked or shared, then the leaders will take me away from my home. I will be subject to forced disappearance. The authority doesn’t help us. They will rather take action against us. Even if anyone wants to receive any help even food relief then they have to pay some money to the authority”*

This statement is a reflection of the painful experience that the climate vulnerable communities encounter at their locality and the dire situation that they are in currently in Dhaka's slum.

Beside trying to understand how climate change impacts one's decision to migrate, I was also keen to see the magnitude of the push factor i.e., climate change related events on their decision to migrate to Dhaka and how the decisions may have varied based on the types of climate change events that they experienced at their local area/place of origin. Based on my detailed conversations with the interviewees, it can be gathered that climate change has direct influence on their decision to leave their places of origin. The above comments 1(a), 1(b), 1(c) and 1(d) resonate that. Furthermore, it has been seen as a common concept among the participants that moving to Dhaka would help them to earn more money and that would ultimately help them to be financially solvent but that seems far from the reality (*appendix 1:c:1, 1:c:2, 1:c:3*).

It has been observed that the impact of slow climate change influenced events e.g., river erosion, water salinity has been different from rapid climate change related events like e.g., flood, cyclones. Furthermore, it has also been observed that the influence of river erosion has more gravity on interviewees' decision to



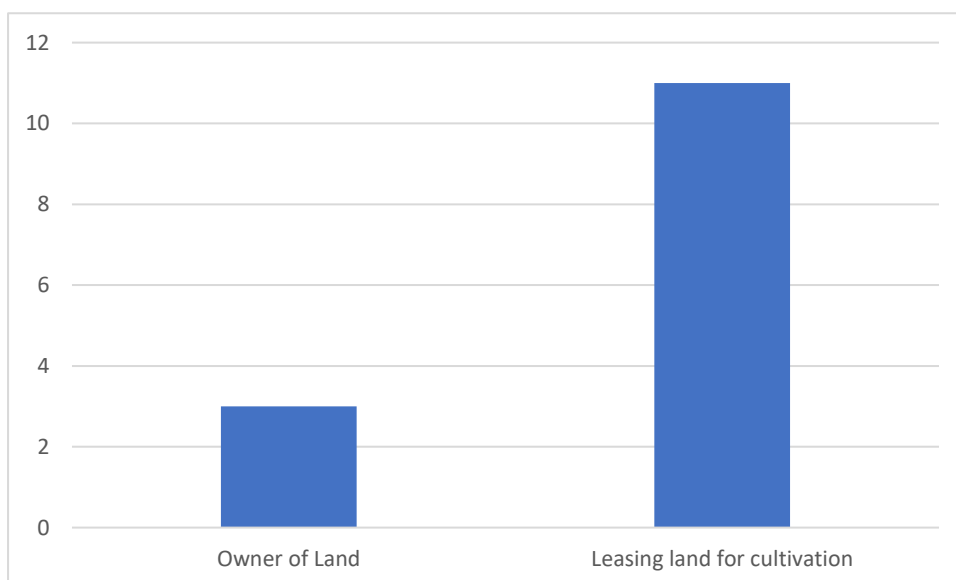
migrate to Dhaka than drought and sea-level rise. Additionally, it has also been monitored that although the eco-migrants have considerably good understanding of the impact of drought on their life, but they are still to grasp the impact of water salinity on their livelihood.

It has been observed that the most common climate change events that work as cause for migration are floodings and river-erosion (*appendix I:a:1, I:a:5*).

Bangladesh is a riverine country. Therefore, it is plausible that both floodings and river-erosions. Furthermore, although flooding is categorized as rapid climate change event and river-erosion is categorized as slow climate change event, but it has been observed that both events have similar effect on participants decision to migrate to Dhaka. Cyclone has been another common influencing factor for migration among interviewees. Eco-migrants those who have moved from the Northern districts of Bangladesh have stated that they have been facing both slow and rapid climate change events simultaneously (*appendix-I:a:1*).

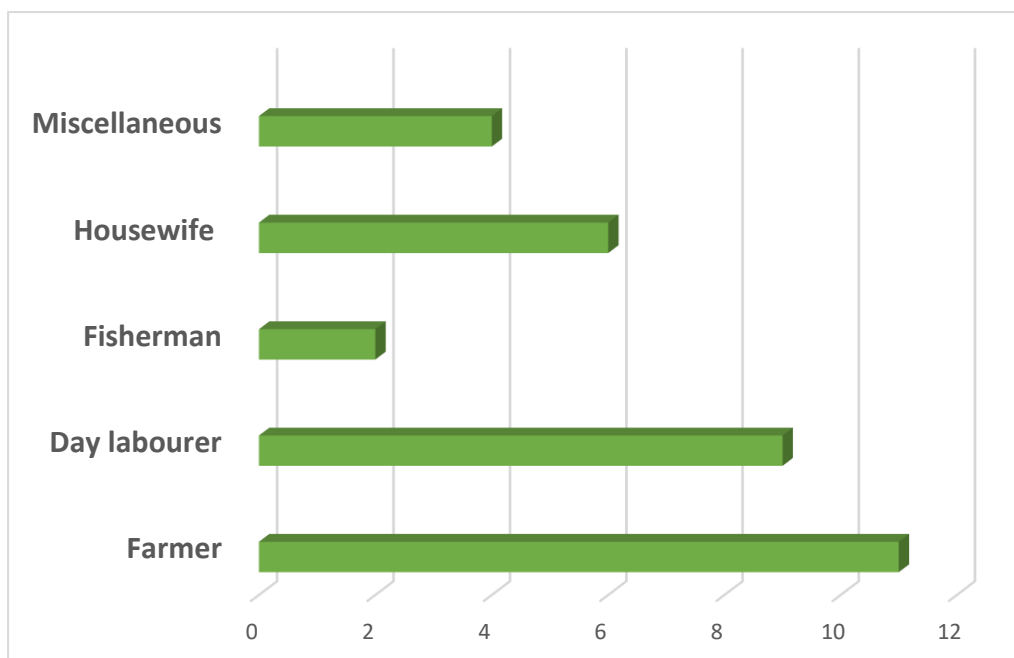
It has been observed that climate change influenced events mainly affected two important features of interviewees' circumstances; one is accommodation, and another is livelihood. River erosion seemed as the principal cause for loss of land

and house. Flood and cyclone have been the primary reasons for the loss of livelihood. Besides, landless farmers at the peripheral level are more inclined to migrate once they face double events impact influenced by climate change at the same time e.g., flood and drought, cyclone and sea-level rise (*appendix-1:a:3*). Furthermore, it has been observed that majority of the interviewees had no cultivable land of their own. However, they used to lease other people's land to cultivate the staple crops including rice, pulses and so on. Additionally, it has been recognised that when river-erosion eats up people's houses and flood washes away crops then people with the least means are most likely to internally migrant to big cities. Besides, it seems that the lack of alternative livelihoods for the affected farming community act as a critical influencing catalyst for the internal migration to Dhaka (*appendix- 1:a:2*).



**Figure-1: Land ownership among interviewees**

Interviewees expressed their extreme vulnerability stating that they had no option but to move to Dhaka their livelihood were severely affected by climate change events. Furthermore, it has been gathered from the interviews that they were not provided with necessary trainings or incentives to restart their life. Additionally, it has also been observed that individuals with no education are the most common group to migrate. It has also been observed that interviewed women eco-migrants were the most vulnerable groups in this situation (*appendix-1:a:4*). It can be summarised from the interviews conducted for this research that farmers, day labourers and other unskilled workers, unemployed women constituted most of the eco-migrants.



**Figure-2: Professional backgrounds of the interviewees.**

The resentment among the interviewees not receiving adequate government support or relief was clearly observed through the comments made by interviewees. Furthermore, it has also been observed that according to interviewees the government relief system is corrupted and flawed. Additionally, it has been noted that without political party alignment, it has been difficult for the interviewees to get any post-disaster assistance. It has also been gathered that local chairman or councillor have demanded bribes in access to disaster relief. Finally, it has been observed that migration to Dhaka city has been a common practice among the climate change affected communities (*appendix I:b:1, I:b:2, I:b:3*).

Housing has been a cornerstone of the human security. It can be observed from the definition of human security which is the freedom from wants and fear. Here for the concept of wants the following variables to have been used; Housing, economic opportunities, access to public healthcare, access to education and so on. Access to decent housing has been a core testing variable in conjunction to the second causal link of the main hypothesis of this research.

## 1. Access to Decent Housing

Decent housing is an important aspect of ensuring human security. Housing

standard and access to housing facility by the climate change migrants has been used as one the few testable variables as part of the human security dimension for this research. Housing is a basic human requirement for life to survive and prosper. It has been emphasised that access to adequate housing can be a precondition for accessing other human rights (Office of the United Nations High Commissioner for Human Rights, 2009). The world urban population is growing substantially. The large cities are becoming denser as the urban population is increasing and thus the competition for space has becoming fiercer. Competition over limited space is driving the housing price higher making it unaffordable for the many. Housing issue can be a core inequality issue if the government doesn't take appropriate action ( UN, 2018). This housing dynamics is applicable for both the developing and under-developing countries. Unless the relevant government authorities take the innovative appropriate steps, this housing issue can be a multilevel human security issue (Brambilla & Skeikh, 2021). Additionally, this can be a focal point for socio-economic exclusion. Developing countries find it difficult to accommodate the extra demand for sufficient housing. Therefore, slums in the developing countries are emerging faster. Sub-Sahara and South-Asia have the highest number of slums in comparison to any other parts of the world. It has been observed that about 60 percent of the world slum population live in Asian cities (Office of the United

Nations High Commissioner for Human Rights, 2014). Both Sub-Saharan and South-Asian countries are some of the most climate change vulnerable countries (Brambilla & Skeikh, 2021). However, there are many examples of developing countries managing their urbanization well.

Eco-migrants would require accessing housing facility in Dhaka as a basic requirement. 31 participants were interviewed for this research to see their perspective of the situation.

They were specially asked the below three questions:

- 1. Did you get any support related to housing from any department of the Government of Bangladesh or from the Dhaka City Corporation Authority when you first moved to Dhaka?*
- 2. What is your overall experience of the current accommodation?*
- 3. Could you approach to anyone from Dhaka City Corporation or any government authority to seek help or information regarding housing facility?*

All interviewees unequivocally answered that they didn't receive any direct or indirect assistance or support related to any form of housing when they first moved to Dhaka. Some of the comments from participants are as below;

**Comments from participants about their access to adequate housing in Dhaka**

**2 (a): “I didn’t receive any help from the government. The condition of my house was very bad. The city corporation also provided no assistance in this regard. No government ministry or NGO helped him”.**

**2 (b): “When I moved more than 30 years back, the housing situation was extremely bad but cheap but gradually it’s becoming expensive. We used to suffer from water borne diseases. But then few NGOs got involved and it has slightly improved the situation”.**

**2 (c): “We have electricity, but we don’t have any supply for gas and water. Even if we move to other places, it will remain same”.**

It can be concluded based on the comments 2(a), 2(b), 2(c), 2(d) made by the interviewees that they didn’t receive any form of assistance from any government department. Additionally, when they were asked if they asked any government organisation for help, they also answered that they didn’t ask for any help either. It is not known why they didn’t ask for help. However, it is perceived from the conversation that they thought it would not be possible for them to avail such facility anyway. Therefore, they didn’t invest any time to seek assistance. I was curious to find out how did they manage to rent a room or house in those slums at first place. A majority number of the participants admitted that they avail their room through their personal network (*appendix*

*l:d:1,l:d:2*). Here their personal network refers to their direct or distance relatives and their acquaintances from the same area as they are from. Furthermore, it has been observed from the responses of the initial responsibility of finding accommodation primarily rests with men. Women interviewees stay with their family and thus men are primarily responsible for arranging accommodation. It has been observed that all women interviewees migrate to Dhaka with wit their immediate family. None of the women interviewees mentioned that they have moved to Dhaka by themselves but with their husband or as part of the family (*appendix l: e:1, l:e:2*).

Concerning the overall experience of the housing, majority of the interviewees expressed their frustration. Here's some of the comments;



**Comments from participants about their overall experience to housing in Dhaka**

**3 (a): “We can’t have nice accommodation. We bought a small land and have built a house there. The supply of electricity is maintained by the local political leaders”.**

**3 (b): “It’s a slum, we are poor, it’s just a shelter for us. Our landlord arrange water but sometimes we don’t have any access to water. Same goes with electricity”.**

**3 (c): “We live in a small temporary one room house. Our rent keeps increasing every year. It was 300 first when I moved in but now its 2000 taka. This accommodation was built illegally by few influential politicians so that they can earn extra money from this business. This housing scheme isn’t government approved. The materials used for building this one room house was not of good standard”.**

**3(d):“ We couldn’t access to housing facility because we don’t have good political connection as we are not educated”.**

The interviewees eco-migrants haven’t received any form of assistance from the government of Bangladesh regarding finding suitable accommodation or access to information that may lead to suitable accommodation. They managed to get a spot in one of the slums in Dhaka by using their personal social networks from their place of origin. Analysing the comments from the interviewed eco-migrants regarding the conditions of their accommodation, the followings observations can be made;

1. The slums in Dhaka city are not of good standard to provide the basic form of

accommodation. Too often the materials used to build those houses are not of good standard (*appendix 1:f:5*)

2. Those slums are not included in the regular supply of water, gas, and electricity e.g., 3(b)

3. The rent of those slums continue increasing despite the lack of basic amenities e.g., 3(c)

4. These houses are not included in any form of government registers i.e., 3(a).

The rent collected from these slums goes to different local influential political leaders. The existence of these slums is illegal altogether and both the local political leaders and the city corporation authorities can sanction evictions anytime,

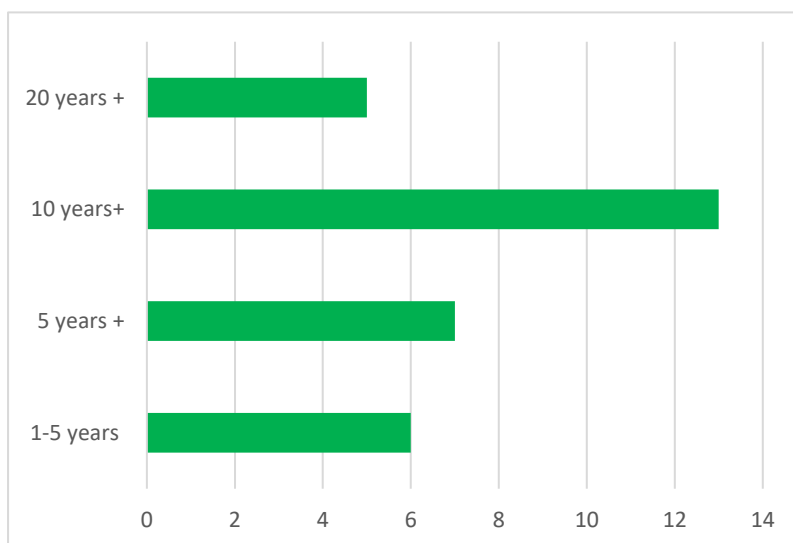
5. The local politicians in Dhaka those who have control over those slums often manage electricity supply from the adjacent local grid. However, those electricity supplies are often illegal, and the electricity and power supply authorities regularly disconnect those connections and sometimes authorise financial penalty (*appendix 1:f:2*),

6. Eco-migrants can buy small piece of land in those slums and build their own home. However, there is no guarantee that they would be able to keep occupying that house as the city authority can tender the notice of eviction

anytime. Besides, it seems that without political connection its difficult to approach to political leadership for housing assistance (*appendix I:f:4*),

7. The socio-economic status of the slum dwellers haven't changed over time to a level where they would be able to afford a better accommodation. As for example, there were interviewees who have been living in those slums for more than 20 years (*appendix I:f:1*),

8. Assistance regarding housing at the point of arrival wasn't available and that hasn't changed over time although interviewed eco-migrants have been living in those slums (*appendix I:f:3*).



**Figure-3: Length of residing in slums by the interviewed eco-migrants.**

In a nutshell, it can be summarised that the interviewed eco-migrants didn't receive any form of housing assistance from any government agencies at the

point of arrival and throughout their time in those Dhaka slums. They have expressed their overall dissatisfaction about the current accommodation.

## 2. Job (expectation Vs reality), Trainings, any Business Opportunities

Human security has seven dimensions and one of these is economic security. Job opportunities and business opportunities are considered to be as part of economic security element of human security (Kaldor, 2020). Economic security supposed to ensure a minimum amount of basic income. Furthermore, economic security intends to deal with livelihood, unemployment, job security and income inequality (United Nations, 2021). Economic security has been featured very amicably in the very definition of human security that freedom from poverty, want and despair. Individual governments retain the primary responsibility for ensuring these important factors of human security dimension although greater international collaboration and partnerships among nations, international and regional organisations are required to achieve various elements of human security (UN Department of Economic and Social Affairs, 2021).

Economic security at an individual level provides with certain degree of stability and predictability that ultimately assists an individual to plan for their future. Economic security has been considered as keystone for human well-being. Furthermore, economic insecurity can generate discontent and that can imperil the political equilibrium (Osberg, 2021).

In this research, it has been hypothesised that the unstable migration caused by the climate change can threaten the human security in the developing countries that can further be a national security concern. Since the economic security is an important aspect of the human security dimension, therefore, interviewees were asked three questions related to economic security: job and business opportunities. These questions are as follows;

*1. Did you receive any job-related assistance and information from the local or central government?*

*2. Did you receive any training from the Dhaka city corporation or Ministry of Labour?*

*3. Can you share your experience related to your jobs/businesses in the Dhaka city?*

Almost all interviewees answered that they haven't received any forms of

assistance from the government e.g., 4(a), 4(b), 4(c) and 4(d). That is both in the form of information and facilitating direct contact between the potential employers and eco-migrants. Furthermore, they also emphasised that they didn't receive any forms of trainings from the government or NGOs. When asked why they didn't ask for any assistance, they mentioned that it has been their understanding from their experience and common knowledge that without education and proper political or social connection both accessing trainings for jobs and information and contacts for jobs would have been impossible. Few of the comments made by the interviewees to express their frustration regarding job and business opportunities are as below;

**Comments from participants about their access to jobs and economic prosperity**

**4 (a): "There are jobs and business opportunities, but we need to bribe the local politicians and powerful local people to get it. I may move out of Dhaka because it is becoming very expensive for people like us and if the government demolish the slum, then I will have no option but to move out of Dhaka as it is becoming expensive and I will have no jobs and accommodation".**

**4 (b): "There is no good jobs or business possible without bribing. For every work, we need to pay bride".**

**4 (c): "There is no education or training facilities for the adult. I don't know anything about training from the government".**

**4 (d): "We don't have access to job and business opportunities because we are not educated, and we are not privileged. I personally must work long-hours every day to earn 200/300 taka to support my family e.g., food and so on".**

Analysing the comments from the eco-migrants the following observations can be made;

1. The eco-migrants do under-remunerated jobs including rickshaw-puller, garage mechanic, domestic worker, and small tea-stall owner,
2. There are no training facilities available for the eco-migrants from Dhaka city corporation or the government of Bangladesh (*appendix 1:e:2*),
3. The eco-migrants don't normally receive any form of assistance in regards to job opportunities in Dhaka, however people those who have political or personal connections may avail such opportunities (*appendix 1:e:1*),
4. It is difficult to start business by the eco-migrants as they don't have enough capital to start a business and too often, they need to pay bribe to the local politicians to start business. There is no financial incentive for the eco-migrants to start business (*appendix 1:e:3*),
5. The first generation of eco-migrants normally don't have decent paid jobs. However, the second generation may avail jobs like security guards, handyman, garments workers,
6. There is no upskilling training programme for the mature learners (4-c),
7. The NGOs operating in Dhaka city focusing slums are pre-occupied with advocacy campaigns. Providing trainings and information related to jobs aren't

very common in their agendas,

8. It seems that local leaders often demand money from the eco-migrants if they want to get a job or start a small business,

9. The access to better job and business opportunities remain distant even though the eco-migrants have been living in Dhaka city for many years.

Summarily, it can now be said that the climate change migrants to Dhaka don't have equal access to job and business opportunities like other residents. They also don't have access to information related to jobs as there is no specific government department or any specific physical office where the eco-migrants can visit to get information related to jobs. Furthermore, the local political leaders demand for money if the eco-migrants want to avail slightly better paid laborious jobs. Additionally, starting any business by the eco-migrants is almost impossible as they don't have the adequate capital. There is no government incentive available for the eco-migrants to start businesses. Besides, the eco-migrants don't feel motivated to take any time off from their as usual work since there is no incentive (*appendix 1:e:4*). And finally, men are more active in financial activities than women for most of the eco-migrants' families.



### 3. Access to Education

Access to education has been an important part of the human security dimension. Education is a powerful tool for enabling and enhancing human freedom and potential. Basic education has been a cornerstone for the human development (Brand, 2021). The correlation between ensuring human security and ensuring human capability is strong and integral. Furthermore, education has been considered as the driving force in the persuasion for eradicating poverty and insecurity. Additionally, education has been characterised as a must requirement in the 21<sup>st</sup> century world to ensure livelihood and employment (The Human Security Institution, 2021). It has been emphasised that education can assist to build a political and socially conscious society that can build a meaningful sustainable society. It has also been suggested that education is the most crucial catalyst to enable other variables necessary to ensure human security (Coetzer, et al., 2023). Therefore, providing education is a noble and foremost responsibility of the state.

Since providing education is such a significant part of human security and a focal responsibility of the state, I was keen to comprehend whether the children of the eco-migrants have access to the locally available education as part of this

research investigation. Interviewees for this research have been asked about the access to education once they move to Dhaka city. The following questions have been asked to gather information about this variable;

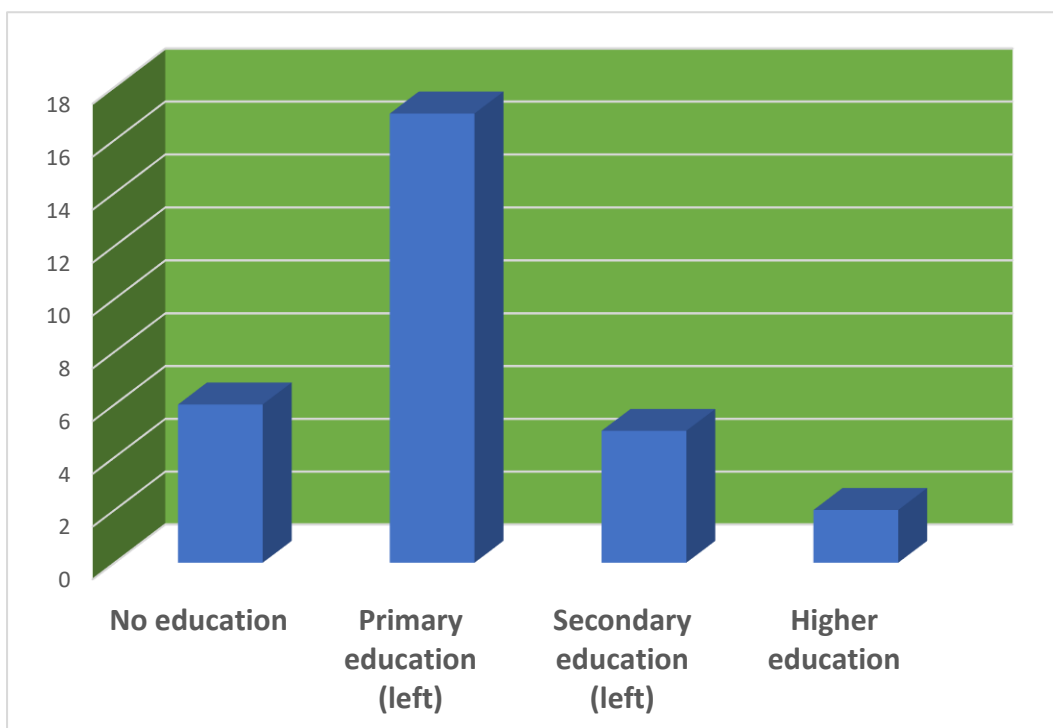
*1. Do you have any children? Do they have access to the local schools?*

It can be summarised based on the comments 5(a), 5(b) and 5(c) made by the eco-migrants that the children of the interviewed eco-migrants do have access to the locally available government or NGO subsidised school. Few of the comments made by the interviewees in regards to their access to education are as below;

<b>Comments from participants about access to education by their children</b>
<b>5 (a): “I have one son and two daughters. My son is disabled. My eldest daughter studied up to class 5 and then she got married. Another daughter goes to school, but I find it difficult to bear the expenses”.</b>
<b>5 (b): “No, we didn’t have access to government schools but then there were few NGOs run schools. My two sons studied there up to class 5”.</b>
<b>5 (c): “I have two daughters and they go to NGO run school”.</b>

However, the following observations can be made based on the interviews conducted observations can be made:

1. Children of the interviewed eco-migrants have access to schools in Dhaka. Those schools are primarily subsidised by the government or NGOs. As those schools are heavily subsidised, therefore there is almost no tuition fee,
2. In general, children of eco-migrants finish their education abruptly just after class 5 or 6. There is high plausibility of children of the eco-migrants finishing their study just after primary school. Furthermore, eco-migrants with disabled children don't seem to get any assistance from the government (*appendix 1:h:3*),



**Figure-4: Education level of the children of the interviewed eco-migrants.**

3. Although there is no tuition fee or affordable tuition fee but there are costs associated with sending a child to school that includes uniform, books, transport cost and so on. Eco-migrants residing in Dhaka slums often can't bear such additional costs (*appendix I:h:1, I:h:2*),

4. Eco-migrants feel the need to have additional earner so that they can improve their financial situation. Male children start working really at their early age to help the family financially. On the other hand, female children get married even they reach their adolescence. However, there was one interviewee whose children did exceptionally well in their professional life, and they left the slum to pursue their careers and have done well. However, such tendency was rare among other interviewees,

5. There are labour laws to stop child labour. However, that doesn't seem to be in action. There are age restrictions for marriage too, however, that doesn't seem to be in action.

In summary, it can be concluded that the children of the eco-migrants have access to primary education. However, the retention rate is low and the likelihood of leaving education is a high possibility. Quality higher education or at least adequate vocational education is required to get a better job that is well remunerated. Therefore, it seems that the children of the eco-migrants are also trapped in this poverty due to their illiteracy.

#### 4. Access to Public Healthcare

Access to healthcare is an important dimension of human security. An individual would need to be healthy in order to enhance freedom and calibre (Martin, 2023). Poor health damages one's capability to achieve freedom from want and fear. It also diminishes an individual's agency to fulfil their potential that is essential for socio-economic prosperity. Adequate access to public healthcare can diminish the threat imposed by health risk that is unevenly experienced by people's exposure to the risk, their economic ability and access to public healthcare (UNDP, 2021). It is no doubt that the gap between health threats and ability to deal with that such threats can be a huge human security threat. An adequate public healthcare system empowers societies to deal with health-risk and protect them from any existential threats. Public healthcare has been an important pillar of the modern and welfare society. Inadequate public healthcare can not only threaten human security but also weakens other important variables that are necessary for maintaining human security (Al-Zaman, 2020). Covid-19 pandemic is a recent example of how important public healthcare is to ensure human security. Even developed countries like the UK, USA, France and many other had their efficient and highly subsidised public healthcare overstressed due to health-risk. Developing countries had suffered

disproportionately during Covid-19 pandemic due to its under-subsidised ineffective healthcare system that is oversubscribed and economic limitation (Al-Zaman, 2020). As part of this research, it has been investigated if the interviewed eco-migrants have had access to the public healthcare system of Dhaka since it is directly connected with human security. The following question has been asked as part of this hypothesis;

*1. Can you and your family members access government have provided healthcare facilities in your locality at Dhaka?*

In response to this question, some of the comments made by the interviewed eco-migrants have been stated below;

<b>Comments from participants about access to public healthcare</b>
<b>6(a): “We can go to the government hospital but the tests for any diseases are not free. We can talk to doctor but it’s difficult. My brother is suffering from cancer, he is in the government hospital, but we had to raise fund to buy his medicines”.</b>
<b>6(b): “Yes, we can access government hospital, but they always advise us to buy medicine from outside but that’s expensive”.</b>
<b>6(c): “We have partial access to government but it’s not totally free”.</b>

Considering all the comments made by the eco-migrants in response to this question related to access to public healthcare, the following observations can be made;

1. The eco-migrants have certain level of access to the government subsidised hospital. However, medicines aren't always free and often expensive and not totally free (*appendix 1:i:2, 1:i:3*),
2. Testing facilities aren't often free, and they would need to pay for this e.g.,6(a),
3. Private hospitals are out of range of the interviewed eco-migrants,
4. The diagnoses of the critical diseases are often difficult to access even in government subsidised hospitals (*appendix 1:i:1*).Furthermore, the overall medical cost involved with screening, hospitalisation and medicines are expensive and out of range of the eco-migrants e.g.,6(a) and 6(b).

Summarily, it can be concluded that the eco-migrants have reasonable access to the public healthcare facilities. However, due to limited economic capability they find it difficult to buy medications from private pharmacies. Furthermore, the eco-migrants find it difficult to avail treatment of complicated diseases from the government hospitals. Additionally, eco-migrants aren't capable to afford

medical treatment from the private hospitals due to financial limitation.

**Test of final causal link: Rise of anti-state grievances > Increase of violent protest > Civil unrest**

## Political Representation

Political representation is a core element of a democratic society. Political representation is important in establishing institutional incentives for government to be responsive to their citizens and to ensure the transparency and accountability of the democratic institution to their citizens (Suzanne, 2021). Furthermore, political representation can provide with the imperative ingredient of a democratic society that is the trust between the government and citizens in a democratic society (Alkire, 2003). The final causal link of this research was about rise of anti-state grievances to violent protest that can lead to further national security matter. As to test this causal link of the hypothesis, the following questions have been asked;

*1. Do you think your concerns are politically well-represented by the politicians or local elected representatives to the Dhaka city corporation and Central*



*government?*

*2. Did you participate in any physical protest?*

*3. What made you or others to protest?*

*4. Do you support physical protest?*

*5. How do you view protest?*

There were number of very interesting and extra-ordinary responses from the interviewed eco-migrants as responses to the questions asked. Here's some of the responses stated below;

*Question- Do you think your concerns are politically well-represented by the politicians or local elected representatives to the Dhaka city corporation and Central government?*

<b>Comments from participants about political representation of their concerns</b>
<b>7(a): "We are poor, so they don't listen to us. They only listen to rich people. What can I do, Allah (the God) has created us this way".</b>
<b>7(b): "The elected representatives have no use for us. They don't represent us. Politicians and government don't listen to us".</b>
<b>7 (c): "Some NGOs may give us loan, but we are poor, we don't see any other help. We are unable to meet MPs or local councillors because we are poor so their security guards will not allow us to talk to him".</b>

## Protests leading to Mass Civil Unrest

Question- Do you support physical protest? How do you view protest?

### How do the participants view protest as a means to escalate their disenchantment against government

8(a): "If anything good happens out of protest" then why not".

8 (b): "I don't think there is any benefit of protest in Bangladesh. The government should do more for us. We are poor, we are busy with our work. No one is there to listen to us as we are poor".

8(c): "I think people should protest to get their demands. It may work but we don't know as we are poor".

8 (d): "I don't have time for protest because I need to work every day. I can't take any day off".

8 (e): "There is no use of protest under the current government. The police will come and arrest people. I don't think there is any outcome of doing protest".

8 (f): "Sometimes we can't afford the very basics. But what can we do with protest. It is really hard work being a rickshaw puller, but I don't have any other option".

8 (g): "The main problem is we come from different locations and people share different mentality. That's why it's difficult to arrange any protest. Sometimes we are pressurised by the political leaders to go to their rallies supporting the politics".

8 (h): "I am a woman; we can't participate in physical protest. I don't know if there is any impact of protest".

Considering the comments made by the interviewed eco-migrants the following observations can be made;

1. Majority of the participants haven't attended any form of protest in Dhaka for their demands. However, that doesn't undercut their grievances and frustration about their situation. The main reasons of not participating in any protests were; a. Fear of getting arrested or being physically or economically harmed by the state or local political leaders (*appendix I:j:6*), b. Interviewed eco-migrants were too occupied with their jobs and they had no time to join any protest (8-c,8-e),
2. Although women were frustrated about the overall situation, but they didn't participant in any protest (8-g). The reason wasn't quite clear, but it seems due to social taboo,
3. Almost all interviewees became emotional stating that they are poor and that's why they have no one to listen to them and no one to change their circumstances other than the God (7-a). They expressed their overall dissatisfaction of not being able to meet and talk to their MPs or local political representatives (7-b),
4. Interviewed eco-migrants expressed their frustration of seeing inequality in their everyday life since a very rich neighbourhood is in their proximity (*appendix I:j:1, I:j:2, I:j:3*). Furthermore, they expressed that feel isolated

and underrepresented by the political system. They expressed their grievances against the political parties and government. However, it is not clear if they wish to take any immediate actions or future actions e.g., rallies, protest, and other campaign activities to fulfil their demand,

5. Majority of the interviewees think that the protest doesn't work as they are not socially and politically important people (7-c, 8-b). However, there were a small minority of interviewees who stated that they are willing to do whatever necessary to let their voice/concern heard through protest if they have good leadership (8-a, 8-c) (*appendix 1:j:4, 1:j:5*),
6. Majority of the participants confirmed that they are politically under-represented, and it is hard to contemplate the sort of socio-economic inequality and discrimination that they face in a democratic society. It seems almost impossible to meet their local representatives to discuss their concerns,
7. The interviewed eco-migrants highlighted that a slum has residents from different parts of the country with different mentality and interest (8-f). Therefore, coordinating a campaign with them to demonstrate something tangible is difficult,
8. The eco-migrants often can't arrange protest because there is concern among them that their plan may be exposed to police or political leaders

then they may face arrest, or they may be forced to leave the slum or Dhaka altogether. However, slum dwellers eco-migrants are sometime forced to participate in government/ruling party organised political rally to demonstrate their support.

In summary, it can be concluded that eco-migrants are politically under-represented. Furthermore, it's almost impossible to escalate their concerns to their MPs or local representatives in Dhaka. It seems that as opposed to democratic society, the access to political representation is dictated by an individual's socio-economic capital. There is clear frustration and grievances among the eco-migrants about their overall situation. However, they are yet to decide how to express their frustration since the conventional political system doesn't represent them. Additionally, there is worry among the eco-migrants that if they organise any protest then they may be arrested, or their livelihood may be at jeopardy (*appendix 1:j:6*).

Finally, it can be demonstrated from this result analysis chapter that internal migration in Bangladesh has been amplified by the push factor; climate change events. Additionally, it can also be established from this analysis chapter that although the pull factor aka belief that the cities can offer more economic and

job prosperity has been acting as a positive catalyst but the main contributing factor to drive internal migration has been climate change influenced both on-set and rapid events for the context of Bangladesh. However, the intensity of climate change event on internal migration varies depending on the types of climate change calamities. Furthermore, it can be established here by analysing the survey data that various elements of the human security are directly threatened by climate change in Bangladesh. That includes basic housing, healthcare, education, jobs and economic opportunity and political representation. Furthermore, it has been well-documented from this analysis chapter that there has been clear resentment among the eco-migrants about the way they have been under-supported both in their places of origin and in Dhaka by the governmental institutions and underrepresented by the democratic means. However, this resentment may not be translated to a nationwide protest at this stage as the interviewed eco-migrants stated that it would be highly unlikely to demonstrate continuous mass protests which may trigger national security concern. Lack of resources and coordination, political manoeuvre, suppressive attitudes by the government and law-enforcement agencies are mentioned as the primary causes for the inability to organise meaningful ways to demonstrate the grievances of the eco-migrants.

## Discussion

This chapter discusses findings of the results analysis chapter and explains the contribution to the existing literature on climate change, human security and unstable migration in the context Bangladesh and other developing countries with climate change vulnerability.

People's decision to migrate is a complicated decision that involves many underlining variables. Climate change acts as one of the main causes for internal migration in Bangladesh, particularly to the big cities like Dhaka. Although the intensity and impact of rapid and onset/slow climate change events have varied impact on people's decision to migrate, however climate change remains as the main driver of internal migration to big cities in Bangladesh, most definitely to its capital city Dhaka. Whilst there is also an impact of pull factors i.e., access to economic versatility and expectation for better social security in the cities on eco-migrants' decision to migrate internally, domestic migration is often pushed more by climate change events than it's pulled by the socio-economic security offered by the city from the context of Bangladesh.

Human security is threatened at an individual level by unstable level of eco-migration in Dhaka city, Bangladesh. The eco-migrants find themselves between a rock and hard place after migrating to Dhaka. They hardly receive any assistance regarding housing, jobs, training, and other basic human necessities. The eco-migrants live in slums that have very limited supply of water, electricity, and sanitation. These slums are unregulated and mainly controlled by the local politicians. Many eco-migrants have been living in the same slums for many years under same condition. Their housing and economic situation has rarely improved. Eco-migrants aren't fully supported by the government to access reasonable well-paid jobs. They also can't access loans or other forms of financial assistances from the government to start their own businesses. Furthermore, they don't have access to necessary information or upskilling training facilities that can support them to avail well-paid jobs.

Children of eco-migrants normally go to government or NGO funded schools but often leave education after primary school abruptly as they are unable to afford extra costs associated with education, for example, uniform cost, exams fees and other educational expenses are often unaffordable by them. Besides, it's financially more practical for the eco-migrants to have extra income source in the family by encouraging their children to get job, rather than attending school.



Eco-migrants are inclined to let their daughters get married earlier than the average age as it is economically more convenient for them. Concerning healthcare, eco-migrants can access the public-funded hospitals and basic medications for free but treatments for complicated diseases are not free. Additionally, testing for complicated diseases including cancer, heart-diseases and others is not totally free even in public hospitals. Furthermore, eco-migrants can't access any welfare assistance provided by the government for family members with disabilities.

Eco-migrants are often ignored by the political system and although they are frustrated by the overall situation, but they are not completely persuaded that organising protests and rallies are the sensible way forward considering their current socio-economic situation and overall political situation in Bangladesh. Their concerns aren't escalated to the appropriate authority by the political system. Eco-migrants don't have access to their local elected representatives. They are overall frustrated due to this situation. However, there is less possibility for them to organise massive rallies or protest since they don't have organisational resources and incentives. Besides, eco-migrants are concerned about their safety and well-being as their interest to arrange any protest may be severely dealt with by the law-enforcement agencies and political establishments.

The above discussion has been gathered based on three causal links connected with the main theory of this research. These are:

### Causal link-1: Climate change related rapid and onset events induce rural to urban migrants to the big cities in Bangladesh

This first causal link has established that climate change related both rapid and onset events are the most influential factor for internal migration to the big cities in Bangladesh, particularly to the capital Dhaka. That means climate change is the most common influential catalyst for rural to urban migration in Bangladesh. Furthermore, this causal link has demonstrated that livelihood, accommodation, and day to day life of many common people those who live within the vulnerable locations, have been severely affected by climate change related events e.g., flood, river erosion, rise of sea-level and drought depending on their places of origin in Bangladesh. Additionally, there is inadequate assistance available for the poor, landless farmers, and vulnerable individuals from the government as part of the disasters relief and rehabilitation to restart their economic activities.

The study has argued that climate change influenced events have a significant impact on internal rural to urban migration. The main findings of this causal link are aligned with this hypothesis. However, this causal link adds new understanding by analysing the differences of slow and onset climate change events in regards to their intensity on affected individuals' decision to migrate. Additionally, this causal link shows that if the affected communities are adequately supported at the peripheral level then that could have acted as a deterrent for internal rural to urban migration.

### Causal link-2: Human security is threatened by unstable eco-migration (Eco-migrants face socio-economic and political exclusion in Dhaka city)

This second causal link in conjunction to the main hypothesis has demonstrated that eco-migrants don't have the adequate and proportionate access to basic housing, job and economic opportunities in Dhaka city. Their children have access to government funded primary and secondary education to a certain level, but those children leave education abruptly due to lack of wholesome support mechanism to keep them in education. Eco-migrants have access to the government hospitals for free, but they are unable to afford any additional costs

associated with treatment for any complicated diseases.

This second causal link has demonstrated that human security is threatened by the unstable internal rural to urban migration caused and influenced by the climate change related natural disasters. Five core elements of human security apparatus have been tested here at an individual level to see if human security is threatened by unstable internal migration caused by climate change in Bangladesh. These five elements are access to decent accommodation, jobs and economic opportunities, education and public healthcare and finally political inclusion. In a nutshell, human security has been threatened at an individual level by climate change influenced unstable internal migration in Dhaka. Here's further explanation in line with the main findings from this causal link;

### **1. Do the eco-migrants have access to decent housing facilities in Dhaka?**

Eco-migrants don't have access to the regular decent housing facilities in Dhaka city. They normally reside in the slums that are inhabitable and lack basic amenities e.g., electricity, drinking water supply and so on. Eco-migrants aren't adequately supported by Dhaka City Corporations, Ministry of Social Welfare, Ministry of Housing and Public Works and Ministry of Relief and Disaster Management in terms of getting temporary or permanent decent housing and

information related to such facility. Eco-migrants manage their accommodations in those slums by using their own personal contacts. Slums in Dhaka are controlled by the local political leaders. They operate those establishments illegally. Since the presence of these slums are not properly regulated, eco-migrants face high risk of eviction and health and safety and fire safety concerns.

## **2. Do the eco-migrants have access to jobs and other economic advantages offered by Dhaka city?**

Eco-migrants don't receive any form of support concerning jobs and other economic opportunities in Dhaka. Eco-migrants remain trapped in poverty doing low-paid laborious jobs even after residing in Dhaka for many years. There is hardly any initiative from the government to provide the eco-migrants with training facilities so that they can upskill themselves to avail better jobs. The eco-migrants neither have access to bank loans nor there are any special financial incentives from the government primarily targeted to assist them to start small businesses in Dhaka. Political affiliation plays a key role to avail any economic stimulus package in Dhaka. The eco-migrants are too often deprived from such opportunities due to apolitical position.

### **3. Do the eco-migrants have access to education?**

There are no special arrangements from the government or NGOs to provide trainings or evening courses or vocational education considering the unique background of the eco-migrants. The children of the eco-migrants have reasonably fair access to government funded schools, but the children are forced to leave their education abruptly owing to various socio-economic factors, mainly additional costs associated with education that are beyond their affordability. Families also need children to earn extra money to support their family and to afford the additional cost of living in Dhaka. Besides, their daughters get married as soon as they reach adolescence as eco-migrants are often unable to support them financially.

### **4. Do the eco-migrants have access to public health facilities?**

The eco-migrants have access to the free public healthcare facilities to a limited context. For instance, the eco-migrants can get very basic treatment from the government hospitals for common diseases but diagnoses of complicated diseases like cancer, heart-diseases, diabetes, and epilepsy aren't free and too

often eco-migrants struggle to afford the additional substantial charges for the medical tests and medications required for these diseases. Delay in treatment for complicated diseases leave the eco-migrants physically and mentally traumatised.

### **5. Can the eco-migrants have access to their MPs or councillors? Are they adequately represented by the political institutions?**

Eco-migrants in Dhaka are deprived of their adequate political representation as their concerns are not heard and they don't have access to their political leaders. Besides, the poverty-stricken communities in Dhaka's slums often lack political agencies to escalate their concerns to the right authorities . Furthermore, the persistent wealth inequality observed by the eco-migrants has been a dominant source of grievances and disenchantment about the overall state of the politics in Bangladesh. This disenchantment has further worsened as the eco-migrants are not proportionately represented by the political system and have very limited access to the political leaders to convey their concerns.

**Causal link-3: Anti-state grievances may grow among eco-migrants that may lead to civil unrest**

Eco-migrants have a strong sense of dissatisfaction towards government. However, they are less willing to mobilise a coordinated campaign and protest to demonstrate their frustration and to escalate their concerns due to complicated socio-economic and political morphology of Bangladesh. This third causal link seeks to answer the following two fundamental questions:

**1. Have the eco-migrants ever participated or coordinated any protest to raise their concern?**

Eco-migrants never participated in any protest related to their rights. In fact, it is rare to have any rallies or protest arranged exclusively to address their concerns. However, eco-migrants are often being pressurized by the political parties to attend their political rallies or demonstration against their opposition parties. Additionally, it is difficult for the eco-migrants to organise protest as laborious job keep them busy and they don't have the luxury to spend time on anything else. Coordinating demonstrations that can have long-term tangible outcome is a difficult task for them as it requires comradeship, meticulous planning, that is difficult for the eco-migrants to exhibit. Besides, rallies or protests against the government aren't embraced easily by the law enforcement



agencies. Even non-political rallies seem to be restricted by the government law-enforcement agencies. Fundamental democratic rights seem to be limited or oppressed in Bangladesh.

## **2. What is their views about protest? How do they plan to express their frustration?**

Protest organised by the eco-migrants, who are not considered as important stakeholder socially and politically, doesn't seem like a feasible option given the current political situation in Bangladesh. The eco-migrants don't have the necessary incentives to arrange protest to convey their concerns and frustration.

Summarily, eco-migrants even after being deprived from the basic citizen's right in Dhaka don't protest or don't intent to protest in near future. Lack of solidarity among the eco-migrants, shortfall of coordination, fear of being busted and penalised by the law-enforcement agencies and political elites seem to be the primary reasons for this reluctance.

Based on the above conversation, we can see how this research contributes to the existing literature and helps to bridge scholarly gap on this topic as follow;

### How this research helps to bridge the existing scholarly gap

People's decision to migrate is a delicate subject matter. Climate change affects people's decision to migrate internally in a country like Bangladesh. The current available literature related to climate-change influenced internal migration is often presented in an oversimplified form without drawing clear distinction between voluntary and forced migration. Furthermore, the current scholarly literature often emphasises disproportionately on the economic aspect rather than the consequences of climate change associated events on people's choice to migrate internally. For instance, Waldinger (2015); Zickgraf (2021); and Nabong, et al., (2023) suggested that it is natural for rural communities to migrate to large cities in the developing countries due to economic opportunities. However, this research has demonstrated that individuals are forced to migrate to large cities domestically due to climate change related calamities including flood, river-erosion, and sea-level rise. Furthermore, recent scholarly studies including (Schafer, et al., 2020); (Sherbinin, et al., 2022) have suggested that the climate change affected communities trend to migrate within

close proximity and their displacement is circular and they often return to their original home. However, this research has illustrated that domestic eco-migration is often permanent and eco-migrants are inclined to move away from close proximity of climate-change related events to large cities even it is involved with long-distance travel. From the context of Bangladesh, migrating to Dhaka and Chittagong city after being affected by climate change events from the coastal Southern areas involves long-distance travel. These scholarly studies have also underscored that cities may offer better jobs and economic prosperity. On a contrary, this research shows that whilst living in Dhaka city for decades, the economic condition of the eco-migrants hasn't changed slightly. Eco-migrants have been struck with similar laborious jobs for years after years without any substantial change in their economic capability.

Urban to rural migration influenced by climate change in the context of Bangladesh is a well-documented phenomenon (Rana & Ilina, 2021). Although this is a well-established phenomenon in Bangladesh, but the discrepancy of intensity of migration based on rapid and slow climate change events hasn't been appropriately explained by the existing literature based on Bangladesh and other developing countries with similar profile. Recent scholarly studies including (Martin, 2010), (Amin, et al., 2021), (Dimitrova, et al., 2020), (Kaczan

& Orgill-Meyer, 2020) and (Ghosh & Orchiston, 2022) have highlighted that both rapid and slow-onset disasters orchestrate economic and social impacts that often lead to both voluntary and forced migration in developing countries. However, these studies have failed to grasp adequately how different types of climate change events may change people's personal circumstances differently and influence affected people's decision to migrate differently by affecting their income sources. This can further lead to both voluntary and forced domestic migration. Furthermore, these studies failed to grasp that people's decision to migrate may differ based on what type of climate change events i.e., rapid and onset events that they may encounter. For instance, the impact of flood and cyclones on people's decision to migrate domestically may differ from drought or river erosion. This research helps to assimilate an in-depth understanding on how rapid and on-set climate change events act differently on affected communities decision to migrate domestically. This research provides a through event-based analysis on permanent and temporary Furthermore, this research also helps to comprehend better on how strong financial resilience and government incentives for the affected communities could have acted as a deterrence for eco-migration to large cities domestically.

The role of industrial decentralisation as a deterrent for urban-rural eco-

migration has been overstated in the existing literature. However, this research highlights that such studies fail to contemplate the fact that peripheral landless farmers in countries like Bangladesh are yet to reap the benefit of industrial decentralisation as they would require appropriate skill sets, trainings, and financial assistance. As per policy is concerned, this research shows that Bangladeshi government's effort to divert the influx of internal migration by creating peri-urban and secondary cities hasn't been totally useful as a deterrent from the context of Bangladesh.

The role of push and pull factor has been over generalised in the current scholarly conversation related to climate change-migration. For instance, Mohamed and Abdul-Talib (2020), Ghosh (2023) and Majumdar and Rahman (2022) have highlighted in their scholar works that climate change related events can worsen poverty, make economic opportunities scarcer pushing people to migrate. However, their observation seems overgeneralised without considering number of variables appropriately including economic resilience, gender, and professional background of an individual. As for example, although climate change influenced events may act as push factor for migration in general, but a businessman may react differently to this push factor as a landless farmer. Similarly, an elderly woman may react differently to this push factor

than a young day labourer. Therefore, it's imperative to clarify and distinguish clearly how push and pull factors associated with climate change can influence an individual decision to migrate domestically. This research provides an in-detailed commentary about the role of push and pull factor on domestic eco-migration from the context of Bangladesh that can be applicable for other climate change affected countries with similar background. Furthermore, this research helps to distinguish between domestic eco-migration and economic migration.

### **Climate-conflict nexus ( resource scarcity linked to climate change, eco-migration, and protests in Bangladesh and in other comparable African, South -Asian and Far-East Asian countries)**

Natural resource scarcity caused by climate change instigating conflict at the peripheral level is conditional and contextual. Recent scholarly studies including (Raleigh & Urdal, 2007), (Link, et al., 2016) and (Madu & Nwankwo, 2020) have highlighted that resource scarcity caused by climate change at the peripheral level has caused civil unrest and forced affected communities to migrate internally to large cities in the under-developing countries in Africa. Furthermore, Urbanski (2022), Dinc & Eklund (2023) and Daoudy (2020) have

suggested that natural resource scarcity due to climate change has caused conflict at the peripheral level in the countries like Syria, Ethiopia, Mozambique, and Cameroon and also instigated internal migration. Resource scarcity leading to conflict and subsequently internal migration is a complex issue. Their observations have not included that climate change induced natural resource scarcity may intensify tension among communities but there are other variables including ethnic and religious division and weaker governmental institutions that lay the foundation for such intrastate conflict. The finding of this research shows a departure from that narrative emphasizing that climate change induced resource scarcity leading to conflict is rather oversimplified and not applicable for all countries. The interviewed eco-migrants for this research haven't indicated that they faced any form of conflict in at their localities. In fact, civil unrest at the peripheral level seems unusual from the context of Bangladesh. Furthermore, this research emphasises that conflict from climate change is contextual and conditional to various political and socio-economic variables ought to be taken into consideration in the civil unrest led by resource scarcity discourse. Domestic environmental migration leading to conflict or civil unrest is a contested topic in academia. The positive association of disasters related internal migration to social unrest has been highlighted by scholarly studies including (Brancati, 2007); (Kikuta, 2018) and (Zhang, et al., 2011). However,

number of recent scholarly studies including (Petrova, 2021); (Bergholt & Lujala, 2012) and (Slettebak, 2012) have highlighted that climate change influenced domestic migration has no association with civil unrest at the migrant-receiving end.

Disaster–conflict links on complex interactions between multiple contextual factors from the context of climate-prone developing countries. Disaster–conflict links depends on complex interactions between multiple contextual factors including population size, government form, exclusion of ethnic groups from political power, economic scarcity and so on (Kristensen, et al., 2020). Ash and Obradovich (2019) underscored from the context of Syria’s civil war that climatic events may have resulted in instability indirectly through unstable level of internal migration that triggered protest at the receiving end. This study also took into consideration of Syria’s ongoing political upheaval. Furthermore, this study has suggested that existing grievances can be bolstered at the receiving-end due to unstable level of internal migration associated with climatic events. This observation has been further strengthened by the scholarly study by Uexkull, et al (2016) emphasising that drought can contribute to sustaining conflict, especially for agriculturally dependent groups and politically excluded groups in climate vulnerable developing countries. Moreover, although the



impact of natural disasters on civil unrest through domestic eco-migration has been gaining attention of the security experts but small-scale protests or riots linked with domestic eco-migration hasn't been gaining adequate attention. For instance, flood-related political unrest at a small scale has been increasing in Africa, Asia, and Middle East (Ide, et al., 2020).

Climate change act as a threat multiplier for conflict under certain condition. The economic impact of climate change coupled with its adverse impact on natural resources and food security can instigate political instability in countries with limited financial resilience and inadequate political institutions. Furthermore, climate change related events affect people's livelihood disproportionately causing the pre-existing social cleavages widening further prompting conflict, in case if the government fails to balance this inequality (Cappelli, et al., 2024). Additionally, as noted previously that climate change can drive unstable level of migration from the peripheral areas to large cities that can put huge pressure on government's scarce resources to provide with the basic services that can trigger unrest by the dissidents (Foresight: Migration and Global Environmental Change, 2011). All these causal links may work together simultaneously that can ultimately cause conflict. Climate vulnerable African countries could not be more on point. Total number of intra-state conflicts have been rising steadily in

Africa since 2000 (Margolese-Malin, 2011). Many of these conflicts are indirectly linked with climate change. African countries have been severely affected by climate change events and these countries are already experiencing and are in risk of experiencing intra-state conflict due to the multifaceted risk imposed by climate change on those countries. Risk of conflict connected with climate change is higher in African countries since a vast majority of African community depend heavily on agriculture for their economics and peripheral communities' poor climate change adaptability due to inadequate government institutions and political leadership. Agriculture accounts for about 35% of the overall GDP of Africa that provides job for more than 65% of the overall population (Margolese-Malin, 2011). Despite such huge dependency and great value of the agricultural sector, African agricultural sector has been severely underdeveloped technologically that has made both the farming communities and overall economics vulnerable to climate change events (Cappelli, et al., 2024). Furthermore, although agricultural production has increased in Africa, but it remains highly reliable on favourable weather condition. Extreme heat, frequent floods, deforestation, soil erosion and other climate associated events have been imposing huge pressure on the livelihood of many communities and overall economic outcome of several African countries (Margolese-Malin, 2011). Besides, due to unfavourable weather condition due to climate change, African

farming communities at the peripheral level face extensive competition among each other to avail natural resources including water (The UN, 2023). This troublesome situation has tipped the political balance of many Western African and Sub-Saharan countries where conflict is very prevailing. Furthermore, due to uneven distribution of the population density some of the West African and Sub-Saharan cities are extremely populous where governments were facing significant economic and logistical challenges to provide with the basic amenities for its citizens (Margolese-Malin, 2011). Unstable level of domestic eco-migration to this populous cities have been causing unrest. Eco-migrants relocating to those cities are often deprived from the socio-economic capital and government support to resettle in those big cities (Foresight: Migration and Global Environmental Change, 2011). Furthermore, many African countries have notably strong pre-existing social, political, and religious divisions that can further be worsened ultimately causing conflict and political unrest. Several militia groups are operationally active in Africa exhibiting significant challenge for the ruling governments (The Council on Foreign Relations, 2024). The statistical model related to climate change conflict nexus developed by Raleigh and Urdal have demonstrated that climate change related events can trigger conflict if important exogenous factors including poor governance, inadequate economic resilience, population density and pre-existing socio-economic and

political cleavages are also in play (Margolese-Malin, 2011). This has certainly the case in African conflict-raged climate vulnerable regions. Considering the exogenous factors, fragile African countries are more susceptible to climate change influenced conflict.

Government intervention can be a critical factor behind any political unrest associated with domestic eco-migration to large cities in the developing countries. Disaster–conflict links are by no means deterministic but an outcome of complex interactions among multiple contextual factors including types of climate change events encountered by the eco-migrants. Individuals who had experienced several different types of severe climatic events at their previous location are more likely to join and participate in social movements that can lead to political unrest (Koubi & Nguyen, 2020). However, recent scholarly articles; (Gregorio, et al., 2019), (Sushil, 2024), (Muzamil, et al., 2024) have highlighted that governments successful intervention can play a pivotal role both at the climate change affected peripheral locations and at the eco-migrants receiving cities to diffuse any pre-existing condition that can trigger protest or civil unrest. Government intervention at the climate change affected peripheral level can also act as a negative catalyst for domestic eco-migration (Huckstep & Clemens, 2023). It was also reflected here in this research findings too as the interviewed

eco-migrants for this research have indicated that they had no options but to move to Dhaka city since they were not provided with adequate support by the Bangladeshi government at the local level. The absence of adequate government institutions can drive political unrest, particularly when grievance is deeply embedded into socio-economic and political structures in combination with a triggering event like a drought, flood, cyclones, river-erosion. Eco-migrants' decision to protest can be subject to specific climatic conditions. Conflict or social unrest orchestrated by the domestic eco-migrants can be influenced by the types of climate change events that they encounter, adequacy of the urbanisation in the migrant-receiving areas that is capable to offer proportionate social and economic opportunity ensured by the government for the eco-migrants (Ide, et al., 2020). For instance, Adano and Zaal (2012) observed that although to certain degree, political, ecological, and economic marginality is prevailing among the eco-migrants but the likelihood of expressing any grievances has been highly unlikely from the context of Kenya due to government interventions. This study also took into consideration that the strong institutional arrangements can prevent violent conflict over natural resources from occurring. On the other hand, absence of government interventions and mismanagement can deteriorate the situation. For instance, in Nigeria, increasing incidence of conflict and protests in the host communities

aka large cities has been linked to climate change-induced domestic migration due to ecological declines in its arid northern region experiencing climate change events like droughts, deforestation and floods and lack of interventions from the government (Igwe, 2021). Similarly in Sri Lanka, post-disaster resource scarcity and mismanagement by the local and central government intensified the pre-existing socio-economic and political cleavages which in turn incentivizes warring parties to get involved with political unrest (Gamburd & McGilvray, 2010). India has faced similar type of protest in its various regions that have direct connection with affected communities' dissatisfaction with the government's interventions related to post-disaster management. For instance, there have been number of riots and protests in the Northern regions of India directly connected with climate change events and government's mismanagement. India's Uttar Pradesh, Punjab, Himachal, and Mumbai have witness growing social and political tensions staged by the eco-migrants (Remesh & Agarwal, 2020). It is not only the Northern regions of India but other regions including West Bengal, Bihar and Patna have all experienced growing protests and political unrest associated with incompetency of the local and central government related to post-disaster management (Ray, 2020). Furthermore, the tension among the locals and eco-migrants has been growing in certain parts of India. Assam is one of such region that has experienced

growing tension among locals and eco-migrants (Sharma, 2012). Assam has been facing growing internal migration mainly associated with climate change associated events such as flood. This region also has a very porous international border that has have often been subject to controversies. Incompetency of the local political institutions and lack of ample subsidy from the central government have been instigating the pre-existing historical socio-economic and political cleavages (Sharma, 2012). Mumbai, which is known as the economic capital of India, has been observing growing protests and demonstration from its slum-dwellers those who are mainly domestic eco-migrants. Mumbai's population is more than 12 million whereas almost 43 percent of the population lives in slums (Pav, 2023). A majority portion of slum-dwellers are eco-migrants who were forced to migrate to Mumbai facing climate change influenced natural calamities including floods, cyclones, and river-erosion (Iyer, 2022). These eco-migrants have been staging number of protests over years in relation to their living condition and economic opportunities since the city government often fails to provide with basics (Virani, 2024).

Eco-migrants have been actively organising and participating in protests in Far-East Asian countries including Thailand, Philippines, Indonesia, and others. There have been number of protests staged by the eco-migrants in Philippines

in recent years. For instance, in Philippines' Manila, there have been number mass-scale protests organised by the eco-migrants in recent years (Roy, 2021). Jakarta, the capital of Indonesia has been witnessing numerous protests organised by the domestic eco-migrants when they were threatened with eviction from their temporary accommodation (Llwellyn, 2023). Besides Jakarta, other major cities in Indonesia which are heavily populated by the domestic eco-migrants have also been observing growing number of protests often staged by the eco-migrants to express their grievances regarding their living and economic conditions (Llwellyn, 2023). Furthermore, eco-migrants have also been very proactive to organise protests in Thailand to convey their frustration about their living condition (Roy, 2021).

The context of climate change leading to conflict varies from region to region. The most vulnerable communities from the climate change affected areas in Bangladesh are landless farmers, who are inclined to migrate internally to big cities along with their families. They migrate to escape poverty and destitute at their place of origins from the context of Bangladesh. However, the current literature from the context of climate vulnerable countries with developing economy tries to shift focus on the narrative that climate change causes natural resource scarcity and subsequently that drives conflict among competing groups



and ultimately migration. This phenomenon has proven to be applicable for many countries from the MENA, Central-Africa, West-Africa, and Sub-Sahara region. The current literature in this perspective suggests that violent intra-state conflict due to climate change increase in ethnically fractionalized countries (Schleussner, et al., 2016). Besides, the current literature emphasises that climate change influenced drought caused large rural to urban migration that exacerbated the existing socio-economic stresses that has contributed to civil war in Syria (Selby, et al., 2017). However, such analogy may not be necessarily applicable for other climate change affected developing countries. South-Asian and Far-East Asia countries like India, Thailand, Indonesia, Philippines, and others have been experiencing small scale protests from the climate change affected communities both at the peripheral level and in the receiving-end. However, South-Asian, and Far-East Asian countries haven't been experiencing mass scale intra-state conflicts associated with resource scarcity and internal displacement related to climate change events as conflicts are conditional to various factors including religious fragmentation, ethnic division, cultural divergence, and other socio-economic elements ought to be considered as contributing factors alongside climate change (Margolese-Malin, 2011). Furthermore, government incentives, capability of the government institutions both at local and national level and forms of government are also

important factors behind the climate change to conflict nexus. Most importantly there are socio-economic, cultural, and political differences in comparison to countries like Syria and many other countries from MENA region, South American and Sub-Sahara region from South-Asian and Far-East Asian countries. Therefore, the scholarly understandings for disenchantment towards state leading to civil unrest applicable for Syria and other countries may not be applicable for Bangladesh and other South-Asian and East-Asian countries. Domestic eco-migrants and climate change affected communities at the peripheral level have been directly or indirectly involved with small-scale protests and campaigns in countries including India, Indonesia, Thailand, Philippines and so on but those protests were mostly moderate, not violent like Sub-Sahara and MENA region (Uexkull, et al., 2016). However, even small-scale protest associated with resource scarcity and domestic displacement associated with climate change has been extremely rare in Bangladesh. The result of this research also reflects upon this point.

## Bangladeshi authoritative governance structures pose a formidable barrier to collective action concerning protest

This research demonstrates that eco-migrants are often deprived from their basic citizens' right including access to decent housing, education and trainings, adequate jobs and economic opportunities and access to healthcare facilities from the context of Bangladesh. Furthermore, eco-migrants may not have the political agency to raise their concerns to the relevant authority. Furthermore, this research shows that even after being deprived from the basic citizens' rights the eco-migrants are unwilling and unable to protest against the government or to organise rallies to convey their frustration. Migration can be a daunting process, even if it is domestic migration. Eco-migrants may find the urban environment quite challenging to adopt. Thus, these new surroundings can act as a negative catalyst for mobilising resources to organise protest or social movement (Petrova, 2021). However, the current political situation in Bangladesh and government's attitude towards protest may have been major contributing factors behind the interviewed eco-migrants decision of not protesting against the government. Scholarly studies including (Trier & Turashvili, 2007), (Koubi, et al., 2020) and (Petrova, 2021), although provide details about the social movement related to domestic eco-migration but these

studies haven't taken the forms of government and domestic political situation into due consideration.

Authoritative governance structures pose a formidable barrier that hinders the expression of public discontent related to climate change. The existing literature shows that democratic countries are better equipped through democratic accountability to ensure better climate change governance and transparency (Lindvall, 2021). Bangladesh holds elections and claims to be a democratic country but there are reports of wide scale corruption and malpractices throughout the government relief and post-disaster support (Mostofa, 2024). Furthermore, since there is deficiency in the government institutions due to lack of democratic accountability, it seems from the commentaries of the interviewed eco-migrants that the existing support schemes have failed to provide adequate immediate and long-term support for the affected communities. However, unlike India, Indonesia or Philippines or other similar countries, the interviewed eco-migrants in Bangladesh seem to be less enthusiastic to organise or to participate in protest to demonstrate their overall frustration concerning their living condition in Dhaka stating that they were concerned about the heavy-handling approach towards protesters from the government's law enforcement agencies. Bangladesh has been slowly shifting

towards authoritarian state (Savoia & Asadullah, 2019). Bangladeshi government has developed a norm of treating any forms of criticism extremely harshly. Any forms of protest are dealt with extreme impunity in Bangladesh. Although using government law enforcement agencies to suppress opposition voices has been common practice in the complicated political landscape of Bangladesh but in recent days the government has doubled-down its efforts to crackdown on opposition voices ( Human Rights Watch, 2021). Since 2009, more than 1000 people have been victims of forced disappearances and extra-judicial killings and prison sentences without due judicial process (Bureau of Democracy, Human Rights, and Labor, 2022). The senior leaders of the opposition parties have also been facing house-arrest or endless cycle of unsubstantiated cases. As for example, more than 10,000 opposition leaders and supporters of the main opposition party were arrested in early November 2023 for demanding general election neutral caretaker government (Hasan, 2023). The opposition party and its alliances have reported that since 2009, more than 130,000 cases have been filled against their leaders and supporters (Petersen-Ellis & Rahman, 2023). It is not only the opposition political parties but also any criticism of the government actions can face extreme consequences. Bangladeshi government arrested and tortured prominent photographer after he expressed his frustration with the government related to corruption and human rights abuse during an interview

about road safety movement that was staged by youth after a road accident that killed two teenagers. That mass protest was mainly initiated to press government to make Bangladesh's chaotic and lethal roads safer (Norland, 2018). Many protesters face government crackdown for participating in peaceful demonstration. International NGOs and civil rights organisation have been reporting on the mass escalation of institutional brutality in Bangladesh in recent years (Amnesty International, 2023). Law enforcement agencies have been treating anti-government protest in an extreme harsh which many human rights organisations consider as a grotesque violation of fundamental democratic right ( Human Rights Watch, 2021). For instance, 1000s of garment workers have been arrested and threatened with detention for demanding fair basic pay. Four garment workers were killed in November 2023 during protest (Amnesty International, 2023). Furthermore, the striking garment factory workers have reported that they faced brutal assault, tortures and threats from the law enforcement agencies and government supporter for trying to bargain for a better pay deal. Although the government denies but reportedly more than 100 protesters were killed on 5<sup>th</sup> May 2013 during an intense mass protest demonstrated collectively by the Islamic parties in Dhaka. Bangladeshi elite force RAB (Rapid Action Battalion) and Bangladesh police have been facing serious condemnation from the international communities and civil rights

organisations for its brutal and suppressive attitude towards government critiques (Al Jazeera, 2023). Considering all these contexts, it is therefore conceivable why the interviewed eco-migrants in Dhaka were less motivated to organise and to participate in protest to press government to ensure better living condition and economic opportunities in Dhaka.

Collective action problem deters eco-migrants from participating in protest. Although various groups including garment workers, political parties and other civil rights organisations have been arranging protests on various relevant subject matters but besides being concerned of government's institutional brutality, domestic eco-migrants in Dhaka also face collective action problem. Firstly, unlike garment factory workers domestic eco-migrants are not represented by any union or action group to organise campaign or protest to convey their overall frustration about lack of government support scheme. Furthermore, NGOs and other civil rights groups often feel apprehensive from the context of Bangladeshi political situation to mobilise and to support organising any protest for the domestic eco-migrants to demonstrate their poor socio-economic condition. Human rights NGOs often face their fund withheld by the government in case if these are involved with any anti-government activities in Bangladesh. Secondly, opposition political parties have failed to highlight the

challenges faced by the domestic eco-migrants in their political agenda. Although systematic suppression of the political opponents by using law enforcement agencies and judiciary have become quite common in Bangladesh but still the opposition parties could have used their experience and organisational strength to assist the eco-migrants in organising protest to convey their overall dissatisfaction with the living condition in Dhaka, but the opposition political parties haven't been paying due attention to this issue since they themselves face severe forms of suppression including prison sentence, enforced disappearance, house arrest and other forms of repressive institutional brutality.

Collective action problem has been prevailing in authoritarian regime that often acts as a barrier for citizens to organise protest to express their discontent. Citizens may feel that they are at the risk of confrontation, intimidation, and arbitrary arrest from their own government and that may demotivate them to organise any form of protest (Ong & Rahmad, 2023). Protest is considered as a legitimate political means in a democratic society. However, under authoritarian democracy protest is severely restricted. Although psychosocial scholars considers individuals as an autonomous political actors highlighting that its rational for an individual in a democratic regime to demonstrate their frustration



against their governments for addressing their concerns related to better economic opportunities and improved living standard, however, under authoritarian democratic regimes, systematic recourse to institutional brutality characterised by arbitrary arrest, false imprisonment, regular intimidation using government institutions and judiciary and other forms of repressing behaviours from the ruling party in government play as a huge barrier for collective action ( Human Rights Council, 2023). Bangladesh has been moving towards one-party state or authoritarian democracy. Three consecutive general elections in 2013, 2018 and in 2024 have been reported to be widely boycotted by the opposition parties. Voters' participation was slightly low in all these three elections (Mostofa, 2024). Furthermore, voter intimidation and wide-scale corruption has been reported during these elections. Besides, Bangladesh elite law-enforcement agency known as RAB has been under sanctions from the US government for its human rights abuse linked with extra-judicial killings (Islam, 2021). The interviewed eco-migrants have indicated they are demotivated to organise and participate in any forms of protest to indicate their dissatisfaction due to the risk of being intimidated by the government. Bangladesh government has been reacting in extremely harsh way to any form of its criticism. The Digital Security Act introduced by the current government in 2018 has put an additional strain to freedom of speech (Amnesty International, 2018). This law has

significantly reduced citizens’ right to criticise the government or political elites even by using social media. Many activists and journalists were arbitrarily sent to jail under this harsh law that many scholars think a significant backsliding for the democracy and freedom of speech (Thomson Reuters Foundation, 2023). The interviewed eco-migrants’ response regarding protest is in line with the exiting scholarly knowledge and examples from similar regimes regarding the collective action problem faced in the authoritarian democracies like Bangladesh.

<b>Regime type</b>	<b>Event</b>	<b>Remark</b>
Britain (full democracy)	There have been number of protests and pickets organised by the RMT, UCU, NHS union and other unions in 2023 for better pay, contract, and pension (Ali, 2023).	There was no arrest, or any form of intimidating behaviour from the police reported. Relevant government departments negotiated with unions to reach to a reasonable solution.
France (full democracy)	Farmers protest since January 2024 to increase government	The French government declared about 400 million

	<p>funding to support farmers and to ease on regulations to make farming competitive for the French farmers</p>	<p>Euros to support the farmers with low income. Government also promised to work with the Europe Union to bring a comprehensive policy Europewide so that the French farmers aren't worse off. French President has also met the leaders of the farmers' union to discuss this issue comprehensively.</p> <p>(P.S.- On 21 February, dozens of French farmers were arrested after they provocatively attack the yearly Paris Farming Show. However, it doesn't qualify as a systematic</p>
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		institutional intimidation) (France 24, 2024)
China (authoritarian democracy)	2011-Jasmine revolution (pro- democracy protest)  Inspired by the Arab Spring  there was protest in China  around 2011.	100s of protesters were arrested and many of them  were put under  surveillance and house  arrest (Fallows, 2011)
Russia (authoritarian democracy)	Protest against the Ukraine invasion	Russia introduced war censorship laws in 2022  under which an individual can face up to 15 years in jail for criticising the  Russian government for invading Ukraine. There  has been a growing  number of arrests in Russia  even for criticising the government on social media for invading Ukraine  (Human Rights Watch,

		<p>2022). In 2024 a new war censorship law was introduced that allows the confiscation of the property of those individuals who were charged under war censorship law previously. 43 journalists have faced criminal convictions for their public stance against war in Ukraine (Amnesty International, 2024).</p>
<p>Saudi Arabia (Monarchy)</p>	<p>Protest is generally illegal in Saudi-Arabia. There can be severe penalty for organising and participating in protest.</p>	<p>Protest is generally illegal in Saudi-Arabia. There can be severe penalty for organising and participating in protest. Salma Al-Shahab have been sent to solitary jail for</p>

		criticising the regime on Twitter (Kirchgaessner, 2022).
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**Table- Regimes Vs Protest**

This research unfolds that unstable internal migration caused by the climate change events is a human security threat for the developing country like Bangladesh. The existing literature featuring eco-migration to human security is very limited, even more so for the context of Bangladesh. Besides, current literature focuses on conflict due resource scarcity caused by climate change (Hasan & Macdonald, 2021), rather than applying human security apparatus on an individual level once the eco-migrants relocate to big cities like Dhaka. Furthermore, although there are a very limited number of studies on the impact of climate change on human security, but these look broadly on the impact of climate change on various elements of human security e.g., environmental security, food security, economic security, and others at a national level, not on individual level specially for the eco-migrants (Altaf & Rashid, 2020). Additionally, this research uses qualitative research method based on primary data obtained through semi-structured interviews. It has been observed that many previous studies used descriptive-analytical method based merely on

reports provided by UNDP and UNEP using realism security paradigm. This research also demonstrates that although human security is being threatened by the unstable internal migration caused by the climate change in Bangladesh and the affected eco-migrants are dissatisfied by the overall situation but still the possibility of having civil unrest caused by the disenchanted eco-migrants is very low. However, it would be far-fetched to apply this analogy to all developing countries with climate change vulnerability including other South-Asian and Far-East Asian countries.

Realism has been one of the major theories in international relations, offering a unified approach of what defines security and insecurity for states. However, climate change exhibited threats adds a new perspective to this conversation and challenges the very core fabric of realism. Human security has been threatened at an individual level due to climate change influenced internal migration that the realism fails to understand.

## Weaknesses of the Realist Approach for Understanding Environmental Security Challenges

Climate change induced unstable internal migration is a security risk that

threatens an individual's ability to avail decent housing, jobs, education, and adequate healthcare at their relocated place. It also threatens an individual's access to the political agencies that are vital for their political representation in the society. This research contributes to the existing debate by demonstrating that realism isn't befitting to comprehend and solve these threats exhibited by unstable internal migration caused and influenced by climate change associated events from the perspective of the developing countries like Bangladesh. Furthermore, this research unfolds that unstable eco-migration is a security threat for Bangladesh that human security apparatus is more suitable to discuss these threats. In general, realism is unable to comprehend security vulnerability originating from within a state since realism suggests that the security threat mainly originates from the external enemy states in an anarchic disposition (Antunes & Camisao, 2018). Hence, this research contributes to the existing scholarly debate on climate change induced unstable eco-migration to security threat by highlighting the weaknesses with the realist approach for the developing countries like Bangladesh, where security threats mainly originate from within those states rather than from the external enemy states. Natural resource scarcity caused by climate change would intensify competition among South-Asian countries (Bank, 2018), but it is inconceivable for Bangladesh to engage with any of its neighbours through military confrontation. Regional



cooperation and economic treaties among neighbouring countries have made the possibility of military combat slimmer. Many South-Asian and far East Asian countries have adopted to this narrative. This research demonstrates that realism is ill-suited to understand the security concerns of developing countries, particularly those deeply affected by climate change. This research bridges the gap in the existing scholarly conversation by highlighting that human security approaches are more suitable to address security threats in the developing world than traditional realist approaches can as human security is people centric.

This research emphasises human prosperity by indicating the shortcomings caused by climate change induced unstable internal eco-migration in developing countries rather than provoking disproportional military expansion and competition that doesn't apprehend this human security threat felt both at an individual level and nationally by unstable eco-migration. Realist scholars who advocated to include climate change as part of the security conversation still suggest keeping the state as the primary reference for security that doesn't help to understand the new security threat evolving from unstable internal eco-migration in large cities of developing countries. This research emphasises that the security reference should be changed in this instance from state to individual

to understand the security threat imposed by security threat developing from within state due to unstable eco-migration in large cities of climate vulnerable countries.

Finally, this research attempts to bridge the scholarly gap by highlighting why even after being deprived from basic citizen's rights, eco-migrants don't protest or are unable to arrange coordinated campaign to change their situation. Disenchantment for the government institutions by the eco-migrants may not necessarily be reflected through protests and rallies that can ignite civil unrest due to various underlying causes including fear of being penalised by the government agencies and political elites. However, that doesn't mean we can ignore the spill-over effect of the human security threats exhibited by the climate change induced unstable internal eco-migration in the developing countries like Bangladesh.

## Chapter Seven- Policy Recommendations

This chapter provides a series of policy recommendation based on the findings of this research. It also provides a comparison on how other similar countries are doing and what organisational structural changes can be brought in Bangladesh so that more can be done to address the policy gap related to climate change.

Climate change is driving unstable internal migration in Bangladesh that is causing a human security issue for the developing countries like Bangladesh. A number of policy recommendations have been made below featuring two important aspects to tackle this threat; firstly, to provide with an adequate and proportionate support for the climate change affected communities at the peripheral level so that they are incentivised not to migrate to Dhaka and other big cities from their places of origin and secondly providing adequate support including accommodation, education, jobs and economic opportunities, healthcare to the eco-migrants in their new migrated locations. Enriching various elements of human security has been emphasised heavily throughout the policy recommendation since human security is threatened due to unstable

eco-migration.

Bangladesh is a developing country with limited financial resources. Furthermore, climate change has been gaining attention in Bangladesh through governmental initiatives, political optics, and civil society engagement. However, Bangladesh alone can't do enough in this regard and would need help from the international community in terms of financial aid and knowledge and technology sharing. It would be difficult for Bangladesh to tackle this mammoth task by itself. Hence policy recommendations have been divided into two fragments based on the parties that should carry out the responsibilities; Bangladeshi government and international community,

### For the Bangladeshi Government:

#### 1. For peripheral areas that are vulnerable to climate change calamities:

The following policy recommendations have been suggested to assist the climate change vulnerable communities adequately through various initiatives so that they feel well-supported and don't feel the need to migrate to large cities Dhaka.

a. Emphasizing people centric and climate change event specific adequately funded adaptation and mitigation strategy

Bangladeshi government should focus on and execute people centric climate change adaptation and mitigation strategy at the peripheral level targeting climate change vulnerable communities. The approach should be bottom-up, not top-down. Although there are number of common challenges faced by the climate change affected communities across the countries, but they do face challenges that are quite unique too based on the types of climate change calamities that they encounter. For instance, the Southern coastal communities in Bangladesh face cyclones, floodings and sea-level rise whereas the Northern communities face drought on a regular basis. Therefore, reemphasizing a people centric climate change event specific adaptation and mitigation strategy is necessary.

Bangladesh has made significant progress in tackling climate change related challenges, but it would require bringing multi-agencies together in a more coordinated way emphasising people centric adaptation and mitigation strategy. Bangladesh government should increase its climate change adaptation

and mitigation budget too in accordance with the expert opinions. Bangladesh has taken number of initiatives as part of both adaptation and resilience strategy, for instance, Bangladesh Climate Change Strategy and Action Plan (BBSA- 2009), Bangladesh Delta Plan 2100, National Environmental Policy (2018) and Mujib Climate Prosperity Plan (Bangladesh Ministry of Environment, Forest and Climate Change , 2022) are some of the government led notable initiatives. Bangladesh has also made progress on climate change resilient infrastructure development. As for example, Bangladeshi government has constructed 352.12 kilometres of embankments to protect communities from monsoon, flush and seasonal floodings and 82 infrastructures for controlling water flow during rainy season. Beside infrastructure development, the government has concentrated on providing climate change resilient technologies to farmers and revitalising forestry. For instance, about 19428 metric tons of climate change stress tolerate seeds have been distributed among the farming communities, 7901 biogas plants installed at household level and almost 72 million trees have been planted and almost 6921.7 acres forest land have been reforested (The World Bank, 2017).

Bangladesh Government has also constructed 65 disasters relief warehouse and information centres, established 18 community radio networks for the coastal

communities as part of communicating adverse weather forecasts. It has planted about 5.4 million Palm trees around coastal districts to become more resilient to cyclones (Bangladesh Ministry of Environment, Forest and Climate Change, 2022). However, Bangladeshi government needs to do more and adopt a people-centric intensive and bottom-up approach for greater longevity and success of its projects.

Bangladesh needs to increase its climate change adaptation and mitigation budget. It would need to allocate more funding for climate change adaptation and mitigation strategy for both coastal Southern districts which is frequently affected by cyclones, floods and water-salinity and Northern districts that are often affected by drought and river-erosion. This research findings show that eco-migrants to Dhaka's slums are primarily from these districts. There has been huge gap between the amount of fund required to implement necessary and proportionate adaptation and mitigation strategy and Bangladesh spends currently (Bangladesh Ministry of Environment, Forest and Climate Change , 2022). Bangladesh has spent around 480 million US dollar on several relevant projects to apprehend various consequences associated with climate change, however, it has been recommended that Bangladesh would require at least 12.5 billion US dollar that is almost 3 percent of its overall GDP in the medium term

for a comprehensive climate action plan (Raiser, 2022).

Framing communities from the climate change affected areas trend to migrate more to large cities to avoid economic hardship due to crops production loss because of frequent floodings, cyclones, river-erosion, sea-level rise, and droughts. Bangladeshi government should work with other actors to ensure adequate support for the farming communities in climate change vulnerable areas. The income opportunities of the farming communities need to be diversified through crop diversification, climate-smart technology and locally lead-led action approach that would help higher agricultural productivity and ultimately boost income for the farming community (The World Bank, 2017). More income opportunities may act as a deterrent to prevent influx of eco-migration to large cities like Bangladesh.

Bangladesh has been maintaining steady economic progress since its independence, but climate vulnerable communities exposed to multiple climate change influenced calamities rather showed slower progress in terms of poverty eradication (Sammonds, et al., 2021). In fact, relative poverty has increased over time for the climate vulnerable communities that subsequently motivates them to migrate to bigger cities for better lifestyle (The Climate Reality Project, 2021).



This has been well reflected in the result analysis chapter too. The interviewed eco-migrants who were farmers stated that there has been lack of job and business opportunities in their local areas that has been a critical contributing factor to migrate to Dhaka city.

Marginal farmers in Bangladesh earn well below the threshold of the national income or income in line with inflation (The World Bank, 2023). Their income opportunities become even slimmer on a regular basis due to climate change influenced calamities. Hence this marginal farming community needs more support. To reiterate the importance, the OECD (2021) has recommended that the marginal farming community should be supported through access to various development interventions including government loans, access to public cultivable land for agricultural purposes, access to modern agricultural technologies that would boost crops production, which would be beneficial for more income generation. The World Bank (2019) has recommended that since almost 87% of the rural population of Bangladesh derive at least one portion of their income from the agricultural activities, prioritizing more climate-smart agriculture in Bangladesh and community based natural sustainable adaptation that can help income diversification and restoration of biodiversity and ecosystem. The UNFCCC (2021) has recommended that community based

natural adaptation plan can be significantly effective for the climate change affected community. Introducing more community based natural sustainable solution would help to ensure more income and ultimately demotivate people from the climate change affected peripheral regions of Bangladesh to migrate to Dhaka. Ensuring more investment in public services including healthcare, education, social housing that is shock-responsive to the climate calamities in the peripheral level too may make migrating to large cities less attractive.

Floods and river-erosion are two most common climate change influenced disasters that have been forcing vulnerable communities to migrate to Dhaka and other large cities. Bangladesh needs to implement a rigorous and meticulous river management. Bangladesh is a riverine country with as many as 800 rivers. These rivers intersect the land to create one of the most complex river-systems in the world. As a result of this, flood and river-erosion have been two major common causes of rural to urban internal migration in Bangladesh, and thus have caused economic havoc for the marginal communities including landless farmers (The World Bank, 2017). Bangladesh Delta Plan 2100 has recommended that more effective water management including construction of more flood-resilient embankments, conducting more river dredging and

freshwater flow and restoration of the wetlands can prevent frequent flood water wrecking houses and livelihood of the vulnerable communities (Bangladesh Planning Commission, 2018). Although Bangladeshi authority has started taking number of steps in this regard including building embankments but more needs to be done. Taking adequate and proportionate actions for water management would help to prevent floodings and river-erosion and that would ultimately deflect the influx of eco-migration in Bangladesh and reduce economic havoc caused by climate change. Water management should also prioritize to cease illegal river encroachment. River encroachment has been a significant contributing factor for the change of the natural flow of the rivers that has further worsened river erosion (The Daily Star, 2023).

Bangladesh should prioritise multi-agencies involved scientific climate change adaptation and mitigation approach that is grounded upon people's interest, transparency, and on good governance. Although there are certain natural causes of climate change calamities that are beyond the remedy of the government or people in general, however, there are number of both mitigating and adaptative measures that the government and other relevant authorities may take to apprehend the consequences of these climate influenced rapid and on-set events that are ultimately causing unstable influx of internal migration in

Bangladesh. The government should bring government agencies, NGOs, experts and affected communities together to form a pragmatic strategy that is people centric. The United Nations Security Council (2023) recommends that beside emphasising disasters-management paradigm, the government agencies should also focus on a comprehensive strategy that is scientific, affordable, and most importantly people-centric. Mongla, a port city of Bangladesh is a good example of implementation of people centric-climate change adaptation and mitigation strategy that has invested resources adequately both in improving public services and in creating diverse income sources for the climate change affected communities by developing the infrastructure and by improving access to natural resources (Global Resilience Partnership, 2023).

#### **b. Effective communication and adequate housing support for the affected vulnerable community**

Bangladesh government should emphasise effective climate change communication. Although Bangladesh has done an admirable job in communicating early warnings of cyclones, floods, however, the government hasn't been meticulous to implement an effective communication strategy that would that convey the gravity of the climate emergency and benefits of various

climate change adaptation and mitigation strategy adopted by the government for the affected community at the peripheral level (UNDP, 2012). Marginal farming communities with very basic education and land have been the most common demographics affected by climate change calamities and more leaning to migrate to Dhaka. However, they seem less informed about the consequences of climate change and various actions taken by the government of Bangladesh. Bangladesh government should take necessary steps to inform the farming community in advance about any natural calamities including monsoon flooding, any anticipated warm weather that may occur based on the weather forecast which can sabotage crops production. Furthermore, marginal farming communities haven't been as well-informed as they should have been regarding the new agricultural technologies from which they can be benefitted vastly (UNDP, 2012). Additionally, although Bangladesh has become a role model among the climate change vulnerable developing countries in terms of evacuation during cyclones, it has been observed that much more can be done in terms of conveying necessary crucial messages to the marginal farming communities regarding climate change rapid and onset events which could ultimately damage crops production and livelihood.

Poor marginal communities are inclined to migrate more often when their

houses are wrecked by climate change influenced disasters. Therefore, government funded housing facility should be made more accessible to the affected communities in the peripheral areas to incentivize them to stay at their locality instead of migrating to large cities like Dhaka. Providing free housing promptly to the landless people who have lost their houses due to river-erosion, flooding and cyclones should be a priority for the Bangladeshi government as it would help to reduce the influx of eco-migration to big cities. There are number of initiatives that the government has taken already under the project called “Ashrayan” to house homeless and displaced people (Pearson, 2023). The Armed Forces Division of Bangladesh plays a central role along with civil administration to execute this project. Although many climate change affected people have been benefited through these housing projects, but these projects need to be amplified as there has been huge disparities between the number of people that require housing assistance immediately after flood, river-erosion and cyclones and number of houses built under these projects.

Destabilising level of internal migration is challenging for any countries including Bangladesh. What has been observed by this research is that that lack of support for the affected communities has been a key driver of eco-migration. The National Strategy on Internal Displacement Management (2021) has suggested

a comprehensive and adequate programme that would render a pragmatic and meticulous support for the climate change affected community. However, this strategy has only come to light recently although climate change induced eco-migration to large cities in Bangladesh has been happening at an unprecedented level. Therefore, Bangladesh government should not be complacent with the current climate change adaptation and mitigation strategy, and it is important to revitalise the support system on a regular basis to ensure greater efficacy and suitability. Furthermore, it is pivotal to cross-check the efficacy of the already initiated or implemented adaptation and mitigation strategies and gather feedback from the affected communities to bring necessary adjustments to the original plans for better outcome.

### c. Tackling corruption to ensure a seamless post-disaster support mechanism

The Bangladesh government should take drastic actions to address any corruption and nepotism in the relief distribution and climate change mitigation and adaptation strategy. A transparent, seamless, and purposeful system in place would help the affected community and demotivate affected communities to migrate to big cities simultaneously.

There has been distrust among the common people about the way the politics and the governmental institutions operate in Bangladesh (Charu, 2017). It has been well-documented in this research too as the eco-migrants stated that climate change adaptation and mitigation execution mechanism overlooked by the politicians in the affected peripheral areas has been inadequate and corrupted. The interviewed eco-migrants have expressed their distrust and frustration about the locally elected political representatives who are mainly responsible for relief distribution and execution of climate change adaptation and mitigation strategy e.g., climate change resilient seeds distribution, emergency fund distribution as part of relief effort and so on. Furthermore, the eco-migrants have reported that there is corruption in the relief distribution system by stating that activists of the ruling party get preferential treatment in the relief distribution system. Therefore, the government should ensure better adjudicating mechanism through overreaching anti-corruption actions from both central and local government.

#### **d. Providing alternative livelihood options to the affected communities**

The landless farming communities being affected by climate change events are more likely to migrate internally to large cities in Bangladesh. Providing



alternative livelihood options to those affected farmers may act as a deterrent against unstable eco-migration (IPCC, 2018). Therefore, income diversification and providing options for alternative livelihood through trainings and vocational education should be prioritised. These additional options would be financially beneficial for the marginal farming community as frequent climate change related events have been working as a negative catalyst for the crops production and subsequently for their income generation. Furthermore, providing more accessibility to the circular economy through trainings, small start-up loans for businesses will help for alternative livelihoods.

Implementation of climate-smart agriculture (CSA) nationwide remain as a huge challenge for Bangladeshi government. Besides, marginal framers need to have access to more macro-credit that would enable them to purchase necessary climate-smart machineries. They also need financial support during crops season. Engaging private sector to advance the CSA agenda can be a sensible measure. Bangladesh has a specific bank dedicated to the farmers, but farmers have had difficult relationship with this bank in the past. Due to the poor reputation of this bank, farmers often go to NGOs instead of coming to this bank (Rising BD, 2023).

## 2. Policy recommendation to support the eco-migrants in large cities

### a. Providing various socio-economic assistance

Providing comprehensive support for the eco-migrants is important to ease various element of the human security apparatus that have been threatened due to climate change induced unstable migration.

Eco-migrants in Dhaka lead a very precarious life with very limited assistance from the government and NGOs. Lack of access to decent housing after migrating to big cities has been a common challenge for the eco-migrants. Bangladesh government should ensure affordable decent housing for the eco-migrants as this is a fundamental citizen right. Bangladesh government should allocate special budget for building homes for the eco-migrants at the outskirts of cities (IMO, 2020). The Ministry of Disaster Management and Relief should take a lead on this matter by coordinating with other relevant agencies. For example, Bangladesh Army has a good track record to managing post-disaster rehabilitation effectively (Disaster Management Bureau, Bangladesh, 2010). They have also been instrumental in implementing Government housing projects for the homeless. Their knowledge and expertise can render a great

help in resolving housing issue faced by the eco-migrants. Additionally, Dhaka City Corporations have special budget to improve the living conditions of the residents of slums that includes providing electricity, driving water, building roads and transport links (Ahmed, 2015). That budget should be used effectively and with greater transparency. The City Corporations should allocate a dedicated team of officials to ensure that the eco-migrants have access to information, and they have the means to escalate their concerns through proper official channels.

Eco-migrants and their children should have access to education in Dhaka and in other large cities. Eco-migrants may be reluctant to start education due to their age, workload, and other underlining causes but they should at least be offered vocational education that is focused on industry demand. There should also be provision of evening school so that the eco-migrants at least have the flexibility and means to achieve basic education (UNHCR, 2019). Bangladesh Ministry of Education should offer completely free education for the children of the eco-migrants. Furthermore, vocational education should be also offered to the children along with conventional education so that they can make their entry to the job sectors quickly.

The Ministry of Health should introduce special provision of healthcare of the eco-migrants. That should include diagnosis and treatment for complicated diseases. Bangladesh government should include private hospital, philanthropic organisations, and big corporations in this persuasion (World Health Organisation, 2018). Incorporating corporate social responsibilities should be considered to address this concern. There are examples of big corporations providing treatment for complicated diseases in Bangladesh. The government should encourage more of such philanthropic activities.

## **b. Ensuring Political Representation**

Eco-migrants are often politically underrepresented in Bangladesh. The government, relevant NGO that works on democratic accountability and civil society leaders should work together to address this issue (World Bank Group, 2023). The electronic and print media should also highlight this issue so that the politicians take note of their democratic accountability. Bangladesh parliament should consider having a parliamentary standing committee totally dedicated for the eco-migrants so that the relevant ministries, government agencies and concerned politicians can be held accountable for their democratic

responsibility.

## Responsibility of the International Community to Assist Bangladesh

International community and global organisations have an important responsibility to address many of the challenges faced by the eco-migrants in Bangladesh. Bangladesh being a developing country lacks adequate financial resource to address many of the consequences faced due to climate change influenced events. There are disparities between what are the requisites for climate change adaptation and mitigation and what resources have been allocated to in Bangladesh (UNDP, 2012). Today's world is interconnected and integrated more than any time before, therefore, a human security issue in Bangladesh can be a matter of agony for the adjacent countries and for the rest of the world. Therefore, The United Nations (2023) has recommended that the international community has a collective responsibility to assist Bangladesh by providing both financial assistance and by sharing climate-smart technologies and knowledge. Furthermore, the European Civil Protection and Humanitarian Aid Operations (2022) has emphasised that the international organisations should provide with humanitarian assistance to the eco-migrants and hold

Bangladeshi government responsible for its democratic accountability towards the eco-migrants.

## How Other Equivalent Actors are Doing and What Lessons Can be Learned

Indonesia, India, Nepal, Cambodia and Thailand exhibit similar profile as Bangladesh after taking socio-economic, political and climate change vulnerabilities into consideration. This part of discussion highlights what actions these countries are taking so that Bangladesh can learn from them to incentivise the climate change affected communities to remain at their localities and how to support eco-migrants once they decide to migrate to big cities;

### **1. Providing assistance to climate vulnerable communities at the affected peripheral level**

This section discusses some of the notable actions taken by the equivalent actors as incentive for the climate change affected communities so that they don't migrate to big cities. The discussion is as below;

#### **a. Implementing climate smart community-based adaptation approach**

Nepal has been constantly advocating community-based climate smart adaptation approaches emphasizing climate smart scientific farming technology to maximise agricultural crops production in the face of climate change calamities (UNEP, 2021). The widespread use of climate smart agricultural technologies in Nepal reflects that. Bangladesh has slowly started adopting this method, but the implementation should be further intensified. In Nepal, marginal farmers are provided with necessary trainings and information so that they can embrace themselves with new climate smart technologies (Mainlay & Tan, 2012).

The farmers in the developing countries are countries more comfortable using traditional farming methods. Although Bangladeshi government has been emphasising climate smart agro technologies but safeguarding indigenous farming techniques hasn't been given much attention. However, Indonesia, Nepal, India, Cambodia and many other South and Far-East Asian countries have integrated indigenous farming methods along with climate smart techniques (UNEP, 2016). As for example, Cambodia has initiated 27 Community Protected Areas (CPA) that has benefitted peripheral farmers by ensuring sustainable sources of income by intensifying agricultural production outside of the protected areas and by rehabilitating degraded forest that can ensure sound

ecosystem (USAID, 2022). This pilot project has been training grassroots climate change activists and so far about 4000 activists have been trained to champion this project (UNEP, 2016).

Indonesia is also using indigenous farming. Their Javara project has 50,000 subscribers who are smallholder farmers. Indigenous farming protects and promote traditional agricultural practices that protects the environment (Letchumanan, 2012). It has also made farmers to be creative and grow diverse crops to compete in global markets by keeping their communities enriched and their ecosystem affluent.

Conventional farmers are more responsive to bottom-up strategic approach that is built on consensus (Sandhu, 2021). Indonesia has built a bottom-up approach to revitalise farming community. There has been consensus among the farming communities to bring necessary adjustments to their agricultural practices that is built on cooperation and climate change knowledge. This has further solidified by the political willingness and administrative support (Letchumanan, 2012).

## **b. Empowering women as an agent for change**

Women should be empowered and encouraged to become economically active



through climate change adaptation and mitigation strategy. The research shows that the majority of the interviewed women had no jobs or are not directly involved with any economic activities at their place of origins. Almost 47% of the coastal population is women in Bangladesh (Ayeb-Karlsson, 2020), therefore, making women involved in economic activities would help to generate more income for the household, which would ultimately motivate them to stay in their locality instead of desperately migrating to the big cities including Dhaka.

Nepal has institutionalized integrating gender in climate change agenda. Nepal's NAPA (National Adaptation Programme of Action) is a solid example of mainstreaming gender into climate change adaptation agenda whereas women have been given a central stage. Furthermore, to consolidate it further, Nepal has passed the Local Self Governance Act to ensure women's participation in the decision-making process (Mainlay & Tan, 2012).

Like Nepal, India has realised the importance of mitigating climate change related gender-based vulnerabilities. Hence, it has introduced State Action Plan on Climate Change (SAPCC) that has prioritised putting women at the centre of climate change strategy (UNCC, 2019). Many states like Ahmedabad, Maharashtra and Odisha have already taken initiatives based on the Indian central

government's framework to put women at the central of this (Chaturvedi, et al., 2019). As for example, the Regional Centre for Development Cooperation at these states and many others have ensured to put equal number of women as men in different committee that works to implement the climate change adaptation and mitigation strategy (Chaturvedi, et al., 2019). There are several NGOs spread throughout India that are primarily working to ensure that women are empowered thoroughly through different initiatives. As for example, Swanti project, Women4Climate Mentorship and many others are working to ensure gender-based disparities in climate change adaptation and mitigating strategy in different parts of India (UNCC, 2019).

### **c. Restoration of the forests and wetlands to revitalise our unique relationship with nature**

Restoring forests and wetlands is important to tackle climate change. Indonesia has been allocating adequate resources to restore its peatlands by bringing the relevant stakeholders together including the local communities. The local community around peatland has experience for 100 of years to manage peatlands and produce agricultural crops without damaging the eco-system (Yuwati, et al., 2021). Local wisdom that has helped farmers and local communities for centuries to grow agricultural crops has been a core element in

the management and restoration of the peatlands. Indonesia has a target of restoring 2.67 Mha of peatland every year that stretches over almost 7 provinces (Letchumanan, 2012). Local communities adjacent to the peatlands have been empowered to use their local wisdom of land management that has been important for both peatland restoration and revitalisation of the local livelihood. It has further helped to minimise climate change influenced floods and droughts.

The Sundarbans, standing on the way between mainland Bangladesh and the Bay-of-Bengal, has been the main frontier to save the people of the coastal areas of Bangladesh from cyclones. This forest has also been a source of livelihood for the local communities. Climate change threatens the existence of this forest that has already started affecting the poor farming communities (Ahmed, 2022). Bangladeshi government needs to implement a robust and well-coordinated campaign like the one done by the Indonesian government to save and restore the Sundarbans. The Rampal coal project that has been constructed close to Sundarbans has received heavy criticism as it would do more damage to this forest (Mathiesen, 2016). The government has introduced special licensing system that would limit the number of people who can enter into the Sundarbans at a time. However, the local farmers and fishermen have been reported to be discriminated against this new regulation (Ahmed, 2022).

Furthermore, this new rule has also had a negative impact on the income opportunity of the local farmers as they have very limited income opportunities.

## **2. How other equivalent actors are supporting eco-migrants**

Eco-migrants normally reside in the slums of the large cities after being relocated due to climate change. Indonesia has initiated a nationwide project to help residents of the urban slums to have access to drinkable water, sanitation, electricity, and other basic amenities that are required for the flourishing of life. This ambitious project would cost the government 1.7 billion US dollar (John & Dewi, 2017). The World Bank and newly formed Asian Infrastructure Investment have jointly become co-sponsor of this project. This project has benefitted about 670,000 households in 20 cities across Indonesia (Asian Development Bank, 2019). The government of Indonesia successfully brought multi-agencies together including civil societies and volunteers to make this project a success. Besides, Indonesian government monitored the key performance indicators of this project very closely to ensure transparency and success.

The Bangladeshi government doesn't have such comprehensive project to assist the urban slum residents in Bangladesh yet. In fact, IDP (Internally Displaced Person) was first mentioned as part of the government climate change adaptation policy only in 2021. It has been seen that 33% of the total population of Dhaka lives in slums but government housing projects can only offer new home with reasonable amenities to only 8% people (Mohsin, 2023). However, since the eco-migrants living in the slums have every limited political influence, too often they are left out of such facility. Furthermore, Dhaka city corporations seem reluctant to interfere in the governance of those slums since these are often managed informally by the local politicians (Mohsin, 2023). This informal governance approach is influenced by a combination of political and bureaucratic patronage. The expansion of slums reflects unwillingness of the government to develop and enforce coherent policies. There have been few housing initiatives from the Dhaka City Corporation North and South, but those housing projects are extravagant. Those expensive housing projects have been beyond the capacity of the eco-migrants, and they are mainly occupied by the political cronies (Newage BD, 2022). Eco-migrants remain outside of the government social safety benefits. In fact, poor in urban areas including slums of the big cities receive less social safety benefits that poor in the rural areas. As for example, only 17.84% of the urban poor receives government social safety

benefits whereas 35.77% of the rural poor get those benefits (Brouwer, et al., 2023). This disparity is a demonstration that there needs to be a firm governmental framework to support the eco-migrants in Dhaka and in other big cities.

Eco-migration to large cities has been a growing concern for Indian authorities too. However, there have been interventions from number of NGOs in India with the cooperation of the government of India to improve the overall living conditions of the urban low-income households (UNCC, 2021). As for instance, an NGO named MHT has been helped many slum-dwellers. Women have been the primary beneficiaries. About 25,000 low-income families have been benefitted due to numerous outreach projects by the NGO MHT in 107 slums mainly in India (Patel, 2015). This NGO has also helped about 27000 women through community actions groups to remain more informed and active about climate change and citizen's rights. Furthermore, it has empowered women to take actions against four major climate risks specifically that includes flooding, water scarcity, drought, and water-vector-borne diseases (Letchumanan, 2012). Many Indian cities including Ahmdabad, Bhopal, Ranchi, Jaipur, and others have been benefitted from different these climate change related initiatives (UNCC, 2021).

Bangladeshi government should partner with NGOs similar to MHT to carry out similar initiatives to improve life of the urban poor who are mainly eco-migrants. It also needs to minimise the gender-disparity in climate change initiatives by allowing interventions from the NGOs and civil societies. Finally, Bangladesh government should prioritise climate change as a top urgency. It should implement an effective climate change strategy by bringing all the relevant stakeholders together to implement a people-centric strategy to prevent eco-migration. Besides, the government should ensure an adequate and dedicated support system for the eco-migrants. Transparency, good governance, and accountability should be at the very core of climate change adaptation and mitigation strategy. Furthermore, Bangladesh should take climate change not only as an ecological issue but also as a security issue. International community should also assist Bangladesh by providing financial aid, updated climate smart technology and knowledge to tackle this challenge collectively.

## Further Research

This research can be developed further for climate change vulnerable developing countries. This research has provided a thorough understanding of the challenges faced by eco-migrants in the large cities of developing countries

and how human security apparatus can be a sensible tool to understand and address this issue. This research has been conducted having Dhaka-Bangladesh as a case study with 31 interviewees. Eco-migrants move to other large cities in Bangladesh too. This research can be extended for those cities too. Furthermore, same hypothesis can be used for other developing countries with similar socio-economic and political characteristics like Bangladesh. Additionally, the number of participants were limited to 31 due to limited time, resource, and Covid-19 pandemic travel restrictions. Researchers interested in this topic may consider having more participants for future research.

Researchers may consider exploring further about citizens' attitude towards protest. Interviewed eco-migrants in Dhaka have not felt the motivation to arrange any protest to express their frustration due to various reasons including fear of being oppressed by law enforcement agencies. It's interesting that people, while frustrated and lacking political voice, do not protest or engage in other direct action. However, this may not be the case in other cities or for all eco-migrants in Bangladesh. I interviewed 31 eco-migrants as part of my research, but researchers may decide to have more participants and use this causal pathway for further research. Furthermore, researchers interested in this topic may extend this research by exploring if opposition political parties may



be able to facilitate and co-ordinate protest for eco-migrants against governments' actions. Besides, further research may be carried out to explore how opposition parties may capitalise the frustration of eco-migrants for their own political gains. Additionally, researchers may be interested to see what the civil societies and NGOs are doing to hold the governments accountable to ensure that eco-migrants are adequately supported through various social security assistance and their concerns are heard by politicians and governments.

## Conclusion

Climate change has been gaining attention from policymakers and other stakeholders. However, we should not be complacent about climate change, rather we must demand more actions and accountability from our politicians and international community regarding this. Governments should treat this issue with urgency and effectively. They should do more to support the individuals and communities being affected by this issue.

Governments in developing countries should support eco-migrants more coherently. Climate change has been causing huge internal migration in

developing countries. But the support system for assisting these eco-migrants seem inadequate in many developing countries. There should be coherent and adequate support available for these eco-migrants since they are at the forefront of this situation. Developing countries may have limited financial resource to support their eco-migrants. However, governments can do more within that limited financial resource by ensuring better governance, transparency, and accountability.

Global North and Global South should extend their cooperation further to support eco-migrants. Global North should exchange its knowledge regarding effective city governance. Large cities in climate change affected developing countries lack in managing public services effectively and proportionately once they have large number of eco-migrants. City-states in developed countries have a reasonably effective management system to ensure sustainable public services for their residents. This city management knowledge can be useful for city-states in developing countries to ensure better public services for all residents including eco-migrants in slums.

Human security apparatus is more suitable than realist apparatus to understand the security challenges imposed by unstable level of internal eco-migration both

at national and individual level. However, human security isn't alternate to realistic apparatus. Human security doesn't recommend that a state shouldn't spend money on its military for its security and sovereignty. It rather points out from the context of eco-migration in developing countries that the security threat evolves from within state that can rather be addressed by emphasising more on human security apparatus than other forms of security mechanism.

Citizens in developing countries need more political agencies and space to express their frustration. Eco-migrants in developing countries have limited political agency to express their frustration and escalate their concerns to relevant authorities. Citizens may not mobilise protests straightway but that doesn't mean the political system should downplay their concerns. The idea of protest organised by frustrated citizens leading to civil unrest in the context of certain countries needs reconsideration. The political condition may not always be favourable for citizens to arrange protests but that doesn't mean their frustration is diluted.

Human development is directly related human rights. The demands of eco-migrants in developing countries aren't luxury, these are rather very basic human rights including the right to adequate housing, education, healthcare,

jobs, and economic opportunities. The primary responsibility of a country is to ensure basic rights and safety of its citizens. Having a strong military is important for territorial integrity of a state but it is also important to invest resources to ensure these basic rights for the eco-migrants or any other citizens. Developing countries should prioritise to develop a strong social security structure for their citizens. Having a strong social security can ensure both prosperity and human security of citizens.

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## Appendix

### Appendix-I: Commentary from the interviewed eco-migrants

#### Causes of migration: I:a

<b>Impact of rapid events caused by climate change (flood and cyclones)</b>	<b>Impact of slow/onset climate change events (sea-level rise, river erosion and drought)</b>
<p><b>I:a:1-</b> “Flooding has been constant in my area. Drought has also been normal. In recent days, drought has been very frequent. The temperature is so high that sometimes it’s difficult go outside. I am only bread earner for the family. After the death of my father, it has been difficult”.</p>	<p><b>I:a:4-</b>“We faced river erosion in our district Chandpur. The mighty river Meghna has taken away my house. My husband died abruptly, and I had no job. Our situation was very vulnerable, and we lost everything to the river”.</p> <p><b>I:a:5-</b>“River erosion (Meghna River)</p>

**I:a:2-** “Migration to Dhaka is a common practice in our area. We have been affected by continuous flood and job loss. We don’t have many factories in our local areas, so we depend heavily on agriculture and we don’t have any other income sources but flood has been badly affecting our crops production”.

**I:a:3-**“The impact of both flood and drought has been very traumatising. Low lying cultivable lands have seen the toughest consequences. People are more inclined to leave agricultural jobs as there is no incentive and we face regular climate change calamities”.

took my entire village away. I lost my house and job”.

## **Most popular destination for eco-migrants- I:b-Dhaka**

**I:b:1-**“People like us migrate to Dhaka frequently. Many people from my area have moved to the slums of Dhaka”.

**I:b:2-**“Mainly poor people moved to Dhaka as they don’t have any long-term support after calamities”.

**I:b:3-**“It is very common to migrate to Dhaka. People don’t wish to talk or express their frustration as they are scared about their life”.

## **Impact of the pull-factor (expectation to get better job)-I:c**

**I:c:1-** “After being affected by river-erosion, we moved to Dhaka for better life and more earning. We had dream that people become rich if they move to Dhaka. But that isn’t the reality. I am a rickshaw puller and the money that I earn isn’t good enough for survival, becoming rich is far away”.

**I:c:2-** “River erosion, flood and cyclones are common in my area. It caused me many issues. There are more job opportunities in Dhaka but sometime its difficult to avail such opportunities as we need to pay bribe or we don’t get the accurate salary”.

**I:c:3-** “People think that they may get a job and do well in life if they move to Dhaka city”.

### **Managing housing in Dhaka by using personal contact -I:d**

**I:d:1-** “I didn’t get any support. I used to know someone in the slum, that’s how I managed a small room”.

**I:d:2-** “I live in a shared house that I managed through my personal contact. I share my room with others. This is not of good quality”.

### **Women are accompanied by their sons or husbands- I:e**

**I:e:1-** “I am 58 years old now, I moved to Dhaka with my husband and kids 30 years ago”.

**I:e:2-** “I am 65 years now. I moved to Dhaka when I was only 30 or 32 with my 2 daughters and 1 son. My husband died very young before we moved to Dhaka”.

### **Housing situation-I:f**

**I:f:1-** “When I moved more than 30 years back, the housing situation was really bad but cheap but gradually it’s becoming expensive. We used to suffer from

waterborne diseases. But then few NGOs got involved and the situation slightly changed”.

**I:f:2-**“We have electricity, but we don’t have any supply for gas and water. Even if we move to other places, the situation would remain same”.

**I:f:3-**“I didn’t get any help from Dhaka city corporation. This is same now too. I asked for help in my local area in Dinajpur too. But the local chairman was too busy with serving his own political party supporters”.

**I:f:4-**“We could not access the political leaders to help us for housing because we don’t have good political connection as we are not educated”.

**I:f:5-**“We didn’t receive any support, nothing at all. The condition of the house was very bad. The city corporation provided no assistance in this regard. No government ministry or NGO helped us too”.

### **Economic opportunities (jobs and businesses)-I:g**

**I:g:1-**“No, we didn’t receive any help. We are not educated nor politically well-connected. That’s why we don’t get any support related to jobs or businesses”.

**I:g:2-**“There was no training facilities that we are aware of. We haven’t received any help from NGOs too. We are not approached by anyone as we are uneducated”.



**I:g:3-**“We received some food relief during Coronavirus pandemic but overall, there is no help. It’s difficult to do business in Dhaka. We need capital but we don’t have any funding”.

**I:g:4-** “No, we didn’t receive any information related to jobs in Dhaka. We live hand to mouth. We don’t have the luxury to take a time off from work for training”.

#### **Access to education- I:h**

**I:h:1-**“It was expensive. It wasn’t completely free. I couldn’t send my children to school in Dhaka”.

**I:h:2-**“I have two daughter. Both go to school at Dinajpur, but I can’t bring them to Dhaka. It’s too expensive”.

**I:h:3-**“My daughters go to NGO ran schools. My son is disabled but we don’t receive any help from the government”.

#### **Access to public - I:i**

**I:i:1-**“We can get doctor’s appointment but recently my mother needed to be admitted to hospital but there was no help. I had to sell my trees to get

money”.

**I:i:2-**“Yes, we can access the basics but when it requires lengthy medical assistance then we can’t get healthcare help”.

**I:i:3-**“There are government facilities but it’s not always convenient and sometimes it’s not free”.

### **Grievances>Protest>civil unrest: I:j**

**I:j:1-**“My entire family lives within one small room. I am poor and I have no one to complain to. The rich people won’t listen to us. I feel sad but I have no way out”.

**I:j:2-**“ I feel bad. I am so busy earning my livelihood, I can’t even visit my parents’ graveyard in my village I don’t know where I will be buried when I will die as we don’t have any land”.

**I:j:3-**“I feel bad. I pray to Allah do anything for us. If my neighbour eats well and ride expensive car but my family go hungry although we live in close proximity, then of course feel bad. If I had any capital, then I could have done business, but I don’t have access to such fund”.

**I:j:4-**“If we can arrange a well-coordinated peaceful protest, then the government would listen but it’s difficult to coordinate people. I wish if I could

go back to my area and work or do business there. I could have stayed with my family, but I don't know if that would be possible".

**I:j:5-**"Sometimes organising protest is the only way out. Many people in my local are becoming poorer day by day. We sometime arrange meetings and rally about it but it's difficult in Dhaka city".

**I:j:6-**"The political situation is not in favour of physical protest against the government. The police will arrest all of us. They are very powerful".

## Participant Information Sheet

***This document has been provided in English, but it will be translated into participants' native language, Bangla.***

### Project title

***Climate change, human security, and unstable migration in Bangladesh.***

My name is Adnan Pavel, and I am a doctoral candidate in the Department of Government at the University of Essex. I would like to invite you to take part in a research study. Before you decide whether to take part, it is important for you to understand why this research has been done and what it will involve. Please take time to read the following information carefully.

### **What is the purpose of the study?**

To find out if the climate change can threaten the national security of the developing countries by creating civil unrest through unstable migration. Here Bangladesh has been selected as a case study - a climate change affected country with fragile democracy and developing economy.

### **The main purpose of this research is as below;**

1. To investigate the impact of climate change on migration to big cities in Bangladesh including Dhaka
2. To investigate the challenges faced by the climate change migrants to big cities including socio-economic deprivation and political exclusion and how that can instigate civil unrest
3. To investigate the economic impact of climate change on the Bangladesh
4. To analyse the climate change resilience strategy i.e., adaptation and mitigation strategy implemented by Bangladesh government and other associated organisations
5. To explore the role of intervening agents including various socio-economic and political agents in minimising the impact of climate change from the context of Bangladesh

This study is being undertaken in relation to my doctoral research at the University of Essex.

### **Why have I been invited to participate?**

You have been invited to participate because you are identified as someone who has been affected by the climate change in Bangladesh.

### **Do I have to take part?**

It is up to you to decide whether or not you wish to take part in this research study. If you do decide to take part, you will be asked to provide written consent. You are free to withdraw at any time, without giving a reason. Withdrawal will have no impact on you.

### **What will happen to me if I take part?**

You will help us for this research to understand how climate change has affected you day to life and livelihood.

### **What are the possible disadvantages and risks of taking part?**

There is no cost and risk involved in participating in this interview.

### **What are the possible benefits of taking part?**

You will help us to understand the impact of climate change on Bangladesh and its people.

### **Will I be paid for my participation?**

You will be paid 50 taka for your inconvenience.

### **What information will be collected?**

For climate change migrants- Information related to your cause of migration, your financial situation and adversity faced by you and your family for moving to big cities.

For locals affected by climate change- Information related to impact of climate change on you and family. How you are supported by the government as its endeavours to adaptation and climate change resilience.

### **Will my information be kept confidential?**

Yes, your information will not be shared to any third party. It will remain confidential.

### **Who is funding the research?**

This is a self-funded research project.

### **What will happen to the data if a participant withdraws at the middle of the interview**

That information will not be used for this research and will be destroyed.

### **Mitigation of Covid-19 risks**

The local contact will follow Bangladesh Government's Covid-19 guidelines. Social distancing will be followed throughout the interview. The participants will be provided with facial masks and hand sanitizer. Due to nature of the research, a very limited number of people will be interviewed. Therefore, it won't break any current Covid-19 restricts imposed by the Bangladeshi Government. The participants will be asked the following questions before they take part-

1. Do you have symptoms pf Covid-19 i.e., fever, cold and so on,
2. Have you been in contact with anyone who had any of these symptoms

### **Concerns and Complaints**

If you have any concerns about any aspect of the study or you have a complaint, in the first instance please contact Adnan Pavel- investigator of the project. If you are still concerned, you think that your complaint has not been addressed to your satisfaction or you feel that you cannot approach to the principal investigator the please contact Professor Han Dorussen ( [hdorus@essex.ac.uk](mailto:hdorus@essex.ac.uk)), Director of Research, Department of Government, University of Essex. If you are still not satisfied then please contact the University's Research Governance and Planning Manager, Sarah Manning-Press (e-mail [sarahm@essex.ac.uk](mailto:sarahm@essex.ac.uk)).

## **Statement of the Data Controller-**

I, Adnan Pavel, hereby declare that I would take all necessary steps to ensure the well-being of the participants, to uphold the reputation of the university, to follow all regulations related to research field works and restrictions related to Covid-19. Furthermore, I would also like to emphasize that I will do everything to ensure the anonymity of my participants.

## **Name of the Researcher**

### **Doctoral Candidate**

Adnan Pavel

Department of Government, University of Essex

[ap18721@essex.ac.uk](mailto:ap18721@essex.ac.uk)

### **Supervisor**

Professor Natasha Lindstaedt

[nezrow@essex.ac.uk](mailto:nezrow@essex.ac.uk)

### **Director of Research**

Professor Han Dorussen

[hdorus@essex.ac.uk](mailto:hdorus@essex.ac.uk)

Sarah Manning-Press (on behalf of The University of Essex)

[sarahm@essex.ac.uk](mailto:sarahm@essex.ac.uk)

## Consent form

***(This document has been provided in English, but it will be translated into Bangla, participants' native language. Both written and oral consents will be used based on the literacy level of the participants)***

Title of the Project: Can climate change threaten the national security of the developing countries by creating civil unrest through unstable migration?

Research Team: Adnan Pavel, PhD candidate, Department of Government, University of Essex, UK

Please initial box

**1. I confirm that I** have read and understand the Information Sheet dated 15/10/2021 for the above study. I have had an opportunity to consider the information, ask questions and have had these questions answered satisfactorily.

**2. I understand that my participation is voluntary and that I am free to withdraw from the project at any time without giving any reason and without penalty. I understand that any data collected up to the point of my withdrawal will be destroyed.**

**3. I understand that the identifiable data provided will be securely stored and accessible only to the members of the research team directly involved in the project, and that confidentiality will be maintained.**

**4. I understand that my fully anonymised data will be used for PhD thesis by Adnan Pavel**



5. I understand that the data collected about me through survey and or audio recordings will be used to support other research in the future and may be shared anonymously with other researchers.

6. I agree to take part in the above study.

Participant Name

Date

Participant Signature

\_\_\_\_\_

Researcher Name

Date

Researcher Signature

\_\_\_\_\_

## Sample Questions;

1. Where did you grow up in Bangladesh?
2. What was your job?
3. Why did you move to Dhaka?
4. How bad was the impact of climate change in your area?
5. Did any of your family members move to Dhaka with you?
6. Is migrating to Dhaka city a common practice in your area?
7. What are the main reasons of moving to Dhaka city from your area? Can you elaborate your experience further on this?
8. When did you moved to Dhaka?
9. What do you do now?
10. Can you share your experience related to your current accommodation?
11. Did you get any housing support from the Dhaka city corporation when you moved to Dhaka?
12. Did you approach to anyone from the city corporation to get help related to housing?
13. Did you receive any job-related information form the from the local or central government?
14. Did you receive any training from the Dhaka city corporation or Ministry of Labour?
15. Can you share your experience related to your jobs/businesses in the Dhaka city?
16. Do you have any children? Do they have access to local schools?
17. Can you and your family members access government have provided healthcare facilities in your locality at Dhaka?
18. Do you think your concerns are politically well-represented by the politicians or local elected representatives to the Dhaka city corporation and Central government?
  
19. Do you feel isolated about this situation?
  
20. Did you participate in any physical protest?
  
21. What made you or others to protest?
  
22. Do you support physical protest?
  
23. How do you view protest?

## Data Management

Details to include are:

- ***What data will be collected?***

Mainly survey questionnaires to find out impact of climate change on migration & people's life and how they intend to express to their discontent (in case if any) towards the state/government. This interview will be conducted via video call due to Covid-19 restrictions.

- ***What will be done with the data?***

This data will be analysed as part of the PhD thesis to test the causal link on climate change and national security.

- ***How will an individual's anonymity be protected if they request it?***

Every interviewee will be given a code number to protect their anonymity.

- ***How will the identifiable data be stored, for how long and who will have access to it?***

The data will be stored to Adnan Pavel's personal laptop that is password protected. This data will be stored for 2 years. Apart from Adnan, Professor Natasha Lindstaedt, Dr Mollie Gerver and Professor Robert A Johns will have access to this data.

- ***How will the data be stored in the long term if it is to be retained or how will it be destroyed?***

This data will be stored for 2 years with password protected laptop and after that the file from the laptop will be permanently destroyed using Windows Operating system.

All IT equipment will be handed with rigours security, each having strong password.