Resilient Destination Cities: Climate Migrant Resettlement in Mongla, Bangladesh

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Abstract

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Climate-related migration is a growing global phenomenon, and it has significant implications for building urban resilience. Bangladesh, particularly its coastal regions like the Sundarbans, experiences high levels of migration due to natural hazards and slow-onset effects of climate change. As a result of insufficient infrastructure and inequitable resource access in large cities, regional cities have received growing focus as potential alternative destinations which also offer higher livelihood security, a primary pull factor for migrants. Despite extensive research on the origins of climate migrants, there is limited understanding of the conditions in destination cities. This study investigates Mongla, a port city in Bangladesh, as a potential destination for climate migrants, focusing on migrants' livelihoods, water access, and overall satisfaction.

Using semi-structured interviews with 21 flood-induced and non-flood-induced migrants, NGO officials, and the mayor of Mongla, this research evaluates the city's alignment with the Climate-Resilient Migrant-Friendly Towns (CRMFT) framework. The findings reveal that labor opportunities are a significant pull factor for migrants, directly influencing food security. However, Mongla faces challenges, particularly in water security and infrastructure, which could hinder its ability to serve as a model for climate-resilient cities. The study highlights the need for improved infrastructure and services to ensure the long-term viability and livability of Mongla as a destination for climate migrants. Future planning must incorporate the migrants' voices and needs to effectively support their resettlement and integration.

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1. Introduction

"I will tell you that we had no refuge after the house was destroyed. There is no other situation to seek refuge. So we came to this Mongla Port. My father used to work in Mongla Port before. He used to work on the ships here. So after everything was broken, my father came here with whatever was left. Houses had been washed away. The houses are totally gone. Our ancestral home is gone. All dissolved in the river, carried away by the river. All went down with the river." - Participant 16

As the effects of climate change increase, so do the ways that human mobility is influenced by those effects (Abbass et al., 2022; Rana & Ilina, 2021). Climate-related migration and displacement are growing phenomena around the world, which have important implications for future population dynamics, urban development, and resilience (Miller, 2020). Climate-related migration is a complex, multifaceted concept, and it can occur as a result of displacing natural disasters or rapid-onset events such as tropical cyclones and flood events, or slow-onset effects, such as coastal erosion and sea level rise (Jolly & Ahmad, 2019; McAdam, 2010). In addition, the role of climate change as an independent factor in affecting migration decisions and outcomes is difficult to ascertain due to its entanglement with micro- and macro-level socio-economic drivers including livelihood instability and stress, cultural norms, social networks, and political context (Black et al., 2011). This complexity means that the distinction between climate and labor migration is becoming difficult to establish, especially given that rural livelihoods are often dependent on diverse ecological systems (Dewan, 2023). Because of the uncertainty surrounding climate migration, there is a wide range of projections; by 2050, anywhere between tens of millions to over a billion climate migrants will exist (Brown, 2008).

Bangladesh has long been a focus area for climate migration scholarship – communities in coastal areas, especially near the Sundarbans, are migrating due to cyclone events, rising sea levels, increasing groundwater salinity, frequent flooding and waterlogging (Rakib et al., 2019).

Within South Asia, the World Bank Group estimates that slow-onset climatic changes could result in 17 million to 36 million climate migrants by 2050, with a third of those in Bangladesh alone (World Bank, 2021). As rich as current scholarship on climate migration is, there is a notable lack of research conducted on migrant places of destination (Ghosh & Orchiston, 2022). The literature to date primarily focuses on conditions in migrant places of origin that influence migration decisions, but knowledge related to places of destination or "receiving communities" – where migrants resettle – is relatively sparse (Ghosh & Orchiston, 2022). Prominent destination cities in Bangladesh like Dhaka and Khulna have received labor migrants for generations and have been studied in this context, but thinking about these cities as destinations for climate-related migrants requires additional considerations (Alam & Mamun, 2022; Chumky et al., 2022). When considering climate migration, places of destination should be resilient against climate change, otherwise natural hazards and slow-onset impacts could paradoxically result in yet another migration (Rahman et al., 2024).

Researchers of climate migration in Bangladesh have also begun addressing this gap, as recent studies highlight the challenging conditions faced by climate migrants in large Bangladeshi cities like Dhaka and Khulna, such as lack of adaptation ability, poor water and sanitation facilities, and financial insecurity (Ahmed, 2020; Khan, 2022). Advancing this research is critical, as Khan (2022) highlights the absence of literature that specifically evaluates "climate migrants' livelihoods and WASH-related hardships and needs in Bangladesh" (p. 2). This study takes interest in both issues, investigating how concern over livelihood opportunity may obscure hardships related to city services and infrastructure.

As an alternative to mega-cities like Dhaka, the potential of smaller cities to receive climate migrants has drawn attention, particularly by Bangladesh's largest NGO, Building

Resources Across Communities (BRAC) and research institute International Centre for Climate Change and Development (ICCCAD) (Alam et al., 2018; Khan et al., 2018). ICCCAD has been developing the conceptual framework "climate-resilient migrant-friendly towns," (CRMFT) applicable to these cities for their proximity to home villages, labor opportunities provided by an economic hub, and sufficient infrastructure and capacity building to sustainably accommodate migrant resettlement (Khan et al., 2018). The specific components that constitute a CRMFT are outlined in **Figure 1.1**; this study only focuses on the economic, structural, and social components (highlighted in green) as the themes that emerged during analysis most relevant to livelihoods, infrastructure, and service provision.

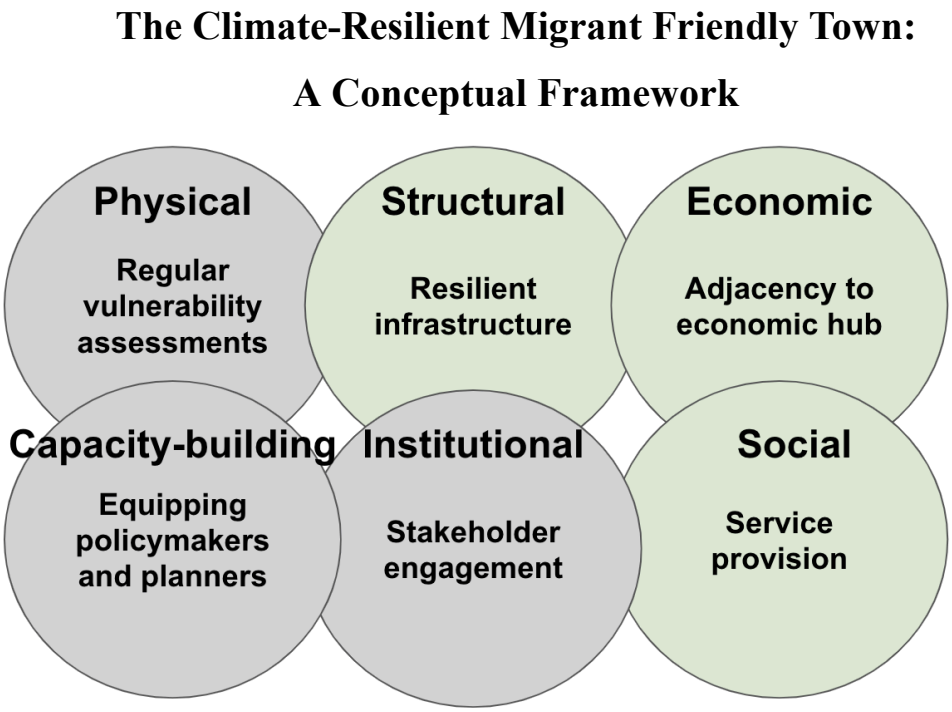

Figure 1.1. The six components of a CRMFT and relevant examples as outlined by ICCCAD. Highlighted in green are the components of interest for this study. Figure designed by author F. Hasan, based on content from Khan et al. (2018).

One study distinguishes recipient cities as "those that serve as unsuspecting or unwilling 'receiving communities' from sudden-onset disasters without preparation" and climate destinations as those "seeking to rebrand their communities as 'climate havens' that welcome displaced residents through equitable planning and preparation" (Marandi & Main, 2021, p. 468). It is critical that CRMFTs align towards the latter, as this same study also suggests that a lack of sufficient planning to accommodate migrants could exacerbate existing inequalities (Marandi & Main, 2021). Because CRMFTs are already being framed as havens, it is necessary to have infrastructure and services prepared to confront climate risks as well as accommodate migrants.

Based on the INFORM 2019 index, Bangladesh is ranked first globally in flooding exposure (World Bank, 2021). Though, it is important to note that not all coastal flooding in Bangladesh is due to climate impacts as in the case of *jalabaddho* flooding, which occurs due to embankment failure (Dewan, 2021). For this reason, this study challenges the term "climate migrant" in categorizing participants in favor of "flood-induced migrant" and "non-flood-induced migrant," as not all floods in coastal Bangladesh are climate-induced. The term "climate migrant" will be only used to engage with existing literature. Flood-induced migrants in this study are distinguished by the exact push factor of a flood event, making their migration specific to such environmental conditions. Non-flood-induced migrants may have also experienced flood events, but a flood event was not an ultimate push factor contributing to their migration. Importantly, the term "non-flood induced migrant" captures a range of drivers and contributors to migrate beyond flooding, most notably labor migration. Labor migration, especially urban to rural, is very common in the Sundarbans region of Bangladesh (Tenhunen et al., 2023).

Migration decisions are often conceptualized based on "push" and "pull" factors. Push-pull theory contextualizes migration based on what drives people away from their places of origin, such as threatened livelihoods, (push factors) and what attracts them to their places of destination, such as social networks (pull factors) (De Sherbinin et al., 2022). This study links push-pull theory to The Livelihood Framework, connecting migration to "livelihood strategies and the five livelihood assets—social, human, natural, physical, and financial capital." Rural livelihoods in coastal Bangladesh are largely ecosystem-dependent, especially in regard to the Sundarbans mangrove forest. Communities that reside close to the Sundarbans reliant on fishing or agriculture are facing permanent income losses – some freshwater fish cannot withstand salinization, and saltwater intrusion damages farmland traditionally used for rice cultivation; around 74% of income for lower income households is dependent on Sundarban forest resources (Mohammad Abdullah et al., 2016). Thus, these communities have been long partaken in seasonal migration: migrating towards cities to participate in the urban workforce then returning to their places of origin after some economic recovery (Roy & Guha, 2017). However, the continued degradation of land bordering the Sundarbans will not favor the cyclical nature of migration since resources are becoming increasingly irrecoverable (Roy & Guha, 2017). Development projects, such as the transition from rice cultivation to shrimp aquaculture, indicate political acceptance of salinity permanence (Paprocki, 2019). Shrimp aquaculture is notably less labor-intensive, leading to loss of rural livelihoods, and contributing to urban migration.

There is little formal research on how residents in small towns like Mongla earn their livelihoods and how they perceive their city (Ruszczyk et al., 2023). The issue of livability is particularly relevant when considering the wellbeing of climate migrants in destinations, because it centers the experiences of the migrants (Ruth & Franklin, 2014). Moreover, changing

environmental conditions have a distinct effect on livability, as they impact "the abilities of cities to maintain their infrastructures, provide reliable supply of services, and support the lives and livelihoods of people" (Ruth & Franklin, 2014, p. 21). For the future of destination cities, assessing livability will have to be an iterative process, with planning and policy initiatives subject to changing environmental conditions and changing migrant perceptions.

This study investigates the concept of livability for Mongla. Using semi-structured interviews with flood-induced and non-flood induced migrants in Mongla, we evaluate migrants' satisfaction with Mongla and its services, how they report their quality of life, and desired improvements. We find that, if Mongla is to be considered a model for the CRMFT framework, it will not only need to provide steady labor opportunities, but also confront stressors on livability that are not openly expressed by migrants.

2. Methodology

2.1 Case study: Mongla

Figure 2.1. Map of Bangladesh with Dhaka, Khulna, and Mongla marked. Source: Central Intelligence Agency (2024)

Among more than a dozen municipalities identified by BRAC as potential CRMFTs is the porty city of Mongla. The city of Mongla has a history of seasonal migration; since its port construction in 1950, it has welcomed laborers from nearby villages. Some modern-day migrants are part of a generational history of seeking work in Mongla, once coming as children when their

fathers found income through the port. As climate change accelerates, in the last few decades the city has also been welcoming flood-induced migrants, who arrive after their villages experience a flood event (Ahmed et al., 2019). Because Mongla has already been identified as a representative case of the CRMFT framework, this study calls upon livability literature to situate migrant experiences within a larger conversation of urban resilience and resource allocation. This study invokes narrative analysis of semi-structured interviews with both flood-induced and non-flood-induced migrants to investigate whether Mongla adheres to the CRMFT framework through participants' expression of their experiences with the city's structural, economic, and social features.

Mongla was chosen as this study's field site because in recent years, it has been posited in the literature and popular discourse as a favorable destination for climate migrants due to its small size, income opportunity based from its port, and its adjacency to Sundarbans villages (Khan et al., 2018). However, this narrative has faced increasing criticism given the city's challenges with water scarcity. Scholars report the danger of the "crisis narrative" – without proper planning, Mongla runs the risk of maladaptation (Rahman et al., 2024). It is pertinent that in moving forward, researchers dismiss the Malthusian narrative that population growth is the inhibitor of sufficient municipal services. As evident by the frequency and impact of *jalabaddho* flooding, the under-emphasized issue at hand is insufficient infrastructure (Dewan, 2021). The failure of a city to accommodate migrants is not a result of population growth, it is a result of low resilience.

2.2 Interview design

This study relies on semi-structured interviews with 21 migrants, 2 NGO officials, and the mayor of Mongla. A focus group with eight migrant women preceded the interview stage to ensure the interview protocol captured relevant themes. Interview participants include the mayor of Mongla as well as officials from NGOs Friendship and Building Resources Across Communities (BRAC). Through a purposive sampling design, migrants from low-income formal and informal settlements in Mongla were selected to be interviewed. The participants were split nearly evenly between the two categories; eleven flood-induced migrants and ten non-flood-induced migrants constitute the sample. As aforementioned, flood-induced migrants are those that have migrated in the aftermath of a flood event in their origin village. These categories are chosen in lieu of a "climate migrant" and "labor migrant" binary due to failures of the binary, such as some displacing flood events being induced by issues like embankment failure. This categorization was based on migrant responses to the question "Why have you come to Mongla?" These groups are also separated in this study due to existing research demonstrating how their experiences can vary in places of destination as the circumstances of their arrival could be indicative of their assets and support systems (Adri & Simon, 2018). In terms of future planning, the city might allocate different resources depending on what is made available to each community, as in the case of the Khurushkul Ashrayan Project, the planned resettlement of thousands of climate migrant families in another coastal district.

The interviews were conducted in Bangla, audio recorded, and later translated into English. The English transcripts were coded for two rounds within ATLAS.ti for thematic and narrative analyses (Soratto et al., 2020). The transcripts were coded deductively, with major themes including water security, housing conditions, housing satisfaction, income security,

services in Mongla, struggles of Mongla, pull factors, retention factors, and desired improvements. The importance of the semi-structured interview as this study's method is reinforced by the findings: migrants would reveal struggles and desired improvements not always when directly asked, but rather as a supporting detail to another question. More structured methods would fail at capturing these sentiments.

2.3 Positionality statement

I conduct this research as a first generation Bangladeshi-American. I had no family ties on the field, as my home district does not encompass Mongla, but I am fluent in Bangla and conducted interviews alongside a research assistant. I was visibly and audibly an insider, but culturally an outsider. I was able to connect with migrants through our shared language, but I was not familiar with the local landscape beyond what I learned through the literature and preliminary meetings. My intentions for this research are (1) to highlight what migrants say they need and what they articulate as needing but do not ask for, and (2) to set Mongla as a case study for how other cities in Bangladesh, South Asia, the Global South, and beyond can prepare for migration by listening to spoken and unspoken testimonies. In my former intention, it is possible that I am projecting Western ideals of what a municipality owes its residents, but I hope instead to project what migrants themselves desire even if such services are not expected or openly asked for. This project has made me a more intentional researcher, and for that I thank my participants.

3. Results

The main code groups revealed through qualitative thematic analysis include “current livelihood,” “past livelihood,” “struggles of Mongla,” “ease of Mongla,” “desired improvement,” and “pull factor.” Within these code groups emerged more descriptive codes; for example, within “current livelihood” are “driver,” “shipwork,” and “garments.” Questions preceding participant responses are only listed in **Table 3.2** to make clear how participant concerns shifted by question.

Overall, results reveal the importance of labor opportunities for migrants in Mongla, including the direct relationship between livelihood security and food security, the importance of water access and other infrastructure/services, as well as a narrative of satisfaction with historical progress and optimism for the long-term improvement of Mongla. These findings are relevant for the development of destination cities because of how understudied livelihood and WASH sector experiences are of climate migrants, the importance of a city’s preparedness in distinguishing it between a recipient city from a climate destination, and the importance of infrastructure in determining livability (Marandi & Main, 2021; Ruth & Franklin, 2014).

3.1. Pull, push, and retention factors

Major themes that emerged in participants’ discussion of labor were its role as a push factor and pull factor, and its connection to short-term food security. Participants described labor shortages in their origin villages as a reason they needed to migrate, and 18 of 21 migrants mentioned labor as a reason they came to Mongla, making it the the most common pull factor among both flood-induced and non-flood-induced migrants. This section also reveals how participants consistently speak of labor security as a direct conversion for short-term food security.

Table 3.1: Thematic analysis results of migration drivers

Theme	**Example quotations**
Labor shortage as push factor	Participant 10: “There was a shortage in the country. There was a shortage in the world. All the houses were washed away. Not being able to eat, I came to Mongla to see if there was any work here. After coming, having gotten housing and work, God is providing for us. This is why I came.” Participant 5: “I remember the hardships of being [in the village] more. Like the struggle for food. There was no work. After that, the river broke and the land went away.”
Labor availability as pull factor	Participant 12: “First, I found a house to rent in Mongla. Second, there is a daily work environment. At the port, EPZ, the driving that I do now. There is an environment of easy earning and eating in Mongla. This is why I came to Mongla.” Participant 11: “Back in my father's country home, Mongla was known for garments. I can do two things for work, I can eat. I came for this.”
Labor security linked to short-term food security	Participant 14: “People have become rich by working. It has reached different stages, but we who are at the bottom, people who eat by working, who eat by labor, remain below… If a person doesn't go to work one day – like today, it’s raining, and he can’t go – a lot of households where fish is eaten, they could not even eat lentils. Honestly, you can ask 5 other people. But this is the kind of work we do here. If we can't go to work today, tomorrow our stove won’t be lit.”
Place attachment as pull factor	Participant 19: “Mongla is next to the village, within the district. I came for this. I visited Dhaka, Chittagong… I couldn’t find any of this... There, I am indeed earning, but I left everything of this place behind.”

Participant 10 and Participant 5 both expressed flood events and labor shortages in their places of origin, but for Participant 10 the flood event preceded the labor shortage, the inverse of Participant 5. Both describe a struggle with food security. As expressed by Participant 11, some participants had heard of Mongla's labor availability while in their villages. They also mentioned being able to do two things for work, which is indicative of the livelihood diversity available in Mongla which makes it so income security can be dependent on more than one form of labor. As referred to by Participant 12, most participants engage in a form of short-term labor they refer to as "daily work." Daily work, whether it be shipwork, as a driver, or in a garment factory, is available to a laborer so long as labor is available to be done. Daily work and its resultant income are acquired on a day-to-day basis. Along with Participant 10 and Participant 5's discussion of food security, Participant 12 refers to Mongla as having "an environment of easy earning and eating." Participant 14 offers an alternate perspective as they describe, "If we can't go to work today, tomorrow our stove won't be lit." Participant 19's expression of place attachment diverges from these narratives but is representative of migrants' desire to be proximal to their villages of origin.

3.2 Labor obscuring infrastructure and services

Mongla's infrastructure limitations are well-known, but participants in this study diluted these limitations and instead drew attention to labor opportunity. In this section, major themes that emerged include an inconsistency between services that migrants have struggled to access reliably in Mongla (e.g. water) and what they state as a desired improvement (e.g. labor), a willingness to discuss other improvements only after labor opportunity has been mentioned, and a concession to poor infrastructural conditions.

Table 3.2: Thematic analysis results of obscuration of hardships in Mongla

Theme	**Example quotations**
Inconsistency between stated hardship (water) and desired improvement (work)	**Q&A series with Participant 7:** **Q: "What is causing you difficulty?"** Participant 7: "The water. When I first came here, I couldn't drink much water." **Q: "Are you getting enough services?"** Participant 7: "For the most part, I'm getting good work." **Q: "What do you think can improve your life?"** Participant 7: "I can do my work here. Besides, there is a garment industry and I can get a job there." **Q: "What would you say to others from your area if they wanted to come here?"** Participant 7: "I would tell them not to come here. Because the water quality of this place is not good."
Revealing potential improvements aside from labor opportunity when asked a follow-up question	**Q&A series with Participant 3:** **Q: "What things can improve your quality of life?"** Participant 3: "I can improve my quality of life by working in garments." **Q: "You don't need anything else?"** Participant 3: "Education of children will need to be provided, roads will need to be good, and a safe water supply will improve our standard of living." **Q: "What would you say to someone from your village who wanted to come here?"** Participant 3: "I would say, 'I am dying, I am dying. Don't you die. Don't come to the river island. I will forbid you to come.'"
Conceding to poor infrastructural conditions	**Q&A series with Participant 19:** **Q: "How is your housing condition here?"**

	Participant 19: **“**The condition of the house is not good. Water is falling in, we have no tin (roof), water is falling in from everywhere. For now, we are living with polythene (roofing). What can I do, where will I go with my children?” **Q: “Are you satisfied with your housing?”** Participant 19: **“**What can we do about satisfaction? We have no other way, no place to go. Apart from this, we have no other accommodations.”

Though water scarcity was well-expressed among migrants when discussing hardships in Mongla, it was not as well-expressed when discussing desired improvements. For example, in their interview, Participant 7 stated they struggled with drinking water in Mongla, but when asked what could improve their quality of life, they responded with labor opportunities. When asked about satisfaction with services, they even responded solely regarding labor. The conversation with Participant 3 went similarly, and their excerpt is representative of how participants reveal their obscured stressors (services and infrastructure) – initially they only mentioned the garment industry as improving their quality of life, forgoing mention of the city’s limitations in favor of drawing attention to labor opportunity. However, when asked a follow-up question on whether there could be any other improvements, they also mentioned education, roads, and water.

Along with an obscuration of the aforementioned infrastructure and services, there were five participants who when asked pointedly about housing, reported poor conditions but also stated they were satisfied with housing. Participant 19 expressed in his excerpt the futility of satisfaction when there is no other option but to persist in Mongla. Because labor provides the means to eat and consequently stay in Mongla, as discussed in the previous section, infrastructure and services are obscured in migrant narratives.

3.3 “New Mongla”

Mongla has made notable infrastructural improvements in recent years, such as the cyclone siren system, new embankments, and water reservoirs. Some participants reported government turnover as having brought positive changes to Mongla and its people, and they express hope for the future of the city so long as the government stays its course. Some participants mentioned roads as a specific positive intervention made by the government in the past, and safe housing conditions as an intervention that is yet to be made.

Table 3.3: Thematic analysis results of perceived government intervention

Theme	**Example quotations**
The city has improved	Participant 17: “There were no roads then. Then slowly after the government came, our roads were developed. We used to have a dirt road here then they were laid with asphalt.” Participant 18: “For example, there was no pond in this place before… We got a water system from the government. Our leader Sheikh Hasina is helping us a lot. We are very grateful to her. She says that she will fix the road in front of us. She said she will fix our house, too. We are very happy with that, very satisfied.”
Hope for the future	Participant 15: “I hope Mongla is safe, Allah willing. As long as this government exists, I hope that it is safe.” Participant 16: “We are in this environment that if the government continues to take steps forward like this, it will benefit those of us who are mere people.”

Participant 18 referenced improvement in water supply, a major stressor. This participant also expressed hope that the prime minister will fix their house and adjacent road. Along with

participants' prioritizing of labor, service dissatisfaction may also be obscured by the hope that the government will eventually intervene as they have historically. Participant 17 specifically referenced roads being developed since government turnover, which was a concern for participants including Participant 3 from

Participant 15 and Participant 16 expressed feelings of safety and expected improvement contingent on the government continuing the progress it has been making. As discussed in the section prior, it is possible that hardships are being obscured to redirect attention towards labor needs, but it is also possible that the changes migrants have experienced so far have contributed to an air of optimism that services and infrastructure will improve without requiring much advocacy by migrants.

4. Discussion

4.1 The role of labor

This section will review pull factors ("Why they come") and retention factors ("Why they stay") as they apply to drawing and keeping migrants in Mongla, with labor being at the heart of both. Migration decision-making is also influenced by other pull factors including previous familiarity with, communities ties in, and proximity to Mongla. Participants unanimously express intent to stay in Mongla, motivated primarily by labor opportunities and secondarily by not having alternative options. Though some participants mention infrastructural improvements as a retention factor, migrants also report inability to migrate as a retention factor; those engaging in daily work find difficulty accumulating sufficient assets for mobility as this form of labor only offers "lit stove security," highly short-term food security.

4.1.1 Why they come

Labor is the largest pull factor among the migrants in this study, both flood-induced and non-flood-induced, because it is inextricably linked to short-term food security. Mongla has been hosting labor migrants for generations. Six participants in this study have mentioned coming to Mongla in their childhood when their fathers sought work in the city, most often ship work. Since then, the garment industry has taken off in Mongla, which has created labor opportunities for female migrants. Mongla also has a livelihood training center for the garment industry, which facilitates skill development and integration into the workforce. Beyond ship work and the garment industry, participants also reported driving and domestic work as sources of income. As shared by Participant 11, participants reported a sense of security from livelihood diversity in that income security is not dependent on a single form of labor.

Related to this pull factor is the push factor of shrimp aquaculture sweeping the region: "the availability of a seemingly endless supply of cheap migrant labor from rural areas has contributed to the vigorous growth of Bangladesh's garment industry… The transition from rice agriculture to shrimp aquaculture has motivated a loss of agricultural livelihood opportunities, contributing to this process of 'free[ing] up manpower'" (Paprocki, 2018, p. 966). Shrimp aquaculture not only creates labor shortage, it is also responsible for amplifying environmental destruction (Dewan 2023). Here lies another failure of the climate migrant/labor migrant binary – "Misreading migration caused by brackish tiger-prawn cultivation, infrastructure-related waterlogging and riverbank erosion as 'climate-induced' hinders a discussion of long-term solutions for rural underemployment, salinisation, siltation and land loss" (Dewan, 2023, p. 2339).

Amjad (2021) argues that push factors are stronger than pull factors in determining migration, and it is ultimately livelihood insecurity that pushes villagers to the city. In this study, 12 participants expressed insufficient income opportunity as push factors in their places of origin, but how this labor shortage might compound with flood events was variable. For example, Participant 10 expressed, "There was a shortage in the country. There was a shortage in the world. All the houses were washed away. Not being able to eat, I came to Mongla to see if there was any work here." For them, flooding induced insufficient income opportunities. Alternatively, Participant 5 expressed, "I remember the hardships of being [in the village] more. Like the struggle for food. There was no work. After that, the river broke and the land went away." In this case, labor shortage was already present in their village, but it was the flood event that ultimately induced migration. Migration can offer different levels of vulnerability reduction and consequent economic mobility based on factors like skillset, length of stay, and access to networks (Islam & Herbeck, 2013). This combination of differences can lead to distinct outcomes in Mongla which is why this study calls for a distinction between flood-induced and non-flood-induced migration. Though non-flood-induced migrants can still have experienced flood events in their origin villages, flood-induced-migrants are those driven to migration by significant loss: land, houses, and other assets are "taken by the river," as some participants describe.

Related to work availability is the presence of community; 10 out of 21 participants expressed family/social ties as a reason they chose Mongla. Existing networks facilitate housing opportunities, which eight of the 21 migrants cited as their mode of initial housing acquisition. Another major theme that arose as participants discussed pull factors was familiarity with the

city. As aforementioned, some participants grew up in labor migrant households which created a previous connection to Mongla.

Bari in Bangla can refer to the dwelling where a person resides, but it can also mean a homeland at large, scaling up from village to sub-district to district the further one goes from their place of origin. Mongla falls under many migrants' *bari* given the close proximity of their villages, allowing a higher visiting frequency. It is important to note, though, that while proximity may be both a pull and a retention factor for some, for others it is only a pull factor. This is particularly the case for some flood-induced migrants who expressed they do not visit at all because there is nothing left to visit.

Though intersection of labor is a relevant consideration as having an existing community can create work opportunities, one migrant notably decided to forgo income in other cities to remain within his *bari*. "Mongla is next to the village, within the district. I came for this. I visited Dhaka, Chittagong… I couldn't find any of this... There, I am indeed earning, but I left everything of this place behind" (Participant 19). His interview reveals not that income opportunity is dismissible, but rather the importance of place attachment in choosing his final destination: origin proximity is also a significant feature of the CRMFT framework. While labor was the dominant topic of conversation, it is also necessary to recognize the relevance of proximity in participants' migration to Mongla. Origin proximity is not something cities can control for its migrants, but as the CRMFT and climate havens at large continue to develop, it would be useful to consider how familiarity might influence perception of a destination city.

4.1.2 Why they stay

Even in the absence of reliable infrastructure and sufficient services, the literature shows that Mongla residents present an overwhelming willingness to stay (Ruszczyk et al., 2023).

Every participant in this study expressed the same; 10 of the 21 migrants mentioned labor opportunity as a reason to stay, the most popular answer. The next highest response was seven migrants expressing not having anywhere else to go. These two reasons are linked: income is reliable in the long-term, but it is insufficient to generate wealth. As Participant 14 stated, "We who are at the bottom, people who eat by working, who eat by labor, remain below." This lack of sufficient assets makes it so migrants like Participant 14 cannot afford an alternative option to Mongla even if they recognize its limitations. As Participant 19 articulated, "What can we do about satisfaction? We have no other way, no place to go. Apart from this, we have no other accommodations." When asked regarding intent to stay, only one participant had a conditional answer and said they would stay so long as there was reliable water (Participant 2).

Migrant vulnerabilities are amplified by "economic factors such as limited income opportunities, lack of savings; and political factors like tenure insecurity at the community level" (Ha-Mim et al., 2020, pp. 1-2). Related to the acceptance of poor healthcare and infrastructural conditions is the lack of financial power. It is important to point out the word *obhab* that has been used by migrants to describe their condition in Mongla. *Obhab* translates to scarcity; 12 migrants state *obhab* as reflective of their experience in Mongla, the most cited of struggles faced in the city. How Participant 14 described their condition in Mongla captures the immobility faced not only physically but financially when participating in daily work.

Khan et al. (2021) recognized a livelihood training center and government/NGO efforts to improve education and informal housing as pull factors of Mongla, but some of these are also strong retention factors, in the sense that six participants from this study cite education as a reason to stay, but only two identified it as a reason they came. One flood-induced migrant (Participant 14) referred to the affordability of education as an improvement since the previous

government, suggesting that migrants are considering Mongla as a suitable destination not only for themselves, but for their children, and another cited her children's future as her only reason to stay (Participant 1). In order for Mongla to operate as a suitable destination for the next generation, though, it will need to have not only a reliable education system but also a resilient infrastructure.

One participant cited both roads and education as retention factors (Participant 5). However, on the matter of roads, this migrant is an exception. They are the only participant who cited it as a retention factor. Though another migrant did acknowledge improvement, five other participants mentioned struggling with roads in Mongla, and four of the five said they need better roads for an improved quality of life. Roads are a particularly relevant limitation for climate resilience as migrants describe hindered mobility during natural hazards. The same participant who said the roads were a reason to stay also said "[Mongla] seems to be safe, but when it is storm season, one has to be in panic, they have to go to the cyclone center with their children. The roads become very broken and it is difficult to come and go" (Participant 5). When asked what she remembers of her home village, they said, "It was difficult to get safe water, the water rose when there was a flood, there were no paved roads, it was very difficult to move. These things I remember more" (Participant 5). It is important to note they are not classified in this study as a flood-induced migrant, yet they still recounted flood events in their place of origin and the impacts of limited infrastructure in their interview. They have decided to stay in Mongla due to signs of betterment, but still carry uncertainty regarding their safety. They did not mention roads as a desired improvement.

Unlike roads, labor is seen as a survival resource, to the equivalence of food and drinking water, because for this community the binary of working or not working one day is proximal to

the binary of eating or not eating the next day. Daily work is the strongest retention factor among participants and is framed as a means to achieve food security. Labor, like food, is procured regularly on a short-term basis. Participants described food insecurity in their place of origin as a push factor to seek labor in Mongla, as well as their current relationship to labor and its causative effect on their ability to eat. Instead of labeling what migrants seek as "income security," the intensity of their situation is better understood as "lit stove security," as described by one participant: "This is the kind of work we do here. If we can't go to work today, tomorrow our stove won't be lit" (Participant 14).

The same participant, when asked whether he received help from his neighbors upon migrating, responded, "They did not have the capacity to help. Because people were very poor at that time. And people have become rich by working. It has reached different stages, but we who are at the bottom, people who eat by working, who eat by labor, remain below" (Participant 14). This quote is indicative of the kind of labor being done, one that sustains the ability to eat without facilitating mobility. There are two notable words for work in Bangla: one is *chakri* which is regular and salaried, and the other is *kaj*, infrequent day labor (Dewan, 2021). Only one of the participants had employment that fell under the umbrella of *chakri* (Participant 8). For migrants seeking lit stove security, when they cannot procure labor, they must rely on others. Participants in the study described neighbors providing food when they experienced scarcity, but also neighbors who connected them to income opportunities. Having a network facilitates not only survival in the forms of safe housing and lit stove security, but also operates as a long-term retention factor by offering a reliable community.

Migrants can fold into quite distinct intersections of vulnerability and resilience depending on factors like assets, social networks, housing conditions, and lit stove security.

Migrants in this study have shared how social networks promote integration within the city, and economic resilience is built through the daily work availability as well as livelihood diversity. The next section will discuss issues of physical resilience; the narrative of water scarcity as it relates to migrant futures is not a straightforward one, nor are its solutions.

4.2 The role of water

This section reviews the water crisis in Mongla, specifically its pervasiveness ("A prevalent stressor"), its relatively under-emphasized nature within migrant narratives ("An obscured stressor"), and a proposed course of action ("An amendable stressor"). The findings of this study are connected to concepts of livability and the right to the city. This section highlights reasons other service/infrastructural needs along with water supply may be overshadowed in migrant narratives, particularly by the need for labor opportunity. The section closes with strategies at the local to national level that could lead to positive interventions for migrant quality of life in Mongla.

4.2.1 A prevalent stressor

The southwestern region of Bangladesh has faced prominent saltwater intrusion and drinking water stress in recent decades, and Mongla is no exception (Lam et al., 2022). River water, for most of the year, is saline – increasing during the dry season when there is low pressure (Ahmad & Saqib, 2021). Water infrastructure and supply face immediate impacts. Coastal communities in Bangladesh have historically relied on groundwater, a critical ecosystem service in the Sundarbans; however, saltwater intrusion has increased in the region not only due to environmental reasons, but also due to land management practices (Islam et al., 2023). Shrimp aquaculture has taken over the landscape – because shrimp require saltwater, areas have been

flooded with brackish water for cultivation, contaminating both fresh surface water and groundwater (Nicholls et al., 2018). With limited access to alternative sources of drinking water, unless they have the capacity to transport water from a distance, residents in this region are forced to consume saline water (Rakib et al., 2019). A study in the area shows that over 70% of participants cited diarrhea, dysentery, and skin diseases as the most prominent encountered health risks from freshwater scarcity; these concerns are predicted to worsen (Abedin et al., 2019). Six participants in this study expressed encountering saltwater sickness.

Mongla is not alone in this crisis; receiving cities generally will need to prepare their infrastructure and services as the World Bank estimates that by 2050, there will be 1.9 billion residents of water-stressed cities (World Bank, 2016). Stakeholder involvement in combating Mongla's freshwater scarcity is critical for a more resilient management of the water supply system. A participatory approach should be practiced for water and health development initiatives, combining perspectives of residents and multi-level policymakers (Nahian et al., 2018). Other stakeholders such as ICCCAD and local NGOs (BRAC, Friendship) should be consulted along the process.

In Mongla, residents are already forced to buy water during the dry season, when the reservoirs and BRAC line have no supply. In conjunction with the CRMFT framework is the scholarship on "right to the city" which researchers define as "a demand on the one hand for greater access to urban public goods, and on the other, for greater democratic influence in shaping the provision, quality, and governance of those goods" (Cohen, 2018, p. 2). Mitigating the water shortage is critical for Mongla to be a long-term CRMFT, but in particular, this mitigation should invite community engagement.

There have already been efforts in this direction: while existing water reservoirs in

Mongla were executed by the municipal government, they were initiated by the community. It is necessary for governments and NGOs to prioritize long-term resilience in order to successfully incorporate more community-led adaptation strategies (Abedin et al. 2019). As shrimp aquaculture sweeps the landscape, more intentional water resources management and adaptation projects need to be implemented to protect critical ecosystem services and drinking water access (Nahian et al., 2018). As aforementioned, migrants in Mongla have reported overwhelming willingness to stay even in the face of water insecurity, but it is critical that residents are made aware of their right to freshwater and actively participate in municipal decision-making (Rahman et al., 2024).

4.2.2 An obscured stressor

Water scarcity is well-pronounced among Mongla migrants, with 11 out of 21 participants in this study reporting it as a struggle in the city, yet only four participants cite it as a desired improvement. Comparatively, only four participants struggled with work, and nine cite it as a desired improvement. As shown in the excerpt from Participant 3's interview in the Results section, migrants may perceive water scarcity as their only hardship in the city but still only mention work opportunity as a potential intervention. This mismatch warrants further consideration; freshwater is a critical resource, yet its scarcity does not invite the same level of concern among participants as labor opportunity. This is not to discredit the importance of labor: as discussed earlier, this study's concept of lit stove security recognizes that labor security among daily work laborers is synonymous with food security. Rather, it is an inquisition as to why freshwater is not weighted similarly when it also has implications for survival, and why it exists among participants as an obscured stressor.

Part of the obscurity can be attributed to why migrants came to Mongla: a strong majority (18 of 21) cited labor opportunity as a pull factor. Only one migrant (Participant 8) mentioned Mongla having good services, but even they did not specifically name water as a reason to migrate. Unlike labor, migrants did not come to Mongla expecting water, and thus they are not demanding it. In fact, the majority came expecting scarcity: only four participants did not know of the water crisis before migrating to Mongla. Many that migrated locally experienced similar scarcity in their villages. One participant noted, "I have already heard that it will be necessary to pull drinking water here. Then I thought, where we were living, there is also water scarcity in this place" (Participant 15). Water scarcity may be understood by migrants as the terms of the landscape which Mongla is not exempt from, a persisting scarcity that has existed for generations both in the villages and in the city.

In the villages, water acquisition is a household-level burden. While there are communal sources for water access, it is up to each family to secure their water. This individualization of water acquisition may deter migrants from criticizing outside entities like the government or NGOs for the lack of reliable, centralized supply. Ruszczyk et al. (2023) highlight that while Mongla has its limits with water and infrastructure, it is still considered liveable by residents because it is still "small enough for citizens to make do with the resources provided by some urbanization combined with a proximity to the natural resources of the rural. For example, in Mongla, backyard and communal water ponds answer both food security and water supply concerns (even if imperfectly)."

The city's recent progress could also explain the lack of current criticism, even as limitations persist. Mongla is vulnerable to many of the same hazards that migrants faced in their home villages, such as cyclone risk and freshwater scarcity, but the limited urbanized resources

are not only better than what is available in the villages, but they are better than they were a few decades ago. This is the ongoing development of what this study calls “New Mongla,” given participants’ comparisons to the city now to what it was when they first arrived. The national government has already invested millions of Bangladeshi taka to promote climate-resilient infrastructure in Mongla which includes flood-control gates, raised embankments, and water reservoirs (Alam & Mamun, 2022). Participant 18 made note of the improved water supply, “For example, there was no pond in this place before… We got a water system from the government,” and Participant 17 commented on infrastructure, “There were no roads then. Then slowly after the government came, our roads were developed. We used to have a dirt road here then they were laid with asphalt.” Not only did participants in this study note how “New Mongla” has proven its commitment to improving infrastructure, some also expressed optimism for the future. As Participant 16 expressed, “We are in this environment that if the government continues to take steps forward like this, it will benefit those of us who are mere people.” Migrants like Participant 16 expect the government to continue on its trajectory producing positive change; this assumed progress which would make complaints of the current state of the city redundant.

One study relays that it is through slow and incremental progress that urban environments are transformed and made livable, even if there is much progress left to be made (Truelove & Cornea, 2021). The same study, though, references cases of “urban-dwellers who must intervene on their own behalf to procure, make and re-make critical infrastructures of urban living in settlements that lack basic amenities” (Truelove & Cornea, 2021, p. 242). In the case of Mongla, this intervention is subdued. Migrants may also be withholding criticism because they are not comparing Mongla’s provision of services to what other cities may offer in terms of livability. As Ruszczyk et al. (2023) write, "On the one hand it is important to acknowledge that there are

likely many underlying factors contributing to residents' contentment with Mongla and Noapara which we might broadly term lack of exposure to other possibilities for urban living" (p. 10).

It is also ultimately the case that freshwater, regardless of seasonal scarcity, has historically been managed, even if it needs to be bought or hauled from afar. Livelihoods were not as secure in their places of origin, and it is in pursuance of income, that to some migrants has been more evasive than water, that they emphasize its importance for their quality of life. Water can be found, but work has to be given. It is necessary to recognize the weight that participants attribute to income opportunities while also steering attention to the city's glaring infrastructural limitations, such as water scarcity. These issues are linked. Rahman et al. (2024) summarize how infrastructure improvement strengthens labor opportunity, the primary pull factor of migrants: "Mongla's experience demonstrates how investments in protective infrastructure that address climatic vulnerabilities can enable significant economic growth and transform urban lives" (p. 26).

The construction of a CRMFT necessitates research, planning, and capacity-building – previous work has identified critical software (e.g. policy), hardware (e.g. affordable housing), and heartware (e.g. reflecting values) that can facilitate such construction (Khan et al., 2018). While the city has made significant improvements and provides employment opportunities, ongoing water scarcity demonstrates that further investment is critical in the resilience of Mongla. Beyond drinking water availability, there are other public services, such as affordable housing and medical care, that require attention (Rahman et al., 2024). During their interview, Friendship NGO expressed that some specialties are missing from the local medical clinic because retaining professionals in Mongla has been difficult: not many elect to live in a small town with water stress. It is critical that interventions are made within the health sector to fill this

gap. Only one participant, notable in that her *bari* is hundreds of kilometers away from Mongla, openly criticized the city's public health and sanitation standards (Participant 6). The potency of her criticism should not be diminished by the absence of criticism by other participants; this is not indicative that migrants at large are not also experiencing struggle. Friendship NGO also stated that the medical cases the clinic receives tend to be severe because people wait until their situation is unbearable to seek medical attention, due to financial constraints for both transit fare and cost of care. It is possible that Participant 6's perspective is supported by her outsider identity; regardless, she expressed a burden that is not well-captured by just the number of migrants.

As shown in the Results section, when Participant 3 was asked what could improve their quality of life, they responded with employment in the garment industry. When prompted with a follow-up question on whether they would need anything else, they responded, "Education of children will need to be provided, roads will need to be good, and a safe water supply will improve our standard of living." It is evident that in addition to healthcare and water supply, other services are also affecting migrants, but they prefer directing attention to labor opportunities. Labor was at the heart of the conversations because it is a primary pull and retention factor, but other concerns can surface if migrants are given further opportunity to express them.

Rana and Ilina (2021) highlight that when planning urban housing landscapes to ensure sufficient services, Sen's entitlement approach could be a lens to understand why climate migrants are "often sociopolitically differentiated and neglected in the cities" (p. 7). Whether the government considers safe housing to be owed to migrants is reflected in policy, and this study reflects to what extent migrants themselves believe it is owed to them. Five of the 11

flood-induced migrants, when asked what would improve their quality of life, stated better housing conditions, which none of the non-flood-induced migrants mentioned. Though, five non-flood-induced migrants reported water intrusion in their homes during the rainy season or having flood risk. When asked pointedly how their housing situation was, eight migrants total described poor conditions, but only three reported poor satisfaction with housing. Regarding water intrusion, one participant shared, "The condition of the house is not good. Water is falling in, we have no tin [roof], water is falling in from everywhere. For now, we are living with polythene. What can I do, where will I go with my children?" (Participant 20) When asked about satisfaction, he responded, "What can we do about satisfaction? We have no other way, no place to go. Apart from this, we have no other accommodations." This excerpt could explain why none of the non-flood-induced migrants initiated housing as a desired improvement despite expressing poor conditions/satisfaction: they have accepted the terms of their situation. Flood-induced migrants, however, are operating from a history of having their houses previously destroyed, which could be contributing to increased vocality regarding their housing condition. As is indicated by the testimonies of non-flood-induced migrants, though, a lack of open complaint does not indicate safe housing.

This set of findings is relevant for the construction of bottom-up research informing adaptation and resilience strategies. To ensure a just and equitable future for Mongla, housing and infrastructure plans will need to extend beyond surface measures of migrant experiences, as the true record of their situation was captured outside of direct questioning. Even pointed questions regarding satisfaction would be a misleading indicator as participant concerns may be excluded completely. This study demonstrates the strength of the semi-structured interview as a method for highlighting the obscured stressors migrants experience in Mongla. As

aforementioned, there are obscured struggles that go under-mentioned, such as healthcare, safe housing, and developed roads. It is water, though, that is actively affecting the majority of participants, for which they are not proportionately advocating for intervention. When asked whether they would suggest their co-villagers also migrate to Mongla, 11 of the 21 participants responded in relation either to labor availability in Mongla or to labor shortage in their place of origin. Only two participants decided to dissuade their co-villagers on the premise of poor water supply. One pleaded to their community, “I will say I am dying, I am dying. Don’t you die. Don't come to the river island. I will forbid you to come” (Participant 3).

4.2.3 An amendable stressor

Ruszczyk et al. (2023) highlight, “Whether planned as part of the ‘Migrant Friendly Cities’ campaign or occurring through capitalist urbanization, both cities [Mongla and Noapora] will continue to see an influx of migration from other parts of the country. Whether the urban infrastructural support in both cities can adequately support this influx seems unlikely without significant state or institutional intervention” (p. 9). As aforementioned, the national government has already intervened in Mongla to strengthen infrastructure, and more generally has provided support in vulnerable areas for livelihood training and housing. Mongla does not yet have specific adaptation plans aligning with these initiatives, but it does have other risk-informed adaptation programs and skill development opportunities (Khan et al., 2018). Moreover, a climate-forward master plan is currently in production, set to publish in the coming months, that is based on bottom-up approaches and participatory methods. However, in order to implement these strategies there will need to be funding available to the local government. When asked during his interview whether the city of Mongla intended to make changes in the near future regarding housing and water scarcity, the mayor stated the government already had plans

prepared for settlements and tanks but was waiting on sufficient funding. Small and intermediate cities are reliant on larger government bodies for a notable proportion of financial power. Subsequently, distributed responsibilities create multi-level governance charged with tasks like strengthening local adaptive capacity.

Rana and Ilina (2021) likewise emphasize the importance of understanding how migration impacts host cities, a critical factor in ensuring sustainable and resilient development; they write, "Most importantly, climate-induced rural to urban migration has appeared as an external burden to the urban authorities, and are creating huge challenges to good governance" (p. 6). When asked what the city provides to migrants specifically, the mayor said migrants receive what all residents receive. As aforementioned, though, those living in informal settlements are particularly vulnerable to the impacts of development and are at risk of displacement; these communities will require higher attention as Mongla continues to develop. Providing distinct resources for flood-induced migrants, in particular those who lost their assets to a flood event, would be the more equitable solution, as in the aforementioned housing complex Khurushkul Special Ashrayan Project. Mongla does have a housing complex that was made available to landless households, some of whom are migrants.

In terms of multi-level governance, strategy at the national level is critical for municipal success. The 2015 National Strategy on the Management of Disaster and Climate Induced Internal Displacement (NSMDCIID) highlighted disaster risk reduction and people-centric approaches, promoting the rights of vulnerable communities such as livelihood, health, and housing (Khan et al., 2021). Rana and Ilina (2021) emphasize that "urban policies in Bangladesh will require more focus on the secondary cities to balance or equally share the migration-induced vulnerabilities…it requires a multi-scalar framework for analyzing the climate-induced migration

problems and providing solutions as well" (p. 7). It is important to note that the most recent national plan indicates little to no progress being made for strategic action "Goal 3: Develop climate‑smart cities for an improved urban environment and well‑being" (Government of Bangladesh, 2023, p. 123).

Because planned relocation is not an adaptation strategy currently implemented by the national government, and according to the National Adaptation Plan, will not be until 2041, it is critical that municipalities are prepared to accommodate migrants (Government of Bangladesh, 2023). Whether the urban destinations chosen by migrants are resilient is a case-by-case question, as it is determined by factors like rate of population change, duration of migrant stay, and the coping capacities of receiving cities (Andrews, 2020). Answering this question has been difficult for the class of small cities, which are under-researched and under-resourced. It is more often the case that larger cities receive capacity-building subsidies (Hoppe et al., 2016). While Mongla indeed has received national aid, it is limited in building its resilience until it is allocated more funding. According to the 2023-2024 Climate Financing for Sustainable Development Budget Report, 45% of total climate-relevant allocation within the Local Government Division was dedicated to infrastructure (Ministry of Finance, Government of the People's Republic of Bangladesh, 2023). There is no mention of Mongla specifically in this budget report; more so, it is important to note that of the funded projects Climate-Resilient Rural Infrastructure Project, Climate-Resilience Project for Coastal Cities, and Integrated Sanitation Project in 25 Cities in Bangladesh, there is no mention of Mongla within the lists provided in publicly available documents. This is not to say Mongla will not be receiving sufficient funding, but rather to point out that it is not part of the coalition of cities receiving funding from these particular resilience-building projects.

The National Adaptation Plan lists intervention CRC4, "Development of city climate action plans for major urban and peri-urban areas emphasizing the resilience of urban-poor communities and climate migrants," with high priority, to be conducted over a short to medium timeframe, and allocated a budget of 4 billion Bangladesh taka (Government of Bangladesh, 2023, p. 99). However, the intervention within this document is too broad to scale ground-level change. Small coastal cities like Mongla without sufficient resources may be forced to prioritize immediate needs over long-term resilience projects (O'Donoghue et al., 2021). Small cities present certain advantages against their larger counterparts: specifically, they are often nested within economic and institutional structures of their region (Hoppe et al., 2016). In this study, though, 10 participants reported having no or infrequent employment in their place of origin, and only two reported not working in Mongla. In migrating, they were absorbed into an economic system they could not participate in before, given the lack of livelihood security in their villages. Amjad (2021) proposes the solution set of "planned migration, availability of work and social care services" (p. 273) to protect the urban poor from further marginalization.

Small cities also constitute almost half of low-income countries' urban land area, and sufficient planning is necessary to ensure resilient infrastructure, either resulting in crowding or unsustainable sprawl (Oginga Martins & Sharifi, 2022). For a city like Mongla that is being portrayed as a CRMFT, ensuring that the city's services properly accommodate migrants will be the only way to protect resident quality of life, as there are already concerns of eviction. This is due to informal settlements – some migrants are living on government land (*khas* in Bangla) to which they have no legal rights, and are at risk of being uprooted for projects like road development, as in the case of one participant: "A new road is being built here. For this new road I had to demolish the kitchen, toilet, and the house that was used to keep chickens. Now cooking

and all other activities have to be done in a very small space" (Participant 1). Another participant expresses a perpetual stress: "This place is a government place. I can spend my life here if the government doesn't deprive us. The fear is that even tomorrow the government can evict us" (Participant 3). It is also common practice for migrants to "sell" government land that they have been illegally residing on; one participant bought their space for thirty to forty thousand taka with only word of mouth (Participant 2).

Current housing pressure relates to a trade-off made by Mongla stakeholders decades ago: to accommodate a migrant resettlement, household drinking water ponds were filled to make room for more tenants. Not only has the housing pressure returned, but water scarcity has been amplified. The city's upcoming master plan will reveal how many and for whom future complexes are planned, and how water access will expand. Alam et al. (2018) calls for the combination of bottom-up approaches with top-down planning solutions in constructing secondary city climate resilience plans, which Mongla has done. After the master plan has been introduced, it is critical that Mongla maintains such participatory practices to promote long-term engagement between residents and planners, policymakers, and politicians. Ruszczyk et al. (2023) write the significance of such "ongoing stock-taking of liveability" to facilitate urban vitality (p. 10).

How Mongla manages to confront its crises will determine whether it can serve as a socially just haven (Rahman et al., 2024). Most participants are from villages that also suffered freshwater scarcity, but that does not exempt them from being affected. A critical observation from this study is that even if water is a leading response when asked about struggles in the city, there is a lack of migrant complaints regarding water when asked directly what could improve their quality of life, making it an obscured stressor. For Mongla to operate as a resilient receiving

city, it must consolidate not just the issues prevailing in the literature as concerns at large or even struggles expressed directly by migrants, but also indirectly expressed struggles, as in the case of water access. If Mongla successfully mitigates this crisis, which will require commitments at multiple scales of change, it will be an exemplary case for receiving cities in Bangladesh and beyond that are experiencing increasing climate stressors, most prominently water scarcity.

1. Conclusions

As an identified CRMFT in southwestern Bangladesh, the city of Mongla has claimed significant academic and media attention. Mongla has been framed as a better, safer alternative to Dhaka, but it is imperative that the city strengthens its infrastructure in various sectors to accommodate migrant resettlement. A key hurdle in the path towards climate resilience is freshwater scarcity, which is afflicting the region at large, but will need to be mitigated if Mongla is to be labeled a migrant haven.

Encouraging the establishment of new mechanisms for understanding resilience would serve not only Mongla and its migrants, but also the larger network of small cities trying to build climate resilience and accommodate migrant resettlement. While Mongla is dominating the scholarship regarding Bangladesh's construction of the CRMFT, BRAC has already identified over a dozen candidates, and strengthening their connectivity can increase Bangladesh's overall climate resilience. To further their adaptation initiatives, research has suggested small cities should construct a knowledge base, and build a network amongst each other to exchange knowledge (Häußler & Haupt, 2021). Local capacity building requires municipal action, inter-municipal network collaboration, and municipal capacity to activate citizen action (Hoppe et al., 2016). Creating a network of horizontal climate governance can be promoted on a national

level (Coulombe et al., 2021). A national network would be useful in its potential for collaboration between municipalities that are within geographic proximity, holding the same institutional context with a shared legal framework and culture (Oginga Martins & Sharifi, 2022). As aforementioned, within the National Adaptation Plan is the prescription for cities to construct their own resilience of climate action plans "emphasizing urban-poor communities and climate migrants," so exchanges and feedback on how cities plan on executing this goal will allow a more refined set of policies in protection of these communities (Government of Bangladesh, 2023, p. 99).

As a leading theme in interviews, it is necessary to highlight the significance of income opportunity in drawing and retaining migrants in Mongla. If the industries could offer longer-term forms of daily work, migrants would be less concerned with lit stove security, as their income would not be so closely tied with food access on a day-to-day time frame. While Mongla has proven its commitment to participatory methods of generating resilience, it is necessary to be more critical of obscured stressors, such as water, safe housing, and healthcare, that migrants may not actively be advocating for even if they are experiencing poor conditions. If the proper solutions go unimplemented, Mongla may fail to be the long-term haven it is hoped to be, subjecting migrants to further insufficient services they do not yet have the language to criticize.

To achieve safe and equitable living conditions for the migrants of Mongla, interventions will need to be made on local, state, and international levels. At the local level, community-based approaches should continue to be practiced, especially as the master plan launches. Mongla's water reservoirs are a prime example of how the community initiated a lasting resilience initiative. One case study of Mymensingh city found that hybridized governance structure, which

acts as a platform for encouraging participatory decision making, networking activities, and reflective learning from the local context, can support critical adaptive capacity development relative to megacities (Yasmin et al., 2023). Though, the authors also emphasize, “Critical elements are required to guide a change if the hybridized governance system is to continue. These include continued strategic and financial investment from the government and a transition of governance structure and policy approaches to develop the small-scale urban system” (Yasmin et al., 2023, p. 15). This study reveals how deliberate planners and researchers will have to be when engaging with the community to understand their concerns. Though water was a prominent hardship reported in the interviews, it was not reflected in the interventions participants desired. Likewise, concerns over infrastructure and services like roads and education are overshadowed by concerns of labor opportunity. It is necessary for Mongla and CRMFTs at large to push beyond surface level community engagement if they are to identify obscured stressors in migrant experiences.

Beyond Bangladesh, the case of a CRMFT can be applied globally to prepare for the rural-urban redistribution of populations. Transnational networks between Bangladesh and other countries adapting for climate migration can inspire more resilient urban futures (Oginga Martins & Sharifi, 2022). Though, it is important to note that local contexts are critical to understanding the specific environmental challenges faced by a given small town (Simon et al., 2021). While it is impossible for this research to be entirely comprehensive and generalizable, previous literature has promoted the importance of building a network of coastal towns and small cities (Lehmann et al., 2021). Learning from the situation in Mongla and the relevant research produced, municipal leaders globally can more proactively consider their local causes of climate displacement as well as the effects of migrant settlement (Rahman et al., 2024). As climate

change accelerates, the world is in increasing need of CRMFTs; to properly develop them will require engagement with migrant communities and an understanding of why they come, why they stay, and the stressors in their way.

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Appendices

Appendix A: Participant information

Participant Code	Categorization	Years in Mongla	Origin	Origin Distance from Mongla
Participant 1	Flood-induced	15+	Chila, South Kanmari	17 km
Participant 2	Non-flood-induced	0-5	Rayenda, Sarankhola	48 km
Participant 3	Non-flood-induced	0-5	Chandpai, Mithakhali	13 km
Participant 4	Non-flood-induced	0-5	Jeodhara Bazar, Morrelganj	26 km
Participant 5	Flood-induced	5-10	Kochubuniya, Morrelganj	25 km
Participant 6	Non-flood-induced	10-15	Noakhali	230 km
Participant 7	Non-flood-induced	0-5	Jeodhara Bazar, Morrelganj	26 km
Participant 8	Non-flood-induced	0-5	Jeodhara, Joy Bangla Bazar	26 km
Participant 9	Flood-induced	0-5	Jeodhara Bazar, Morrelganj	26 km
Participant 10	Flood-induced	10-15	Rayenda, Sarankhola	48 km
Participant 11	Flood-induced	10-15	Jessore	101 km (paternal bari 19km)
Participant 12	Non-flood-induced	0-5	N/A	N/A
Participant 13	Flood-induced	10-15	Bhola	155 km
Participant 14	Flood-induced	10-15	Morrelganj	43 km
Participant 15	Flood-induced	5-10	Morrelganj	43 km
Participant 16	Flood-induced	10-15	Morrelganj	43 km
Participant 17	Flood-induced	10-15	Barisal	116 km

Participant 18	Flood-induced	10-15	Rayenda, Sarankhola	48 km
Participant 19	Non-flood-induced	10-15	Kochubuniya, Morrelganj	25 km
Participant 20	Non-flood-induced	10-15	Morrelganj	43 km
Participant 21	Non-flood-induced	15+	Barisal	116 km

Appendix B: Interview protocol

Public officials

<u>সরকারী কর্মকর্তাদের জন্য প্রশ্নাবলীঃ</u>

1. Why do you think migrants are coming to Mongla?
    a. অভিবাসীরা কেন মংলায় আসতেছে বলে আপনি মনে করেন?
    b. What are the advantages of Mongla for migrants?
        i. অভিবাসীদের জন্য শহরে কী কী সুবিধা আছে?
2. What arrangements are available for migrants when they arrive?
    a. যখন অভিবাসীরা এইখানে আসে, তাদের জন্য কি ব্যবস্থা আছে?
3. What supports does the city have in place?
    a. তাদের জন্য কি শহরে কোন রকম সাহায্য আছে?
4. What challenges do you think migrants coming to Mongla face, and how does the government aim to address them?
    a. অভিবাসীরা মংলায় আসলে তারা কী কী সমস্যার সম্মুখীন হতে পারে বলে আপনি মনে করেন? আর সরকার কি ভাবে এই সমস্যা গুলো খুঁজে বের করছেন বা সমাধান করছে?
    b. What are your barriers to meeting migrant needs?
        i. আপনি/সরকার অভিবাসীদের সমস্যা সমাধান করার জন্য কি কি অসুবিধা সম্মুখীন হচ্ছেন?
5. What can other cities learn from Mongla about migrant resettlement?
    a. অভিবাসীদের পুনর্বাসন নিয়ে অন্য শহরগুলো মংলা থেকে কী শিখতে পারে?
6. How have migrants socially integrated into your city?
    a. শহরে অভিবাসীদের কিভাবে সামাজিক ভাবে অন্তর্ভুক্ত করা হয়েছে?
7. Is there anything else you'd like to tell us about Mongla’s migrant programs?

a. আপনি কি মংলায় অভিবাসীদেরকে নিয়ে কাজ করছেন এমন কোন কর্মপরিকল্পনা বিষয়ে বলতে পারবেন?

Migrants

<u>অভিবাসীদের জন্য প্রশ্নাবলীঃ</u>

1. What is your name?
    a. আপনার নাম কী?
2. Where is your country home?
    a. দেশের বাড়ি কোথায়?
3. How long ago did you come to Mongla?
    a. কত দিন আগে এসেছেন?
4. Why have you come to Mongla? Tell me a little about your life, how did you end up leaving your village?
    a. আপনি মংলায় কেন এসেছেন? আপনার জীবন সমদ্ধে আমাকে একটু বলেন, আপনার গ্রাম থেকে কি ভাবে আসলেন? কী হয়েছিল?
5. What do you remember most from your village?
    a. আপনার দেশের বাড়ি ছাড়ার পর সবচেয়ে বেশি কী মনে পড়ে?
6. Why did you ultimately choose Mongla? Why didn't you migrate to other cities?
    a. সবশেষে কোন বিষয়টার জন্য মংলায় অভিবাসন করলেন? আপনি কেন অন্য কোথায় অভিবাসন করলেন না?
7. Where did others from your village settle?
    a. আপনার গ্রাম থেকে বাকিরা কোথায় গিয়েছিলেন?
8. Did you know anyone else in Mongla when you arrived?

a. আপনি কি কাউকে চিনতেন/ জানতেন যখন আপনি মংলায় অভিবাসন করলেন?

9. Do you return to your village home?
    a. বাড়িতে যান মাঝে মাঝে?
10. What was your employment at home?
    a. আপনি নিজ বাড়িতে কী কাজ করতেন?
11. What is your employment here in Mongla?
    a. আপনি মংলায় কী কাজ করেন?
12. What is the biggest challenge you have faced in Mongla?
    a. আপনি যখন মংলায় অভিবাসন করলেন তখন কোন বিষয়টা আপনাকে সবচেয়ে বেশি কষ্ট বা অসুবিধায় মধ্যে ফেলেছে?
13. What resources in Mongla have eased your transition?
    a. মংলায় কি আছে যা আপনার আসাটা সহজ করেছে?
14. Are you finding enough services?
    a. আপনি কি যথেষ্ট পরিষেবা পাচ্ছেন?
15. Do you see yourself staying in Mongla long-term? Why?
    a. আপনি কি মনে করেন যে মংলায় দীর্ঘ সময়ের জন্য থাকতে পারবেন? কেন?
16. Do you feel safe here?
    a. মংলাকে কি নিরাপদ মনে করেন?
17. Do you feel like you have supportive neighbors?
    a. আপনার কি মনে হয় আপনার প্রতিবেশীরা আপনার সঙ্গে সহযোগিতা করেন?
18. Were you welcomed by locals?
    a. এইখানকার লোকাল মানুষরা কি আপনাদের সাদরে গ্রহণ করেছে?
19. How is your housing condition?

a. এখানে বাসস্থানের কেমন ব্যবস্থা?

20. Did you have any trouble finding housing when you came to Mongla?

a. বাসস্থান খুঁজে পেতে কি অসুবিধা হয়েছে?

21. Are you satisfied with your current living conditions?

a. আপনি কি এখনকার থাকার ব্যবস্থা নিয়ে সন্তুষ্ট?

22. Did you know of the water crisis before coming to Mongla?

a. মোংলায় আসার আগে পানির সংকটের ব্যাপার জানতেন?

23. What could improve your quality of life?

a. কোন বিষয় গুলো আপনার জীবনকে আরো উন্নত করতে পারবে বলে আপনি মনে করেন?

24. If someone else from your village wanted to come here, would you tell them to come?

a. অন্য কেউ যদি আপনার বাড়ি থেকে এখানে আসতে চায়, আসতে বলবেন?

25. Do you have any questions for me?

a. আপনি আর কিছু বলতে চান আমাকে?

NGOs

<u>এনজিও কর্মকর্তাদের জন্য প্রশ্নাবলীঃ</u>

1. Why do you think migrants are coming here?
    a. অভিবাসীরা কেন মংলায় আসছে বলে আপনি কী মনে হয়?
2. What gaps are NGOs filling for the migrants?
    a. এনজিওগুলো অভিবাসীদের কি কি সমস্যা গুলো নিয়ে কাজ করছে?
3. What challenges do you think migrants coming to Mongla face, and how does the government aim to address them?

a. অভিবাসীরা মংলায় আসলে তারা কী কী সমস্যার সম্মুখীন হতে পারে বলে আপনি মনে করেন? আর সরকার কি ভাবে এই সমস্যা গুলো খুঁজে বের করছেন বা সমাধান করছে?

4. What are the NGOs' barriers to meeting migrant needs?
    a. এনজিওগুলো অভিবাসীদের সমস্যা সমাধান করার জন্য কি কি অসুবিধা সম্মুখীন হচ্ছে?
5. Is there anything else you'd like to tell us about Mongla's migrant programs?
    a. আপনি কি মংলায় অভিবাসীদেরকে নিয়ে কাজ করছেন এমন কোন কর্মপরিকল্পনা বিষয়ে বলতে পারবেন?