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**Policy Analysis: Climate Change and Migration in  
Bangladesh Working Paper**

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# Climate change, migration and human cognition in an Asian mega delta

## 1. Introduction

Recent research into the links between migration and climate change have highlighted the varied roles that migration plays as a response to environmental stresses and shocks ranging from a failure to adapt to a proactive adaptation strategy . Projections based around current patterns of migration and future changes in climate, population and economic growth and different scenarios of governance suggest that a large part of such migration will be in the Global South, within countries or to nearby countries, including to areas of environmental risk (Foresight, 2011). In this context there is considerable local and global concern about environmental change — including climate change — and its impacts on the Asian megadeltas, which have been highlighted as areas of high relative vulnerability (Parry et al 2007). Exposed to a range of climatic impacts Bangladesh is often highlighted as the archetypal Asian megadelta and its exposure to past and recent climatic shocks often depicted as a harbinger of changes likely to affect other regions.

Bangladesh is highly vulnerable to adverse impacts of climate change because it is densely populated and poor with a heavy dependency on natural resource based livelihoods (Agarwala et al 2003). Past climate shocks have exerted a heavy toll on lives and livelihoods in Bangladesh (Narayan et al 2000 cited in De La Fuente 2007). Future climate shocks and stresses are predicted to result in increase flooding, river bank erosion, and salinization of water resources. The country is already highly prone to cyclones and flooding. Eighty per cent of the land area consists of floodplains of the major rivers including the Ganga, Brahmaputra and Meghna, which are highly prone to flooding. In catastrophic years such as 1988, 1998, and 2004 more than 60% of the country or an area of approximately 100,000 km<sup>2</sup> was inundated for the duration of nearly 3 months (CEGIS, 2002). Multiple displacements are common characteristics of the chars (Zaman and Weist 1991).

Although some scholars have made a strong link between past climatic events and migration (Hugo 1996, Mahmoud 1995), there is plenty of evidence to show that the relationship between climate change and migration is not linear and impacts differently on different groups of people . For example, studies on the impacts of the 1988 floods in Bangladesh show that while some families left many stayed. These differential responses resulted from differences in risk and vulnerability at the household level which included access to assets and official relief (Shaw, 1992 and Thomalla and Schmuck, 2004). Also in Bangladesh, Paul (2003) found that in situations where disaster aid ran smoothly and without irregularities, people did not move from affected areas. Furthermore it also appears that a majority of migrants return once the crisis is over or move to nearby locations. For example, Zaman and Weist (1991) found that a majority of people displaced by natural disasters in the country, moved only a couple of miles, on average, from their residence because they held out hope that the land would be reclaimed. In their study areas roughly 10 to 25%, move to urban centres permanently.

Migration is an important adaptation strategy for poor rural populations to cope with both gradual onset climate stresses and shorter, sudden shocks (Barnett and Webber 2010). Seasonal migration already provides vital income sources for the rural poor during periods of low local employment (Toufique 2002). There is a large literature on the causes of migration, but also a measure of agreement that the key drivers of migration fall into three very general categories: (a) factors related to the region or country of origin, including, lack of economic opportunities, and lack of access to resources ('push' factors); (b) factors related to the region or country of destination, including the availability of employment and demand for workers, higher wages, or access to resources ('pull'

factors); and (c) intervening factors that facilitate or restrict migration, including ease of transportation, and family or social networks (Arango 2004, Boyle et al. 1998, Portes 1997, Massey et al. 1993, Zolberg 1989). In addition to the distinction between 'push', 'pull' and 'intervening' factors, drivers of migration can be categorized into structural and institutional/network influences, and factors operating at the level of individual human agency; in turn, they can also be broadly divided into 'economic', 'political', 'social', 'demographic' and indeed 'environmental', although these categories often overlap. Furthermore the multi-causality of migration has been widely acknowledged (Wood 2001, Boyle et al. 1998, Castles and Miller 1993, Kritz et al. 1992).

Migration patterns are not only complex because of the various types of migration drivers that influence them at different levels but also because they depend on individual characteristics and perceptions and a range of institutional opportunities and constraints. Factors that drive migration of some people might drive other responses or no response at all of other people in the same or other places. Furthermore, migration can occur across a range of scales, involving long and short-distance moves, crossing national borders or not, over timescales that range from a few months to a lifetime, and in circumstances that may be both adaptive and reactive. For example migration can be both a positive choice or arise from more negative circumstances, with reasons for movement spread along a continuum from planned adaptation to stresses, shocks and uncertainties, to a last ditched choice made in distress when other options have failed or are not available. In particular, there is evidence that migration may accelerate or take on emergent properties in certain situations, as barriers are removed, political or economic conditions deteriorate, or new opportunities emerge.

Additionally it is predicted that the consequences of climate change will particularly affect the poorest people as they are more vulnerable and least able to adapt, and as a result they will be rendered even poorer (Parry et al. 2007). Yet, there is also an emerging consensus that it is generally not the poorest people who migrate overseas because it is an expensive endeavour that demands resources for the journey and for the crossing of borders (Castles 2000, de Haan 2000, Skeldon 2002). Thus is it conceivable that climate change might deprive some people from the option of migrating, at least over long distances and internationally, even though it might put pressure at the same time on other people to move. As a consequence of the complexity of the migration response it has been put forward by Black et al (2011) that there is a need to understand first the drivers of migration before assessing how sensitive to climate change these determinants are. Furthermore this sensitivity assessment should include not only drivers but also the contexts, assets and abilities of those studied to migrate. In this paper we outline the findings from some qualitative field surveys in Bangladesh designed to elicit facts, behaviour, and attitudes of those people in Bangladesh that are already exposed to high levels of environmental stresses and shocks. In particular the paper explores the attitudes towards climate change threats and livelihood choices in order to understand the cognitive side of adaptation to climate change and the role migration plays in decisions made to adapt to climate change impacts. In the following section we discuss the role of cognition in understanding the migration/climate change nexus, before describing the methodology used to gather the qualitative information in Section 3 and the findings of this process in section 4. Finally in Section 5 we summarise our findings and discuss how they might be used to direct policy building on the subject.

## **2. Climate change, migration and cognition.**

The majority of past studies of the determinants of migration have tended to be socio-demographic in nature (e.g. focused on characteristics of age, education), rather than attitudinal or psychological. Given the characteristic of climate change as something that moves beyond variability now, to a fundamentally different state this leaves a gap in understanding how people will respond to a longer more constant pressure on livelihoods, that in many situations has not yet occurred, or where it has, implies a different reaction to one where 'bad' years are followed by 'good' ones and thus the

opportunity will no longer exist to buffer household capacities to withstand shocks and stresses in one year with the benefits of another. Thus the spectre of climate change raises issues for migration both in real time as the impacts of climate influence the economic, social, political, demographic and environmental drivers of migration and the ability of individuals and households to respond to these drivers; but also through the implications of the longer term expectations of the consequences of climate change on the sustainability of livelihoods. Qualitative data collection allows a relatively stronger psychological exploration of the implications of the future influence of climate change on migration through an attitudinal and psychological lens

The theoretical background for the qualitative data collection described in this paper follows the work of Grothmann and Patt (2005) and Smith et al (2010). In turn these studies based their conceptual approaches on the Theory of Reasoned Action and the Theory of Planned Behaviour (???). The Theory of Reasoned Action was developed by Fishbein and Ajzen (1980) as an expectancy-value model that recognises attitudes as just one determinant of behaviour within a network of predictor variables. The theory proposed that the proximal cause of behaviour is 'behavioural intention', a conscious decision to engage in certain behaviour. Making up this behavioural intention is the attitude toward the behaviour (defined as the sum of expectancy x value products) and the subjective norm (defined as the belief that a significant other thinks one should perform the behaviour and the motivation to please this person). By extending the theoretical model to incorporate the additional parameter of perceived behavioural control, Ajzen (1991) created the Theory of Planned Behaviour. Intended to aid prediction of behaviours over which a person does not have complete voluntary control, perceived behavioural control was conceptualised as the expected ease of actually performing the intended behaviour. Including attitudes toward behaviour, a subjective norm and perceived behavioural control (as well as the beliefs held by an individual that make up these components), the Theory of Planned Behaviour can be used to effectively break down the reasoning process relating to the development of a behavioural intention in the context of the migration decision. Thus within the Theory of Planned Behaviour the intention to perform a particular behaviour is treated as a direct antecedent of the behaviour in question and is driven by individuals' perceived behavioural control, attitude towards the behaviour and subjective norms. Attitudes are thought to represent an evaluation of the perceived consequences of behaviour and likelihood of outcomes, whereas norms can be thought of as socially accepted standards conveyed by peers, family, community or society (Price and Leviston 2012).

In terms of climate change adaptation Grothmann and Patt (2005) presented a process model of private proactive adaptation to climate change (MPPACC) which separates out the psychological steps to taking action in response to perceptions of climate. Smith et al (2010)

developed this model further to produce the conceptual Model of Migration Adaptation to Rainfall Change (MARC) (Figure 1) to represent the individual migration decision-making and related input components that shape an agent's decision to migrate under changing rainfall conditions. The MARC model is divided into four component levels: structural, institutional, individual and household. The central "individual" level of the model displays the reasoning processes proposed as undertaken by an individual, the "household" level permits interaction between members of a household to develop a group strategy, while the "structural" and "institutional" levels provide information used by the agent in their reasoning process. Although migration is a multifaceted process with multiple interacting components contributing to an individual's migration decision, for the purposes of their study, Smith et al 2010 focused on rainfall variability and change as the key structural component affecting the migration decision. In figure 1, at the institutional level a social discourse inputs institution level views on the structural components in question (in this case rainfall variability and change) to the individual. This allows each individual decision-maker to be aware of and potentially share community views on issues such as the severity of a drought period and the potential implications this might have upon harvest yield. As the individual performs their own assessment of

the rainfall conditions and the adaptation options available to them, they are able to consider the value of their potential actions in the eyes of the community through the consideration of this social discourse.

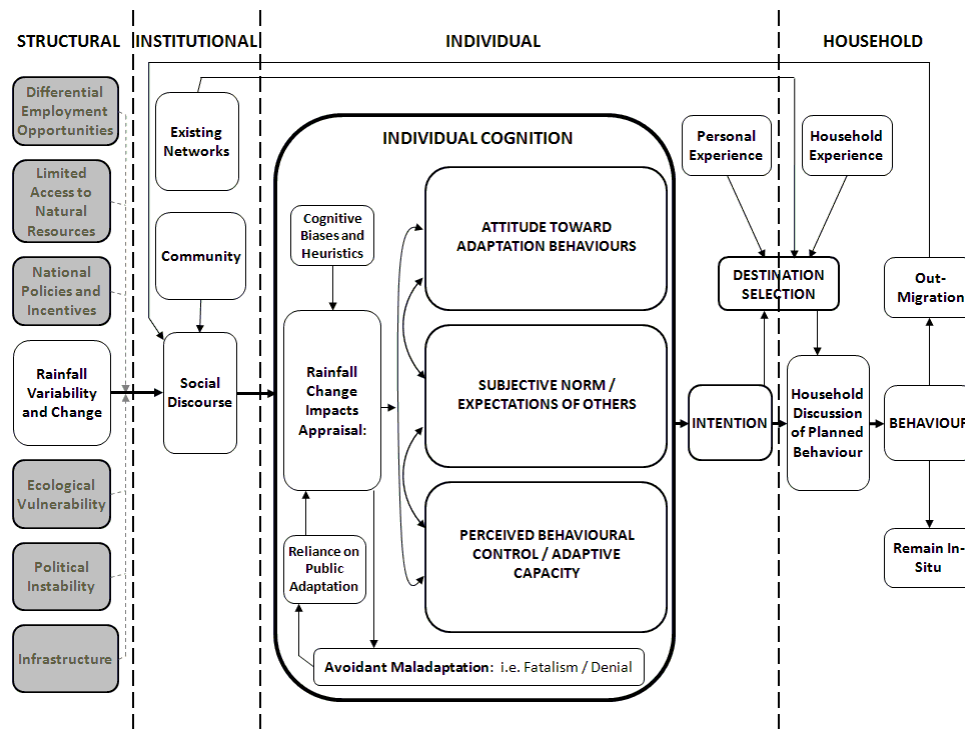


Figure 1. Model of Migration Adaptation to Rainfall Change (MARC) Smith et al 2010

A key variable in these conceptual understandings is perceived behavioural control (PBC), a measure of the extent of a difficulty thought to be associated with behaviour. In terms of future behaviour this factor is particularly difficult to measure. In its place an alternative measure has been proposed by Price and Leviston (2012) of the Locus of Control. The concept Locus of Control dates back to Rotter (1966) in which individuals were grouped into one of two categories based on their general expectancies about where control over events and outcomes is located. In this theory those individuals with an internal locus believe that outcomes are contingent on their own actions; those with an external locus believe that chance, fate or powerful others control outcomes (Levenson, 1981; see Paulhus and van Selst, 1990). An internal Locus of Control (LOC) has been found to predict environmentally responsible behaviour (Darner 2009; Bamberg and Möser, 2007; Hwang et al., 2000; Hines, Hungerford and Tomera, 1987; Huebner and Lipsey, 1981), environmental attitudes (McCarty and Shrum, 2001) and environmental concern (Pettus and Giles, 1987). Furthermore the Locus of control has been identified as a possible influence on farmers' decision-making styles, interpretation of events and, subsequently, levels of stress (Pannel et al 2006). Given the role of migration as an adaption strategy and in the context of high uncertainty, of climate change, variability and changing financial markets, a sense of being in control of one's destiny, rather than at the whim of fate, weather and powerful others, maybe thus considered a predictor of an individual's likelihood to undertake migration.

Based on these conceptual understandings the following method attempts to sample the different elements of the attitudinal and psychological parameters affecting migration behaviour to climate change. In particular climate change will be considered as function of a variety of impacts including sea level rise, flooding, storm surges, salinization of water and soil resources, drought and wind damage. Equally the response of individuals and households will be sought to be understood in terms not just of migration but other adaptive livelihood choices

### 3. Research Methods

Three regions were selected for qualitative data gathering. The regions covered villages that are exposed to different climatic stresses and shocks and environmental change in general -- drought, floods, cyclones and riverbank erosion.

### 3.1 Description of the geographies

**Chapainawabganj:** Chapainawabganj district is located in the northwest region of Bangladesh under Rajshahi division. Two upazilas were selected, i.e. Nachol and Shibganj for field work. Two villages from each upazila was taken. Nachol is a part of *barine land*. Barine land extends to several other districts, i.e Nogaon, Rajshahi. It is naturally high land than other lands. The soil quality is both sandy and loamy. Nachol is 38 Km away from Chapainawabganj sadar. Because of being part of *barine land* drought is a chronic problem in *Nachol*, mainly caused by scarcity of water. It began to get severe since the mid 1990s, with a gradual drop of rainfall. Earlier drought was seasonal and irregular. Eventually it has become regular in nature. The ground water layer is going down day by day. Currently the water can be found 150ft down which was 70 fit 15-20 years before. Drought extends for at least 6 months in Nachol (From Mid November to Mid June).

Another field site Shibganj stands by the river Padma, 25 km away from Chapainawabganj Sadar. Two villages from a *char* areas were selected for field work. *Char* areas are mainly low-lying flood and erosion prone areas surrounded by water for most of the year. The villages which were selected in chars are located along with the Bangladesh-India border in northwest. The villages are 20km away from Shibganj district. The only way to reach to these villages is by a two-hour motorboat ride from Shibganj. These *char* villages faced severe river bank erosion over the years. People of these villages informed that they lost almost 13, 86,000 decimal lands out of a total of 15,84,000 decimal lands in the last 40 years. Apart from erosion, these villages also suffer from regular floods. Flood water remains at least for three months during monsoon. The land goes under water. Farmers can not grow crops during this period. Flood visits every one or two years.

**Satkhira:** Shymnagar upazila was selected for field work which is a part of coastal areas in Bangladesh. Two unions, i.e Gabura and Paddapukur, were selected for field work. A total four villages were studied under these two unions. These unions are 15 km away from Shyamnagar upazila very close to the largest mangrove forest Sundarbans and the Bay of Bengal. It takes 20 and 30 minutes respectively from Gabura and Paddapukur over engine boat to reach to the forest. The two unions are identical to islands surrounded by three rivers. The only way to reach to these unions is by boat. The unions are highly vulnerable to tropical cyclone, water and soil salinity, erosion and coastal flooding. The current level of salinity is 25-30ppt which is not suitable for vegetation. These two unions are almost like desert. The cyclone Aila uprooted trees and currently there are few trees in these unions.

**Munshiganj:** Munshiganj is 40km away from the capital city Dhaka. Two upazilas were selected for fieldwork, i.e Lauhajong and Sirajdikhan. Lauhajong is 25km away from Munshiganj Sadar. It stands by the river Padma. The upazila is highly vulnerable to river bank erosion. Two villages were selected from this upazilas under Kolma union. Kolma union is eroding gradually. In the last 10 years 4km areas were eroded. The lands are low lying and also vulnerable to regular flooding. Another upazila Sirajdikhan stands by the river Dholeswari. It is also low lying and vulnerable to regular flooding particularly during monsoon season.

### 3.2 Information collected

The field work used three sets of questionnaires, i.e village survey, Focus Group Discussion and in-depth individual interviews. There are 14 village surveys, 14 Focus Group Discussions (each in one village) and 24 individual interviews. Village survey entails basic information about village including physical characteristics, population, livelihood, educational institutions, health care facilities, types of environmental hazards faced, and crops pattern. Focus group discussions include how livelihood of people in a village evolved over the last 40 years, present and past livelihoods. What are the major climatic and non-climatic events/problems a village faced in 40 years? How these problems

impacted people's livelihood and trend and pattern of migration from village. Whether migration was influenced by climatic events. Individual in-depth questionnaire included detail background information of migrants and their households, how livelihood of migrants and their households changed over times. What are the major climatic and non-climatic problems migrants and their households faced over the last 40 years. How those problems influenced their livelihoods and how they adapted with situations. The major focus was to know about the factors that drove people to migrate and examine how and to what extent climatic events influenced people's migration.

### **3.3 Sampling method**

For conducting individual qualitative interviews 'a snow ball tactics' was used to reach to migrants. The focus group discussions were held in support of local NGOs and community based organisations. Participants of focus group discussions included key informants like, teacher, local opinion leader, local government functionaries, student, experienced old man and women who knew about local environment and changes, people's representatives i.e. local chairman, members of union parishad, NGOs, people from different occupations, i.e. fishermen, farmer, boatmen etc and migrants and their households.

### **3.Results**

Based around the theoretical discussion in section 2, the information can be categorised on the following themes:

- Climate Change beliefs - perceived severity and probability of threat posed by impacts of climate change, including increased salinity, erosion, water quality, flooding, drought and changes in disease and pests;
- Behavioural attitude - assessment of efficacy of different livelihood choices in response to climate change impacts
- Behavioural control beliefs – generalised expectancies about location of control (i.e. Locus of control) and perceived resources available for livelihood practices
- Behavioural personal norms - self-concept as opinion leader, perceived level of risk and innovation; and
- Social norm beliefs – perceived trust in and influence of sources of advice

The following subsections summarise the findings of the field surveys on these themes.

#### **a. Climate Change beliefs**

##### **4.1.1 Warming**

Extreme temperature, especially during summer, is an observation that has been repeated across the three regions. Several respondents felt that 2012 was the hottest year. "This year heat is extremely intolerable," said a respondent in Chapainawabganj. A villager in Satkhira linked the heat with the deserted nature of Gabura village after the 2009 cyclone: "...Extremely hot after Aila due to lack of trees and shadows, hot wind."

AILA of 25th May 2009 was the most devastating for the villagers of Gabura. It caused 12 feet high tidal wave that suddenly flooded the village. The village is surrounded on three sides by rivers. The embankment was severely damaged and fractured in many parts. When tidal wave came houses were submerged. The union – comprising a cluster of villages - was water logged for close to two years. The shrimp farms and paddy fields were destroyed. Earlier, villagers faced an even more devastating cyclone in 1988.



While respondents in Satkhira and Munshiganj complained of extreme temperatures, those at Chapainawabganj talked about droughts getting worse. Three of the respondents said drought has become severe over the past decade – one said the past five years saw its intensity increasing. The fifth respondent found tubewells drying up. One villager's statement came possibly as an exaggerated way of saying: "Nowadays we do not get a single glass filled up with water from tubewell."

Water stress is a major problem mentioned by respondents in all three geographies. The underlying issue is the lack or reduction in rainfall, drought or salinization of water resources. In the drought-prone Chapainawabganj district the issue is lack of rainfall or inadequate rainfall. The respondents talked about a drinking water "crisis".

One of the respondents in the flood-affected Kolma village of Munshiganj district also complained of depleted fresh water supply. People in Chapainawabganj feel that drought has become severe over the past 10 years. One respondent said: "The layer of water is going down day by day. Now water can be found 160 feet down. Ten years ago the layer of water could be found 100-120 feet down." In turn, water scarcity affects livelihood patterns.

In Satkhira one of the respondents noticed worse droughts over the past 8 – 10 years. The worse problem in this district is salinization of water sources and soil as explained below.

#### **4.1.4 Irregular, reduced rainfall**

A repeated observation – from all the three regions – is about irregular rainfall patterns over the past decade. In general the seasonality of rainfall has changed and the amount of rain received in a season appears to have reduced, the villagers noted. 'Unpredictable, 'irregular' and 'decreased' are the common terms used to describe the rainfall trends of late.

##### **4.1.4. Salinisation:**

Apart from drought and erratic rains, one reason for the water stress is salinization of water resources and soil. In Satkhira, where delta villages were left waterlogged after cyclone Aila in 2009, the issue salinization of water resources. Storm surges flooded huge tract of farmlands with salty water. Salinity affects the soil too and it makes drinking water scarce and farming difficult, if not impossible. Ingress of salinity from the sea due to reduced riverflow is another issue in the southern coastal districts like Satkhira (WARP, 2009??). Most of the respondents in Satkhira fear complete salinization of the land and water resources in the coming decades.

#### **4.1.5 Flood**

Flood is a common problem across the regions, the most problem being the most severe in Munshiganj. People in all the regions are worried that there could be more crop failure in the coming decades due to floods. Potential lack of market access due to floods is another concern. In Munshiganj and Chapainawabganj, the 1998 flood is seen as the worst calamity people have witnessed.

#### **4.1.6 Cyclone**

In Satkhira all the eight respondents felt that the frequency and/or intensity of cyclones has increased. There were two major disasters in the past five years – Sidr and Aila.

#### **4.1.6 Erosion**

Riverbank erosion is a current and future threat in Munshiganj. It makes the impacts of floods even worse. Loss of land is common, leading to loss of livelihood.

## **4.2 Changes in livelihoods**

Across the regions people are diversifying their livelihoods for various reasons. Mostly their forefathers were farmers and fishers. But the new generation adopts a wide basket of livelihoods – from shrimp farming and vegetable marketing to seasonal migration and commuting to a nearby town for day labour. Some of this diversification and repeated change of jobs have been necessitated by climatic stresses and shocks, but often it is an outcome of economic necessities.

### Major changes in the last 40 years

*Examples from different regions*

Ancestor's livelihood	Current livelihoods	Major change	Extreme threats
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<b>Chapainawabganj</b>			
Farmer	Farmer, rickshaw puller, seasonal migration, commuting for work	Crop failure due to drought, job in village only for six months, six months work outside	Drought, Increased temperature
<b>Munshiganj</b>			
Farmers, sharecroppers	Landless farmer, sharecropper, day labourer (sons working in Dhaka as permanent migrant and shopkeepers and scrape collector	River erosion	Riverbank erosion
<b>Satkhira</b>			
Farmer, occasionally collecting forest resources	Shrimp fisheries labourer, day labourer, forest resource collection for a contractor, migrant labour, sea fisherman	No fixed income, economic pressures, sickness	Increased temperature, salinization of water and soil, cyclone

### 4.2 Behavioural attitude

Migration decisions are made to ensure a better livelihood – at times they have a direct or indirect link with climatic stresses and shocks, but not always. Government policy as well as market and business decisions play a role in livelihood status and migration. On the whole migration comes across an example of the agency of migrants.

*Examples of statements:*

**Chapainawabganj, Man, 42**

“I migrated for ensuring constant income to my household.”

**Satkhira, Man, 45**

“Though it is not induced due to climate change events but the effects of the events (AIIA) have deeper influence in my life and livelihoods.”

**Munshiganj, Man 65**

“My eldest son migrated 20 years ago when erosion occurred first time. At that time, I lost 33 decimal lands. It created pressure on my regular income.”

**Satkhira, Man 41**

“My father supplied wood to the Bangladesh Newsprint Mill in Khulna. In 1995 the mill was permanently closed. Thus we lost our livelihood”

**Munshiganj, Man 30**

“My migration was driven by my desire to lead a better life not by any natural calamities.”

**Chapainawabganj, Woman 35**

There is no other way to fight hunger. Besides, we need a good saving for our children’s study and marriage.

Migration decisions are usually often taken firmly and deliberately. In most of the cases the idea is to enhance family income. Even when there are climatic and environmental threats, the decision-making process weighs pros and cons of migration against other options such as diversifying livelihood activities at the home base. Often migration complements these activities and covers a part of the year that is designated as the ‘lean’ season. It is selected male members of the family that migrate usually – the entire family does not move out unless there is a serious disruption of livelihood and/or habitat.

In short it is not an entirely reactive response to an adverse situation. It is more adaptive in nature than coping. However, concerns of the migrants vary across the socio-economic spectrum.

Some examples of the way decisions are made:

**Munshiganj, Man 27**

“Before migration I used to work as welder. But the money I could earn was not sufficient for me. It was only 2000-3000 taka per month. To earn more I migrated.”

The respondent is an international migrant who has returned and jobless at the time of the interview. He is aware of the environmental/ climatic stresses and shocks including riverbank erosion, floods, and unscientific human interventions. However his immediate concerns are not direct threats to livelihood or security, but the general ‘backwardness’ of the village. “It lacks good communication infrastructure. Moreover, due to regular flood people almost cannot do anything during that time. It has no opportunities to do any business.”

To the question, what are the problems he faced to sustain livelihood, he answers: “Do not have any capital. Need money to do business.”

**Gabura, Man 35**

“I was very poor since my childhood. I lost my parents in my early ages. I grew up in my elder brother’s house. But within a short time I have become a burden to their family. Later I took shelter in a Mahajan contractor’s house in our area. I worked as cowboy .... I went to Chalna (Satkhira) for searching work during 1989 with a group of 7- 8 persons. I got the work of paddy harvesting.” He worked as a farmer, cowboy, day labour, worked as an internal migrant worker such as paddy harvesting, digging, and brickmaker.

His elder son left school at 14 and migrated with him to work and his second son also became a migrant worker in a brickfield. The family was offered BDK 35,000 for six month’s of work offered by the boy, 20,000 in advance.

#### **4.2 Behavioural control beliefs**

Though migration decisions are adaptive and deliberate, the decision-makers do not always believe they are in full control of the situation. There is a sense of helplessness about possibilities of progress despite people trying to do their best. The Locus of Control question on agreeing with the statement "The success of household is mostly determined by factors outside of your control" elicited strong positive responses in general. Two of the respondents commented that it is in God's hands.

The question on the difference between the current and the idea situation with regards to resources elicited mostly a 'little satisfied' or 'not at all satisfied' responses. On the whole the questionnaire revealed low locus of control scores. One response vividly described this sense of helplessness: "I am still struggling to find livelihood. If I can work I can eat but this is pitiful at this age. Riverbank erosion is eroding my land. Cyclone AILA destroyed my trees and resources. Now I do not have any resources." "

#### **4.2 Behavioural personal norms**

In almost all the case the migration decision was made by the migrant, usually the head of the household, suggesting a high level of decision-making and execution power over family affairs. There has been consultation with family members and relatives.

At the same time responses to questions regarding their influence over peers and neighbours received low scores too. The typical responses were 'no influence' or 'moderate influence.' However the migrants were often consulted by others for advice.

#### **4.2 Social Norm Beliefs**

The migration decisions and actions showed a high degree of trust on social networks. Usually information of migration was provided by local people who also work outside village, family members, relatives or their friends. Mostly resources came from family members. For the question dealing with Social Norm Beliefs the trust factor was the highest for fellow households, many respondents declaring 'complete' trust. NGOs and the National government came next in the trust factor.

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