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Gender, environment and migration in Bangladesh

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ABSTRACT

This article addresses how gender norms impact the process of migration, and what this means for the use of migration as an adaptation strategy to cope with environmental stressors. Data was collected through qualitative fieldwork, taking the form of semi-structured and open-ended interviews and focus group discussions from a Dhaka slum and three villages in Southern Bangladesh's Bhola district. Our data revealed that women migrate when environmental stress threatens livelihoods and leave male household members unable to earn enough income for their families. Employing an analytical framework that focuses on the perceptions of individuals, this article shows how gender norms create social costs for women who migrate. Women thus have ambivalent feelings about migration. On the one hand, they do not wish to migrate, taking on a double work load, forsaking their purdah, and facing the stigma that follows. On the other hand, women see migration as a means to help their families, and live a better life. While social costs negatively affect the utilization and efficiency of female migration as an adaptation strategy to environmental stressors, it becomes clear that female migration is imperative to sustain livelihoods within the Bhola community.

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Gender; environment;
climate change; migration;
adaptation

1. Introduction

The rising acknowledgment of negative consequences of climate change (IPCC, 2014; Warner, Van der Geest, & Kreft, 2013), has led to an increased interest in the relationship between human migration and the environment. Within this expanding academic field, migration is increasingly perceived as a potential adaptation strategy to more intense and frequent environmental stressors (Black, Bennett, Thomas, & Beddington, 2011; Tacoli, 2009). Among factors that shape migration patterns and experiences, gender roles are 'perhaps one of, if not the single most important factor shaping the migratory experience' (IOM, 2009).

The study tries to answer the following question: *How does gender influence the process of migration, and the utilization and efficiency of migration as an adaptation strategy to environmental stressors?*

The article employs an analytical framework which focuses on how individuals perceive different adaptation alternatives when environmental stressors threaten their livelihood. It explores how gender norms influence the perceptions of different options, and what alternative is ultimately chosen. Based on evidence from a local case study in Bangladesh the article shows that, like men, women also migrate when environmental stressors impoverish the livelihoods of their households. While female migration is an important source of income for households vulnerable to the negative effects of environmental stressors, perceptions of appropriate gender roles negatively affect opportunities and outcomes of female migration.

The article is structured in the following way. The first part investigates how women have been portrayed in the migration

literature over time; how migration is increasingly seen as an adaptation to environmental stressors; and the role of social and gender norms in people's adaptation choices. The second part reports on empirical fieldwork conducted in Bangladesh. In the last part of the paper findings are discussed and the conclusion is presented.

2. Literature review

2.1. Female migration

In migration literature, female migrants were long portrayed as largely passive, migrating for the purpose of marriage or family reunification. Research conducted from the 1970s onwards challenged this narrative, and pushed for the inclusion of women as active agents in migration research (see for example, Chant, 1992; Curran, Shafer, Donato, & Garip, 2006; Pedraza, 1991). Literature increasingly recognizes that women migrate for many reasons, of which marriage is only one. It has furthermore been shown that more women migrate independently, and that migration for work is on the increase, both across and within borders (Deshingkar, 2005; Gosh, 2009, p. 8; Martin, 2003, p. 4; Tacoli & Mabala, 2010).

Literature on women moving independently, moving without the rest of their household members, in South-Asia is sparse. Also, migration statistics in this region tend to be of poor quality, and may misrepresent actual female migration flows (Zlotnik, 2003). Despite this dearth of quantitative data, there has been an emergence of studies focusing on internal female labour migration in South-Asia (Deshingkar, 2005; IOM, 2009; Mazumdar & Agnihotri, 2014; Sundari, 2005),

showing that: ‘autonomous migration by women for employment (...) is a phenomenon that can no longer be ignored’ (Mazumdar & Agnihotri, 2014, p. 146). In the case of Bangladesh, several studies show a substantial increase in female migration from rural to urban areas for wage work (Afsar, 2002; Huq-Hussain, 1995; Kabeer, 1991).

Although first mentioned in the 1970s, the field of environmental migration only developed as a distinct research topic in the early 2000s (Renaud, Bogardi, Dun, & Warner, 2007, p. 11). Given its youth and cross-disciplinary dynamics, it cannot be expected that all topics related to the broad academic umbrella of environmental migration have yet been covered. It is, however, clear that the concept of actively migrating women, women migrating independently or otherwise taking an active part in the migration process, has thus far been largely ignored within environmental migration literature.

2.2. Gendered vulnerability and environmental migration

In view of the renewed interest in the relationship between environment and migration (Hunter, 2005; Piguet, 2013), it is surprising that the potential linkage between female migration and environmental stressors has not been explored to a larger degree (Chindarkar, 2012, p. 2). This missing link is especially prominent in the context of South-Asia, an area highly prone to climate change and environmental stress – factors expected to significantly increase human mobility over the next decades.

A partial explanation for the lack of focus on women in environmental migration studies can be found in disaster and hazard literature where the vulnerability of women is compared to that of men with disheartening results (see for example Cannon, 2002). Such studies have established that women are more vulnerable to environmental stress because of their subordinate status at home and in society (Ahmed & Fabjer, 2009; Björnberg & Hansson, 2013; Fothergill, 1996; Ikeda, 1995; Nelson, Meadows, Cannon, Morton, & Martin, 2002). Disproportionate vulnerability of women is prominent in South-Asia (Cannon, 2002), ultimately leading to higher mortality rates for women in disaster situations. Although of crucial importance, this focus on vulnerability can lead to victimization of women. It risks causing a blindness to the potential of female agency, failing to capture the whole story (Jolly & Reeves, 2005, p. 2; Pedraza, 1991, p. 304). In line with the narrative of passive women, gendered migration research concerning climate change impacts has thus far focused on situations where the husband migrates and the wife stays behind, leaving her to face increased hardships because of the absence of a male guardian. There are therefore few studies on women *as* migrants (Boyd & Grieco, 2003).

There seems to be a growing awareness of this gap, and other studies have now been conducted focusing on independently migrating women in contexts of environmental stress. Jungehülsing (2010) shows that, although more vulnerable because of societal disadvantages, Mexican women migrate in search of work when environmental stress negatively affect the economy of their home community. Similarly, Tacoli and Mabala (2010) show how young women are using migration as a tool to diversify their livelihoods in Mali, Nigeria, Tanzania, and Vietnam. The authors find that independent migration

is on the increase among young women in response to a shortage of land in their home communities combined with increased income opportunities in urban areas due to gendered labour markets. Sundari (2005) has noted the same trend of increasing numbers of young women migrating internally in India. She explains this by citing the recurring drought in the sending areas coupled with the creation of new income opportunities in export-oriented industries in urban areas.

If women migrate for environmental reasons more information is needed on the circumstances under which they do so. Failure to acknowledge this group of environmental migrants may cause the research community to miss the full array of adaptive measures undertaken. In view of female vulnerabilities highlighted in disaster literature, it can be expected that female migrants face different and perhaps greater challenges than men throughout the migration process. Thus, a better understanding of the ability of women to use migration as an adaptation strategy, in comparison to men, is needed (Jungehülsing, 2010, p. 20).

2.3. Migration as adaptation

Environmental migration has increasingly been perceived as something to be supported and facilitated for improved adaptation, rather than as a failure to adapt to environmental stress (Tacoli, 2009). This view builds on the argument that people who are able to move can diversify their livelihoods, as migration provides opportunities for alternative income sources (Black et al., 2011; Foresight, 2011, p. 21; see also Martin et al., 2014).

To investigate when and how migration can function as an *adaptation strategy* to environmental stressors, it is important to distinguish forced and voluntary migration. Walsham argues that: ‘If migration is both *planned and voluntary*, it can provide a social safety net for loss of income’ (Walsham, 2010, p. 7, my italics). By contrast, when migration is forced, it tends to undermine livelihood security and worsen the situation for migrants and their relatives at home (Van der Geest & Warner, 2015). These criteria – planning and choice – can be used to evaluate when migration is useful as an adaptation strategy.

To better understand the circumstances under which migration can function as an adaptation strategy, two aspects of migration patterns in societies prone to environmental stress need to be investigated: namely, drivers of migration as well as constraints to undertake such action. The Foresight report on migration and global environmental change identifies five different but interrelated drivers for migration: economic, social, political, demographic, and environmental (Foresight, 2011, p. 46).

A key point made in the Foresight report is that the environment can function both as an independent driver while also reinforcing the effect of other drivers of migration. Thus, to understand environmental migration, one should not only look for the visible environmental drivers, but investigate how these interact with and affect other drivers of migration already prominent in the community in question, as ‘substantial social, economic and human capital may be required to enable people to migrate’ (Foresight, 2011, p. 12).

In view of this argument, also constraints are important factors determining migration. Adaptation constraints are defined by the International Panel for Change (IPCC), as ‘factors that

make it harder to plan and implement adaptation actions' (Klein et al., 2014, p. 907). Ultimately, constraints can cause people to be 'trapped', when they 'need to move for their own protection but...lack the ability' (Black & Collyer, 2014). Constraints to adaptation has often been categorized as ecological, physical, economic or technologic (Adger et al., 2009, p. 337). Challenging this view, both Adger with others (2007) and Jones and Boyd (2011) have used the term 'social barriers to adaptation' to describe how also norms and values may cause people to decide against what can be objectively viewed as the most optimal action for adaptation.

Social and cultural norms colour how potential migrants perceive their different options by discerning what is appropriate behaviour. In accordance with what is perceived as appropriate, different alternatives for actions will lead to differently valued outcomes. Consequently, the perception of different options influence what decisions are made and what actions are carried out (or not) (Martin et al., 2014).

Gender, the social construct that guides what is appropriate behaviour for men and women respectively (IOM, 2009, p. 10), is often highlighted as a factor expected to greatly influence an individual's migration behaviour. Understanding gender as a subjective process, where expectations of appropriate behaviour for men and women are internalized and then acted out in interaction with others, gender can be expected to influence which actions are perceived as more or less desirable, and subsequently what is seen as normatively and practically possible (Adger et al., 2009; Jones & Boyd, 2011; Kabeer, 1991).

3. Analytical framework

The concept of social barriers to adaptation is useful for investigating how gender roles can work as a constraint on female adaptation. However, we sought an analytical framework that also includes the possibility of individual agency and allows

for investigating how an individual negotiates both opportunities and constraints. The analytical framework of Grothmann and Patt (2005) is useful for this purpose. It considers which opportunities are perceived to be accessible and how desirable these opportunities are.

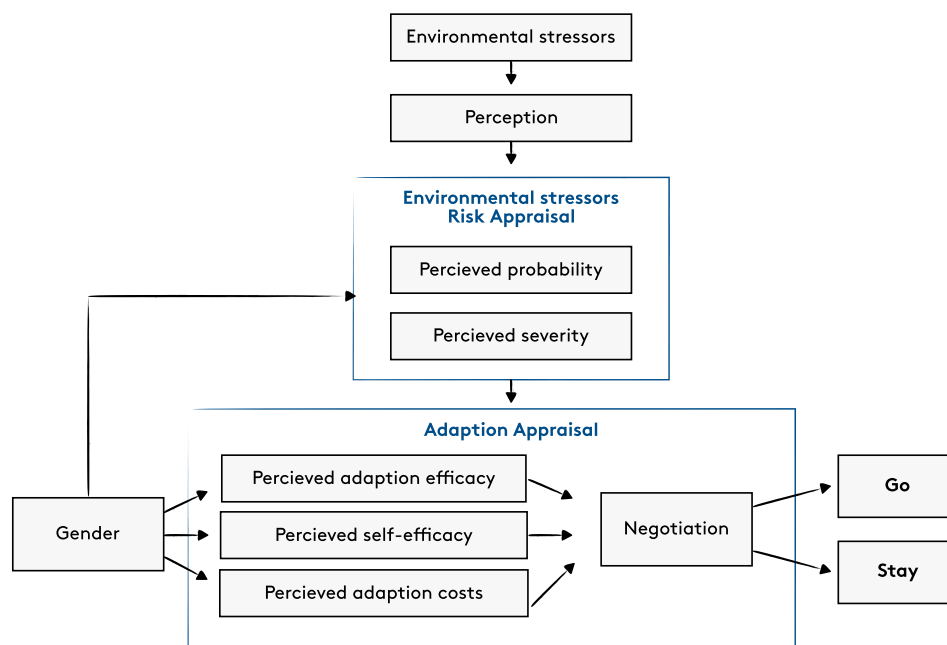
Grothmann and Patt divide the decision-making of adaptation choices into two phases (2005, pp. 200–203). First, a 'risk appraisal' is carried out, where the individual evaluates the probability of a threat and how harmful the potential consequences of this threat are. Next, if the threat is perceived to be both likely and grave an 'adaptation appraisal' is carried out, where the individual evaluates his or her own capacity to act upon the perceived risk. The adaptation appraisal is divided into three subcomponents: (1) how efficient the adaptive actions are thought to be, (2) whether the individual perceives the action as possible for him or her to carry out, and (3) the anticipated costs associated with this action. These three components form the perceived adaptive capacity of the individual. The authors stress that cognitive processes – how individuals perceive the world around them – may be as important as material resources in influencing decision outcomes:

(...) if agents systematically underestimate their own ability to adapt, this qualifies as a more important 'bottleneck' for adaptation than the objective physical, institutional or economic constraints. (Grothmann & Patt, 2005, p. 203).

Altering Grothman and Patt's model to include gender as influencing people's perception of alternative options, as shown in Figure 1, it can help shed light on how gendered norms and values in a community affect who migrates and why.

4. Methods

Given the study's explorative nature and the need for an in-depth understanding of the actors' motivations to comprehend the effects of gender on migration patterns, a case study, using



Adapted from Grothmann and Patt, 2005

Figure 1. Analytical framework.

Table 1. Interviews and focus group discussions.

Study site	Gender	Interviewees	Focus groups
Bhola Island	Female	4	2
	Male	2	1
Bhola Bustee	Female	13	0
	Male	7	1

qualitative tools, was deemed appropriate to answer the research question of this study (Gerring, 2004; Yin, 1994, p. 13).

Prior to the actual fieldwork, six interviews with academic specialists on gender, climate change and development were conducted. Insights from these interviews were used to design the research tools. During the fieldwork, semi-structured and open-ended interviews were conducted with 9 male and 17 female respondents in the Bhola bustee and the Bhola district. In addition, we conducted four focus group discussions, two with men and two with women. See Table 1 for overview. Interviews with key informants, including local leaders, non-governmental organizations, and local government officials, were conducted in all stages of the research process. See Annex A for full list of respondents.

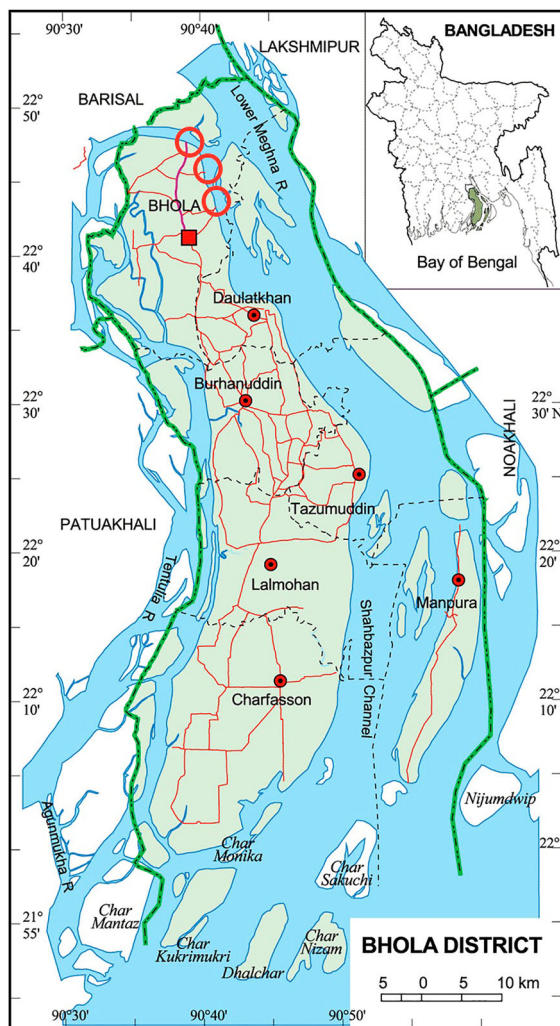
Bangladesh was chosen as a case in view of three of the country's characteristics. First, migration is already an important

means of income-diversification (Afsar, 2003; McNamara, Olson, & Rahman, 2016; Siddiqui, 2003). Second, Bangladesh has been listed the fifth country most at risk from disasters, the risk index comprising exposure to natural hazards and the vulnerabilities of the society (Mucke, 2014, p. 9). Having negative consequences of climate change threatening their livelihoods, a great number of Bangladeshis face a need to migrate. However, many lack the capacity to do so. Third, Bangladesh is a country where deep gender inequalities persist (Amin, 1997, p. 213; Kabeer, Mahmud, & Tasneen, 2011, p. 7). Gender roles in Bangladesh are heavily influenced by the cultural practice of purdah, which can be understood as 'the broader set of norms and structures that set standards of female morality' (Amin, 1997, p. 213). Excluded from the public, the home naturally becomes women's domain and affects the division of labour among household members. Men are required to provide for the family by generating income outside of the home, while women are obliged to take care of domestic tasks (Kabeer et al., 2011, p. 7). It is assumed that the effect of gender on migration is stronger where gender inequalities are greater. In view of the strength of purdah, Bangladesh is a country where one can expect to see strong effects of gender on migration behaviour.

A high number of migrating women take up work in the garments sector. Therefore, the first part of the fieldwork was conducted in the capital, Dhaka, where the majority of garment factories are located. Although many migrants settle elsewhere, a significant number of poor migrants settle in the slums in and around cities (Walsham, 2010, p. 15). Furthermore, because of their low income, many garment workers are slum dwellers. The smaller geographical areas that slums occupy aided in identifying female migrants. The Bhola bustee (bangla word for informal settlement or slum) particularly stood out. The overwhelming majority of its inhabitants are from the Bhola district in coastal Bangladesh, which is highly exposed to environmental stressors (McNamara et al., 2016). People have been moving to Dhaka from the Bhola district since the 1971 cyclone, establishing a migration pattern between the two locations. Furthermore, the slum is located in the Mirpur area of Dhaka, where numerous garment factories are located.

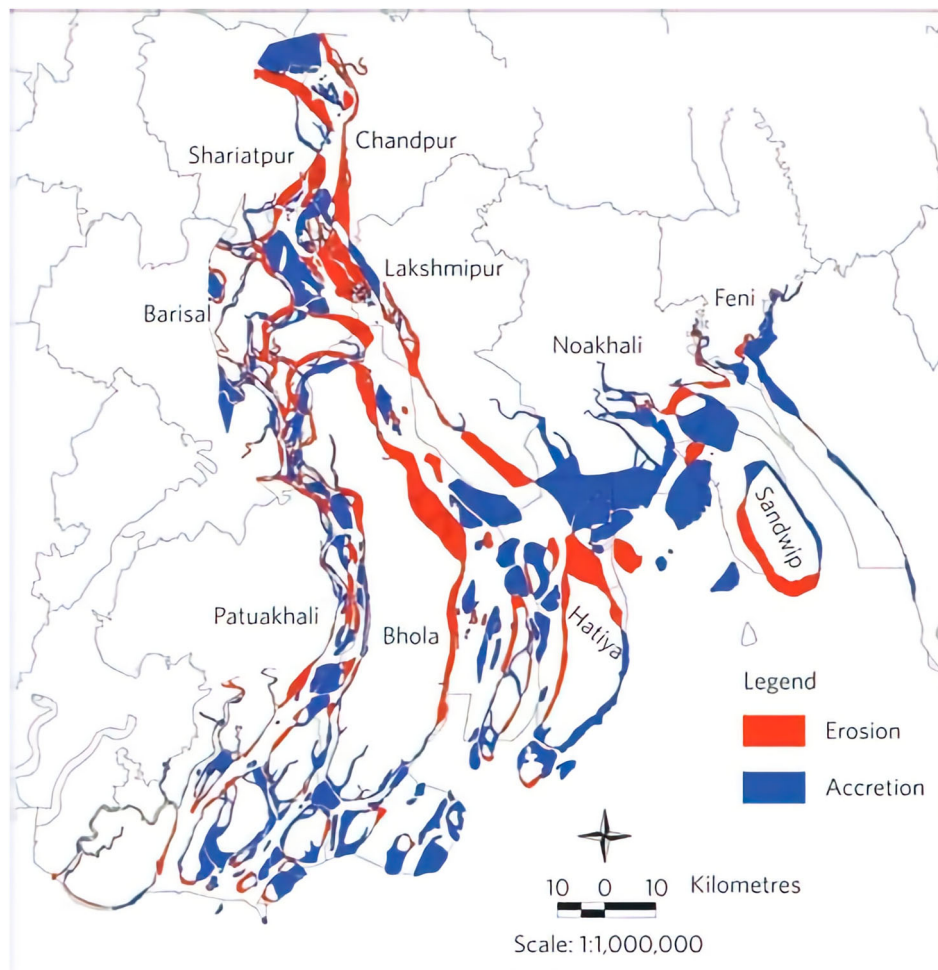
Next, fieldwork was carried out in sending communities in Bhola island to get a better sense of this community's attitude toward migration in general and perceptions of male and female migrants in particular. Open-ended interviews and focus group discussions were conducted in Ilisha Union Parishad, Dhania Union Parishad, and Syeddpur Union Parishad in the Bhola district, as indicated by the red (opened) circles in Figure 2. The study sites were selected from the hazard map displayed in Figure 3, showing riverbank erosion across the Bhola district between 1973 and 2005 (Sarker & CEGIS in Inmam, 2009).

Lack of quantitative data limits the scope of this study. The Bangladesh population census does not have detailed data about environmental migration disaggregated by sex. Such data would have been useful for a quantitative analysis of patterns and historical trends in female migration from environmental hotspots like the Bhola district. While additional quantitative data collection could have benefited the results of this study, limited time and resources did not allow for such data gathering.



Source: www.bdmaps.blogspot.com

Figure 2. Field sites in the Bhola district.



Source: Sarker & CEGIS in Inmam, 2009

Figure 3. Hazard map showing riverbank erosion.

5. Findings

5.1. Sending and receiving communities

Situated in the Bay of Bengal, the coastal Bhola district is exposed to the activity of two rivers, as well as to tidal changes and cyclones from the ocean. Of the many environmental stressors affecting the area, river bank erosion was identified by an overwhelming majority of the respondents as the main environmental stressor influencing their decision to move.

The main occupations in the Bhola district are fishing and farming (Arzu, Mayors office Bhola zila, personal communication, September 21, 2014). Fishermen represent the poorest strata of society in the district, and live close to the river where land is cheap. Poor fishing families are most affected by river bank erosion, lacking resources to move further inland. The Meghna River strips soil from the island's eastern bank and, in the process, destroys farmland and displaces families. The loss of farmland pushes farmers into fishing, an occupation with which they have little experience.

Several respondents also complained that there is 'less fish in the river', causing food insecurity large parts of the year. As fish is a fundamental natural resource to these households' livelihoods, declining fish stocks further increases the need for alternative income strategies in the district. For women in the Bhola district, no real income opportunities are available.

In response to the decrease in natural resources, many see migration as the only way to find new income sources. People move to the larger cities like Chittagong and Dhaka to work as day labourers, in the garments, or as domestic workers, depending on their gender, age, and social networks.

Dhaka, the capital of Bangladesh, is swelling beyond its capacity, which affects available income opportunities, as well as living conditions (McNamara et al., 2016, p. 2). Furthermore, many low-lying cities are vulnerable to environmental stressors, and Dhaka is no exception (Adamo, 2010, p. 162; Simon, 2010; Adri & Simon, 2018). Consequently, many migrants find themselves in a situation where they leave one set of problems behind for a new set of vulnerabilities in the destination area (Ayeb-Karlsson, Van der Geest, Ahmed, Huq, & Warner, 2016; Foresight, 2011; McNamara et al., 2016). In the Bhola slum, threats of eviction, fires, and flooding constitute constant stress for the slum-dwellers. Yet, for many rural poor, Dhaka is viewed as an opportunity for alternative income sources and a better life.

5.2. Women as migrants

In the Bhola district, when asked about female migration, every villager knew someone who had moved, often responding 'yes, a lot, a lot'. Somewhat surprisingly, in several conversations with villagers in Bhola, it was reported that almost equal

numbers of women and men migrate. Thus, we could establish an existing trend of female migration from the Bhola district.

In the receiving community in the Bhola slum in Dhaka, we identified three categories of migrating women: (1) women who had migrated with their husbands, (2) women who were the head of their households, typically divorced or widowed, and (3) young unmarried women who had migrated alone to provide for themselves and their families back in the village.

The agency exercised – by all three categories of migrating women – was a surprising finding. In view of the norm that women need approval from their male guardians before leaving the home, it was expected that female migrants would in some way or other have been ‘sent’ by their families. This assumption did not hold. With only a few exceptions, the female respondents took the initiative and convinced skeptical family members to allow them to leave, or to migrate with them. 17-year-old Anika explained: ‘I told them a lot of things to make them understand’ (Bhola slum, 29.08.2014).

Women migrating independently are mostly younger, unmarried women. This is not surprising, and is found also in other studies, which show how married women are the least likely to migrate (Afsar, 1994; Jungehülsing, 2010; Massey, Fischer, & Capoferro, 2006). (Afsar, 1994; Jungehülsing, 2010; Massey et al., 2006). Household responsibilities, and especially the obligation to take care of the children, make it difficult for married women to leave their household behind. Leaving her children behind, a woman would be deemed a ‘bad mother’. Several female participants of whom had migrated without their children, before returning to their village, expressed guilt in this regard (Bhola district, focus group discussion, 26.09.2014). Alam, a male villager, explained: ‘basically nobody leaves their children behind here. If they move to Dhaka they all go along’ (Alam, Bhola district, 29.09.2014).

An important lesson taken away from the fieldwork is that agency should not be ascribed only to independently migrating women, however. Although less visible, married women also exercise strong agency in the migration process. For example, the initiative to migrate is often taken by the wife. This was confirmed by a substantial share of the male respondents, who explained how it had been a female household member – mothers, sisters, and wives – who had first suggested that the household should migrate. After arriving in Dhaka with their household, married women also take up wage-work alongside their husbands. Nahar, wife and mother, recalled:

I said, (...) ‘I am going to go to Dhaka so I can feed my kids. (...) I will go to work myself so we can eat.’ I said that and made him understand, and we came [to Dhaka] (Bhola slum, 04.09.2014).

5.3. Gendered opportunities

An interesting characteristic of the Mirpur area in Dhaka where the Bhola slum is located is that the labour market is segregated by gender in a way that allows for a more stable income for women than for men.

Women in the Bhola slum are mostly occupied either as housemaids or garment workers. While the income of housemaids is also of importance, it is the presence of numerous garment factories that explains the favourable working

opportunities for women in this area, as the wages are significantly higher in the garments sector than in traditional household work.

The garment factories do not exclusively employ women, but prefer to do so. In the past, more men also worked in these factories, but this has changed due to harder competition in the labour market (Evertsen, 2015, pp. 61–63). As a result, many men that used to work in the garments sector in Mirpur have now lost their jobs. Slum-dwellers explained that employers prefer to hire women because they are easier to control. Women will not complain over bad working conditions or low salaries Rafiq explained: ‘[The employers] know women will not come forward to ask them for money. But the men will. That’s why they work with the women’ (Bhola slum, 01.09.2014).

Most of the male slum-dwellers work as day labourers, taking odd jobs wherever and whenever available. Typical work includes rickshaw pulling, cutting soil, construction work, garbage management, painting, and carpeting. Strong competition over few jobs only allows men to find work between 10 and 15 days a month, the slum-dweller Alam explained (Bhola slum, 01.09.2014).

The fact that the garment factories prefer to employ women over men has two contrary effects. Women’s subjugation is the main reason why they are the preferred workers, and their employment contributes to a reinforcement of this subjugation as women are often underpaid and mistreated in their workplace (Afsar, 2002, p. 106; HRW, 2015). At the same time, the gendered segregation of the labour market in Mirpur results in women often having a more stable income than men within the slum community. Men’s salaries are higher per hour, but they tend to work less hours. Consequently, female income is of high importance to households in the Bhola slum.

This reliance on female income finds itself in striking disagreement with socially accepted gender norms in Bangladesh. Nevertheless, facing lack of income opportunities in the Bhola district, the garments industry creates an economic pull factor for women to migrate, implying that women perceive migration as an efficient way to cope with the risk that environmental stressors pose to livelihoods.

5.4. Social costs

There seems to be a consensus among researchers and development organizations that a job in the garments sector has a higher status in society than jobs previously available to women in Bangladesh, which has typically been domestic work (Banks, 2013; Jansen, personal communication, February 28, 2015; Nasreen, personal communication, August 7, 2014). Domestic work has been regarded as unsafe for the women in question, often bearing the stigma of sexual harassment. To be a housemaid has furthermore never received the status of a ‘real job’, as household tasks are already the responsibility of women. Work in the garments sector is perceived as safer than domestic work, making households more willing to give female members permission to work.

However, this study finds that women working in the garments sector are also highly stigmatized, in some ways even more so than more traditional domestic workers. A recurrent

explanation of why the garments sector is not suitable for women was that it will make them 'go bad'. Investigating what was meant by 'bad', it became evident that the negative stigma attached to 'city girls' is linked to the perception of them violating their purdah.

In view of the stronghold of purdah, the idea of working women is contested in Bangladesh. While garment work is perceived as a 'real job' in a workplace where men also work, the fact that women and men work together is also the crux of the problem with regard to female reputation, as it breaks the physical segregation of women and men. This will lead female garment workers to be viewed with suspicion, their behaviour closely scrutinized. Respondents expressed concern that women working long hours outside the home will not have time to properly do their prayers, or be able to fully cover their bodies when doing physical labour work, both seen as important elements of upholding purdah. Not being able to cover properly will lead to increased attention by male coworkers, leading to accusation of the women being immoral and 'loose'. The accusations of women working in garments differ from the stigma associated with domestic workers, who are still confined within the walls of the home and are largely portrayed as victims rather than active violators of the purdah regime.

To be perceived as a 'bad' woman has high social costs, both for the woman in question, and for her family members. One such consequence is the unmarried women's decreasing value on the marriage market. Saving for one's own dowry is a common rationale for young women to migrate to Dhaka. However, the price of dowry is closely linked to reputation. The stigma associated with being a 'city girl' increases the amount of dowry to be paid to the groom's family for acceptance of the marriage. This requires them to stay in Dhaka for a prolonged period of time, potentially further increasing their dowry as this also rises with age (Huda, 2006, p. 255).

Importantly, purdah is not a concept that only involves women. It is a relational social construct regulating specific responsibilities and appropriate behaviour for both men and women. When a woman takes up wage work it indicates that her male guardian has failed both to provide for her and to protect her, signaling that he has failed to fulfil his responsibilities as a man. Tasfiq explained: 'I obviously felt bad that [my sister] had to work' (Bhola slum, 14.09.2014). Male honour thus creates a substantial constraining factor for women who wish to enter the labour force.

Because taking care of home and children are at the core of female responsibilities, male household members will often require an assurance that wage work will not compromise such tasks before permitting their women to earn a wage. 'I told her that if she can manage to work, then she should,' one male slum-dweller recalled (Reaj, Bhola slum, 15.09.2014). A problem mothers faced, was that only a few factories offer childcare services. Several female respondents explained that they worried for their children while at work, leaving them home alone or with neighbours: 'I leave my son home alone [...] I feel anxious. If he is ill, I can't be near him, that's what I feel bad about' (Ayela, Bhola slum, 05.09.2014). Having the responsibilities for home and children, going to work, and facing social stigma when doing so, women in the Bhola slum face a triple burden.

It becomes clear that it is important for working migrant women – as well as for their household members – to uphold a positive reputation to the extent possible. Such efforts conceal actual conditions and hardships of the migrants, with the potential consequence of further deepening the costs that migration entails. When asked about her visits to her home village Anika, a young garment worker in Dhaka shrugged: 'I can't say it's not nice, so I said it's nice' (Bhola slum, 29.08.2014).

We asked migrants what they had expected to earn before coming to Dhaka. Respondents often answered a number four times higher than their actual salary. This high number was also reported by villagers when asked what people in Dhaka earn. One consequence of such misinformation is that migrants see the need to stay in Dhaka longer than planned. Several respondents explained that they wanted to save enough money to buy a new plot of land in the village, having lost land and home to river bank erosion. Because they earned less than anticipated, they were unable to return as planned. This was true for both male and female respondents. However, as women face larger social – and subsequent economic – costs when migrating, the consequences of such misinformation may be correspondingly more severe.

5.5. Justification

The male stigma associated with female migration leaves the initiative to migrate for wage work with the women in question, simply because men will not ask their women to work. In view of negative social stigma and subsequent economic loss attached to female migration, we wanted to explore how migration nevertheless becomes a normatively justifiable option for women in the Bhola district.

It became clear from conversations with female migrants that they put the blame of the violation of their purdah upon their male household members, who, by failing to provide for them, forced women to take up wage work. The female respondents perceived their purdah as valuable, being closely linked to their identity and honour. At the same time, blaming men for the violation of purdah also functioned as a justification for women to step out of the home, as their men left them with few other options. Using hardship to justify their actions, these women seemed to have found a pragmatic balance between the norms of purdah and the reality of their situation:

Staying under purdah is very good, but you can't sit back and only think about purdah and not do anything. (...) So you have to maintain Allah's rules and also have to lead your life (Jameela, Bhola district, focus group discussion, 27–28.09, 2014).

Similar to the reasoning behind men's responsibilities toward women, female migrants often justified their actions by referring to their responsibilities towards parents, younger siblings, or children. Anika, a young garment worker, explained how she worked so she could stand with her 'head held high' (Bhola slum, 29.09.2014), justifying her working outdoors by emphasizing the importance of supporting her younger siblings.

5.6. Resistance

While some women find justifications that allow them to migrate, such rationalizations are challenged by women who

have not migrated. During the focus group discussion in Bhola with women not connected to the garments sector, a striking level of anger was expressed toward migrating women. One respondent burst out: 'We hate the garments!' (Bhola district, focus group discussion, 28–29.09.2014). The other respondents expressed strong-felt agreement. The group associated clear negative characteristics with women migrating for wage work. They explained how such women are 'greedy', thinking about themselves rather than their families' reputation.

This anger may have two different but interrelated explanations. First, the inappropriate behaviour of migrating women may feel like an attack on the self-respect of those who stayed behind. An alternative explanation is that women remaining in Bhola envy the women who migrate for taking such an opportunity when they are themselves equally distressed. Still, they did not reach the same conclusion as the women who chose to migrate. Rather, their rationale seemed to be that it is their responsibility as women to keep the household together, no matter the situation. If a woman migrates, it symbolizes a breakdown of the household: 'Women are responsible for maintaining the family with husband's little income' (Bhola district, focus group discussion, 27–28.09.2014), it was explained.

An apparent question is what differences exist between migrating and non-migrating women that can explain their contrasting decisions. One such difference may be educational level. While we asked respondents about their educational background, most respondents were migrants, which gives us little basis for comparison with non-migrants. Earlier research has shown that people who migrate due to loss of livelihoods are generally worse off and have less education than people migrating for other reasons (Adri & Simons, 2018, p. 326). The Bhola district is poor, and most respondents only had a few years of schooling. It is therefore not certain that migrating women have more education than non-migrating women. This would be an interesting point for further research.

6. Discussion

6.1. Risk and adaptation appraisals

According to the model for cultural perceptions laid out in section 3, an individual will carry out a 'risk-appraisal', evaluating the likelihood and magnitude of a threat, before evaluating potential routes for adaptation. For women in the Bhola district, the alternative adaptation routes identified in response to river bank erosion are to move further inland or to migrate for wage work. In line with Grothman and Patt's model, it seems that women only consider migration as a real alternative when they perceive it a high probability that their male guardian will not be able to provide for the household and that this will have serious consequences. When women identify the need to provide for their household, some will migrate in spite of social and cultural norms discouraging them from doing so. As Nahar, mother of four, simply said: 'My husband working alone can't do it' (Bhola slum, 04.09.2014).

Female migration as a response to lack of male income should not be understood as an automatic process, however. As showed by Grothman and Patt, the existence of a high

risk with grave consequences is not enough to explain adaptive action. An adaptation appraisal also has to be concluded before action is taken. In this case, the women will weigh how efficient they think migration will be, whether it is physically and normatively possible for them to migrate, and what the costs associated with migration are. If the risk is perceived as growing, so may the likelihood for migration being perceived as a real alternative.

The gendered income opportunities, with the availability of work for women in the garments factories in Mirpur, makes migration appear as an efficient migration strategy. However, this study has shown how the concept of working women is highly contested in the Bhola community. Purdah is highly valued, and it is important for both men and women to uphold purdah to the extent possible. Grothmann and Patt (2005) seem to be right in their argument that perceived adaptive capacity can heavily influence adaptive behaviour. Values and norms held by the community play an important role in an individual's decision making. Although the loss of livelihoods in the home community and economic opportunities in Dhaka are important factors influencing the decision to migrate, the notion of 'self-respect' is of outmost importance in this case, and is not easily given up for monetary goals. Indeed, sometimes the adaptation appraisal carried out by individuals will conclude that the costs associated with migration are too high, and that moral reputation is of more value. For some women, it becomes normatively impossible to migrate.

6.2. Implications for adaptation

Interviews and focus group discussions conducted with migrant and non-migrant men and women in the Bhola community reveal that women have to weigh migration opportunities against higher social costs than men. Consequently, a larger risk may be needed before women perceive the risk as sufficient for action, highlighting the interlinkage between risk- and adaptation appraisals. If this holds, it means that when affected by the same negative consequences of environmental stressors, women will wait longer before they migrate than men will.

This has negative implications for adaptation as it will render households with more female household members more vulnerable to environmental stress. If migration is delayed until there is no other option left – for example when farmers are unable to make a living because farmland is lost to river bank erosion – there is a risk that the migration will be carried out in a less planned manner. Several female respondents explained how they had lived on the streets of Dhaka for some time before finding their way to the Bhola slum. In situations where women do not have the support of their household upon migrating, it is possible that they are also less able to utilize migration networks that the household would otherwise draw support from. In short, the fact that women wait to migrate will expose women to greater risks both at home and in the destination area. Because it is regarded as unsafe for women to travel to Dhaka alone, some women also wait for a substantial amount of time after they have made the decision to migrate. Anika explained how she waited in the village for three years before she could travel with a neighbour (Bhola slum, 29.08.2014).

That women wait for years to migrate because of gender-related constraints shows that they may be temporarily trapped, until an opportunity to migrate emerges. Furthermore, not all women facing the same situation of livelihood stress migrate. Some wish to stay while others feel like they can not move. The informal settlements alongside the embankments indicate a significant trapped population in the area, as entire households are being displaced. Women may not only be trapped in monetary terms, but also but also culturally within the walls of their home. As one of the returned garment workers expressed: 'Girls stay in the house as if they stay in jail' (Nasreen, Bhola district, focus group discussion, 26.09.2014).

In section 2.3 we argued that planning and choice can be used to evaluate when migration is useful as an adaptation strategy. Women in the Bhola community face challenges in both these respects. Lacking choice of when to migrate and when to return, leave women unable to plan for their future, and affect how efficient female migration is as an adaptation strategy to environmental stressors.

The fact that income opportunities are more stable for women than men in the destination area would, from a purely economic perspective, be an argument in favour of more female migration. However, when considering the social costs, and their subsequent negative economic effects, the positive outcomes of migration diminishes. This study shows how female migration is an important adaptation tool, but that better facilitation is crucial to avoid that women suffer from their choice.

7. Conclusions

The findings of this study support the idea that gender influences all aspects of the migration process. Exercising strong influence on the behaviour of individuals within the household, gender directs what income-generating opportunities are available, the level of wages, status of work, likelihood of migration, and how migrants are perceived. Gender norms also impact vulnerabilities by delaying adaptive behaviour and compromise the economic gains from female migration.

In view of the large social costs associated with female migration, strong environmental and economic push factors are required to explain the relatively large share of female migrants from the Bhola district. Yet, not all women facing the same push-factors migrate. Having to negotiate economic incentives and cultural constraints women in the Bhola district feel ambivalent towards migration. On the one hand, they do not wish to migrate, taking on a double work load, forsaking their purdah, and facing the stigma that follows. On the other hand, women see migration as a way to help their families, and to be able to live a better life. Such dilemmas make it difficult to determine when women are trapped, when they move voluntarily, and when they are forced to do so.

No one should be forced to migrate or forced to stay. One should therefore be careful to conclude on behalf of women in the Bhola district what would be the best way for them to adapt to environmental stressors. It is clear, however, that to better facilitate for women who need and want to migrate is imperative.

First, female environmental migration need to be brought to the attention of development agencies, donors and policy makers. Increased awareness is a precondition for better facilitation. Second, the main issue to address is the social stigma associated with working women. This study has shown this stigma comes from the assumption that working women are unable to adhere to the practice of purdah. Thus, one solution could be to allow breaks for prayers and ensure temperatures that allow female workers to cover their bodies as they want inside. Furthermore, providing day-care for children would help lessen the extra burden of work which women are facing. These could be important first steps to improve facilitation of female migration from Bhola.

Women are more active agents in migration processes than expected. This study concludes that women should not be perceived as passive, but rather active agents in migration processes, who at the same time face greater struggles than men in achieving their goals. To better facilitate for planned and voluntary migration as a way for vulnerable households to adapt to environmental stressors, and in view of the challenges migrating women often face, there is a need for more research on the interlinkages between gender and environmental migration. It is also clear that female environmental migrants deserve more attention than they have thus far received.

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No potential conflict of interest was reported by the authors.

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Annex A.

List of respondents	Name*	Age	Occupation/ life situation	Date
In Bhola slum				
Male respondents				
	Abdul	35	Day labourer	01.09.2014
	Rafiq	33	Sanitary craftsman	01.09.2014
	Malik	20	Day labourer	02.09.2014
	Amir	25	Day labourer	03.09.2014
	Tasfiq	23	Van driver	13.09.2014
	Faisul	35	Day labourer	13.09.2014
	Reaj	35	Day labourer	15.09.2014
Focus group discussion				
	Hafiz	Over 60	Retired day labourer	17.09.2014
	Bashir	40	Day labourer	17.09.2014
	Ahmad	40	Van puller	17.09.2014
	Rahman	40	Rickshaw puller	17.09.2014
	Habib	32	Construction worker	17.09.2014
	Salim	40	Shop owner	17.09.2014
Female respondents				
	Anika	17	Garment worker	29.08.2014
	Israt	18	Garment worker	29.08.2014
	Seema	19	Garment worker	29.08.2014
	Rayhana	25	Garment worker, just lost her job	04.09.2014
	Nahar	35	Housemaid/tea-vendor	04.09.2014
	Ayela	25	Housemaid	05.09.2014
	Adila	31	Housemaid	05.09.2014
	Farzana	unknown	Garment worker	05.09.2014
	Samira	20	Looking for work	11.09.2014
	Nadia	18	Garment worker	11.09.2014
	Nyala	35	Previous housemaid and garment worker	11.09.2014
	Nasrin	16	Garment worker	12.09.2014
	Naureen	17	Garment worker	12.09.2014
In Bhola district				
Male respondents				
	Nasir	28	Fisherman	25.09.2014
	Sharif	Over 60	Retired fisherman	27.09.2014
Focus group discussion				
	Rasul		Fisherman	29.09.2014
	Zarid		Fisherman	29.09.2014
	Nasif		Fisherman	29.09.2014
	Alam		Fisherman	29.09.2014
	Fahim		Fisherman	29.09.2014
	Kamal		Fisherman	29.09.2014
Female respondents				
	Farhana	35	Housewife	24.09.2014
	Halima	50	Mother of garment worker	24.09.2014
	Faiza	50	Mother of garment worker	25.09.2015
	Seleha	24	Returned garment worker	25.09.2015
Focus group discussion				
	Jameela	19–35	Housewife, returned garment worker	26.09.2014
	Nasreen	19–35	Housewife, returned garment worker	26.09.2014
	Sabah	19–35	Housewife, returned garment worker	26.09.2014
	Fatima	19–35	Housewife, returned garment worker	26.09.2014
	Shirin	19–35	Housewife, returned garment worker	26.09.2014
	Naju	19–35	Housewife, returned garment worker	26.09.2014
	Aysha	19–35	Housewife, returned garment worker	26.09.2014
	Tahera	19–35	Housewife, returned garment worker	26.09.2014
Focus group discussion				
	Rehana	35	Housewife	27–28.09.2014
	Sabiha	35	Housewife	27–28.09.2014
	Nasrat	25	Housewife	27–28.09.2014
	Rumana	50	Housewife	27–28.09.2014
	Nyala	30	Housewife	27–28.09.2014
	Soraya	35	Housewife	27–28.09.2014

*All names have been changed to maintain respondents' privacy.