

## **CHAPTER 7**

### **CONCLUSION**

This chapter, which concludes my thesis, deals with the findings and results from my research work. First, I will sum up the discussions from the previous chapters, focusing on my field work in the two villages in Gaibandha District in Bangladesh, as well as on my documentary research. Next, I will make some suggestions in terms of recommendations for the Bangladesh government as well as the NGOs working there, in relation to the management of flood hazards and poverty alleviation for the rural people of Bangladesh. Finally, the chapter ends with some implications for further research.

#### **7.1 Research Findings and Results**

Geographically, Bangladesh lies in a flood-prone zone, as the recorded occurrence of flooding goes back as far as 1787.

Four types of floods – flash floods, riverine floods, rainfall floods and storm surge floods – occur in Bangladesh, with riverine floods being the most common. One area may be affected by one kind of flooding only and another experience all types. Furthermore, one area may face floods two or three times (early, peak and late floods) in one calendar year.

Flooding in Bangladesh is inextricably linked to the upstream flows of three major international river basins – the Ganges, the Brahmaputra and the Meghna river basins, and any changes or blockages in the pathways upstream of these rivers is sure to affect the flows downstream.

Massive flows of water through a single constricted path, obstacle of flows in the pathways and heavy monsoon rains together tend to cause recurrent flooding in Bangladesh, and as a result, major devastating floods took place in 1917, 1954 and in 1970 prior to Bangladesh's independence in 1971, and since 1971, disastrous floods have occurred in 1987, 1988 and 1998. The level of devastation caused by flood events depends on the coincidence of more than one flood type (for example, in 1987

all four types of floods occurred together) and the duration of the floods (as in 1988 and 1998).

People in my study area are simple in terms of their lifestyle, are religious and tolerant. The majority of them rely on agricultural activities and have a low income; they lack far-sightedness and as such do not think much about future uncertainties and risk, thinking that there will always be some way out. They take flooding as a normal annual event which is part of their commonly expected life cycle. In the study villages there are many dependent people in the households, the ratio being one person earning to six dependents (females, the elderly and children). The people are trustworthy and as such may easily be misguided or cheated by clever local leaders or *matabbars* (social leaders who settle disputes).

Access to land and land ownership is limited for the villagers, as about 84% of households in the two villages I studied have no or negligible cultivable land and the remaining 16% of households control almost 90% of agricultural land. However, villagers do have access to the canal beside the Brahmaputra Right Embankment (BRE) and nearby rivers for fishing.

For their livelihoods, the villagers have to undertake multifarious activities, those which are seasonally available. After agricultural activities, fishing and transportation are the next major sources of income, while some people engage in small businesses like running grocery shops or selling vegetables or other raw materials. Some households also earn a livelihood by raising livestock. In addition, I found some day-laborers who carry out short-term work such as digging, fishing, driving rickshaw vans or repairing or making houses – whichever is available.

The communication systems of both villages are not good, and villagers have to walk in most cases when traveling to and from Upazila or the district town. The BRE is used as the main means of communication for both villages, as well as being used for flood protection. For emergency purposes, some villagers use motor-bikes, though it is very difficult to ride along the dirt roads.

Housing conditions and the sanitation system cannot be considered good, and 95% of households do not have cemented toilets and the floors of these households are prone to flooding. However, GUK has raised the plinths of some poor households

to protect their houses from floods as well as allow people to earn a livelihood by cultivating vegetables and fruits on the raised ground.

In the absence of community-based flood management, the government, with the help of local bodies, makes regular arrangements to help affected people cope with the floods. Though flood forecasts are provided using modern technology (GIS), I learned that only forecasts received within four days are 100% accurate and that any information beyond four days but less than ten days may be only 75% accurate. The government also arranges flood shelters, but they are also inadequate, plus there are allegations of nepotism and corruption in terms of the selection of people to go in the flood shelters, as well as in the distribution of relief.

The majority of the flood-affected people try to cope with the floods at the household level, first, by preparing their homesteads by raising the plinths or by making make-shift platforms for themselves and/or their livestock. Many households add extra tubes to raise the head of the tube-wells and build *sanko* (bamboo-made bridges) to move from one building to another house within the homestead (such as from the main house to the kitchen, bathroom or toilet). Some shift their livestock to the embankment, which is not submerged during the floods and to feed the cattle they collect water hyacinths, banana leaves and use previously stored straw and oil-seeds. However, some people can neither shift their livestock to the embankment nor manage them in their households and as a result, suffer either by having to sell them cheaply or by losing them to starvation or disease.

The worst problem the flood affected people face is the disruption to their livelihoods. The flooding season here also coincides with the *monga* in the northern regions of Bangladesh, including Gaibandha District. Some poor farmers and day-laborers adopt fishing and some others engage in boat operations. Many households sell valuable assets to survive and also borrow money from neighbors or relatives, and lastly from money-lenders. Some NGOs also come forward with financial assistance on credit, but they have limitations; these NGOs give credit to landless households but not to those landless households who have already taken a loan from any NGO. As a result, farmers with only a small plot of land are not eligible for credit from the NGOs. However, I found that some households come to help their helpless neighbors with both cash and in-kind assistance, but even after that, some households reduce or

diversify their consumption patterns based on the situation. As livelihoods are the key to survival, some people, both men and women, migrate to nearby towns and cities in search of work and food.

Though the society is egalitarian in principle, the dominance of certain powers is very much explicit in almost all strata of society. Politics plays a central role in the generation and continuation of the corrupt practices of power, and the top-down power structure inherited from the British is still in vogue in terms of education, the law and administration of the country. The state machinery that exists in Bangladesh was shaped under colonial rule and has not changed since, even after 40 years of self-rule. This neglect and lack of consideration of the illiterate rural and powerless people has led to an exploitation of rural resources for modernization and urbanization purposes.

The implementation of development programs is another key sector where power relations are an open secret at the micro-level. Local leaders and government officers at the local level form an alliance to reap the most from the development programs in the name of development. NGO workers try to ensure benefits flow to the powerless villagers, but cannot work independently of the local powers when trying to do so.

Religious practices among the villagers tend to supplement the continuation of the prevalent power structure in society. By advising poor farmers and day laborers to devote more time to religious rituals, the religious preachers try to establish their own importance in the power structure, while doing the opposite in collaboration with the *jotdars* or *matubbars* in society. Intra-household religious practices also strengthen male dominance by limiting women's participation in public life.

Discrimination against women is common and culturally rooted at the intra-household as well as society levels. After marriage, women move in with their husband's families and any girls receive only half what their brothers get from the parents as an inheritance. Socially, women have few rights and little choice in respect of taking personal and family decisions, when participating in public gatherings and also in terms of movement and marriage. In the lower income households, the birth of a girl is not welcomed and girls are seen as a burden. Intra-household gender

disparities cause women in poor families to be deprived of adequate food, leading to chronic suffering from poor health, nutrition and general well-being.

## 7.2 Theoretical Reflections

### 7.2.1 Vulnerability

Blaikie et al. (1994) in their PAR model understand disaster to be the intersection of two opposing forces: socio-economic forces on the one side and physical exposure on the other. They distinguish between three components on the social side, these being the root causes, dynamic pressure and unsafe conditions. The most important root causes are “economic, demographic and political processes”, which affect the allocation and distribution of resources between different groups of people in society. Dynamic pressures (class, gender and state) translate economic and political processes within local circumstances (such as migration patterns). Unsafe conditions (the physical environment, public actions and institutions, a fragile economy and a poor health service) are specific forms in which vulnerability is exposed in time and space.

In my two study villages in Gaibandha District, all three components of the socio-economic forces found in the PAR model can be identified. First, all the features of the root causes are available and applicable to my research site. The people in the two villages are economically poor, demographically they have a population too large for the resources available and politically they are neglected. Secondly, inequality between the rich and the poor, gender disparities and a corrupt state machinery create *monga* (dynamic pressure) in this area, as well as great suffering during the floods. Third, the villagers of Char Kalasona live in an active flood zone, with poor communications and poor housing - without a proper sanitation system (unsafe conditions). So, here I contend that almost all the conditions within the socio-economic forces found in the PAR model are applicable to my research site to differing degrees or intensities.

Again, in the Access model, the same authors, Blaikie et al. (1994), talk about the amount of “access” that people have to the capabilities, assets and livelihood opportunities that will enable them to resist and recover from shocks and stresses. At



my research site, people regard flooding as a part of their life, so they are not passive victims but rather try to respond to the situation by mobilizing whatever capitals (especially human and social capital) they have. Thus, it is a complex issue to understand the level of vulnerability of the people at my research site, as they are usually able to struggle and survive, despite living in poor socio-economic conditions.

### **7.2.2 Coping Strategies**

Start and Johnson (2004) identify three potential components to a coping strategy based around assets, activities and needs or consumption. Coping at the asset level involves liquidating stores and productive assets, making informal claims to relatives and neighbors and formal claims through financial services. Coping at the activity level involves working harder or longer hours, or diversifying new economic activities. Coping at the consumption level requires consumption diversification such as changing diets or inputs to cheaper or more plentiful items, or reducing consumption by reducing the number of consumers.

During my study visits, I learned that the villagers in my study area adopt all the coping strategies mentioned by Start and Johnson. The poor farmers and day laborers sell their valuable and productive assets like cows and trees to meet their immediate demands when they fail to get enough funds from informal and formal channels. At the activity level, I have already mentioned that the poor villagers have to carry out multifarious strategies, such as diversifying their economic activities for to earn a livelihood during the *monga* as well as the floods. Furthermore, at the consumption level the women suffer most, as customarily they take their meals after all the male members have taken theirs. They also diversify their consumption activities by using home-grown vegetables or water lily branches which are plentiful during the floods.

Roger Few (2003) argues that people facing flood risks might take actions (a) to prevent the spread and penetration of flood water through physical means, and (b) to reduce the negative effects from flood waters through actions such as livelihood diversification, relocation of belongings, or the community distribution of drug supplies. In the context of my research site, people facing flood risks follow both strategies to cope. First, they raise the plinths of their houses and also raise the height

of the tube-wells by adding more tubes to prevent flood water seeping in. Next, some of them shift to flood shelters and many of them transfer their livestock to the BRE.

Again, according to Moser, “there is a growing recognition that the poor are strategic managers of complex assets portfolios” (Moser, 1998). This idea is entirely applicable to the people at my research site, as they utilize their human capital by diversifying their livelihood activities into fishing and operating boats during the floods.

### **7.2.3 Power Structures**

Among the theorists, Marx talks about structural power. According to Marxist tradition, power relations are embedded in the division of labor, the legislative system and other structural features of society. Structural forms of power are easily noticeable in many contexts; obedience to norms and implicit rules may easily be seen as a form of structural power. In the context of Bangladesh at a macro level and in the context of my two study villages at the micro level, Marxist structural power is evident in the education and legal systems, in cultural norms, intra-household and social relations.

For Foucault, power is “employed and exercised through a net-like organization” and individuals are “always in the position of simultaneously undergoing and exercising this power” (Foucault, 1980a). Foucault’s power exercise is nicely reflected in the double role of the Imams at the mosques, who exercise power when advising the poor villagers to be more devoted to religious rituals, while at the same time coming under the power of the heads of the mosque management committees.

Gender studies highlight intra-household power structures, demonstrating the importance of a kind of power that is normal to us; that cannot be possessed but exists only when exercised. This is the power that makes women accept a subordinate gender role, and it is this intra-household power structure that ensures rural poor women remain half-fed or starve during floods. This habit affects the health, level of nutrition and above all the development of women as human beings.

Political ecologists see power as a key concept used to specify unequal relationships among various actors of a politicized environment. They argue that the

attempt of rich actors to monopolize a valued environmental resource for exploitation is linked to marginalization of the weaker grassroots actors, which also leaves the latter vulnerable to episodic changes. So, in periods of episodic changes like floods or cyclones, the powerful or the rich do not look into the root causes of the vulnerability, but rather they attempt to respond to the crisis using 'short-cut' solutions, such as providing relief. In the two villages at my research site, the most common solution is to provide relief and take a record of this by taking photographs.

### **7.3 Policy Implications and Recommendations**

In light of the allegations of corruption and nepotism against the officials of government bodies and political leaders, a community level Hazard Management Committee should be formed (responsible for floods and river erosion). All members of this committee should be affected people from the village covering every section of society, including women. As NGO workers have a reputation for implementing tasks promptly, they should also be included in facilitating the Committee. In the flood shelters, provision should be made for declaring openly the amount of relief assistance given for each center, plus a distribution list should be hung on the wall of the flood shelters, to check against malfunctioning processes.

Development projects should be aimed at strengthening the potentialities of the villagers, rather than making them more dependent and marginalized. As a result, the money spent on relief distribution could be invested instead in improving the housing conditions of the people in flood affected areas. The women of the households could, in that case, cultivate vegetables, fruit and other necessary profitable items in the homestead.

The Brahmaputra Right Embankment has been found to be very useful for the flood affected people in terms of communications, giving shelter to helpless households and livelihoods. But one problem with the BRE lies in its management, so the Community level Flood Management Committee as well as some NGO workers should be employed to monitor the embankment so that nobody can dig on it or lower its height. Steps should also be taken to allow the appropriate maintenance of the embankment's sluice-gates.

It is known all over the country that the people in the northern districts face *monga*, which also coincides with the flooding season, so the policymakers in the government should take it more seriously, so that ways can be found to provide alternative livelihoods for these people and remove the *monga* permanently. The establishment of local agro-based food industries I believe should therefore be considered.

Lastly, the general mass of villagers (especially the women) needs to be made more conscious of their rights and responsibilities – those that support their own sustainable development. In addition, over-population has created an obstacle in each and every field of development, so social awareness is essential in helping to limit the size of families to that within their own capacity.

#### **7.4 Implications for Further Research**

There were several limitations placed upon my research work. First and foremost, I had limited time and resources, and this restricted me to studying only two villages in Gaibandha District. Certainly, I chose two representative villages in the District but still feel I could have produced a better piece of work if I had had more time and resources. For example, I worked in the two villages for one month, which I found was not enough for a thorough study to take place.

Secondly, in 2010 there was no major flood at the study site, nor in Bangladesh as a whole, so I missed the opportunity to see for myself what the flood-affected people do and how they behave in response to floods. Again, the villagers also had to recount their experiences from memory about what they had done or how they responded during the flood events.

Thirdly, it is a cultural practice for the women-folk, particularly the housewives in all the households in rural Bangladesh, to take food only after feeding all the other members of the household. By following this custom, many housewives take less food than the other family members, but during my field visit, no woman agreed to tell me anything about this explicitly. Again, it seems the oppression of women is very much common among the poor families, as the affected women did not tell me this directly; I had to collect the information indirectly.

Finally, I should point out that the Bangladesh government conducted a nationwide population census in the third week of March 2011 (after my field research had taken place) and that the Bangladesh Bureau of Statistics (BBS) has not yet published its report. As a result, the demographic data I have used in my study may vary from that in the new population census report when it is published.