CHAPTER 5
COPING WITH FLOODS

This chapter contains the most significant part of my thesis – detailing the real struggles of the people in the two study villages - Uria and Char Kalasona, and representing the people of Gaibandha District in general. It describes how the flood-affected people cope with this situation given the vulnerable position they are in, as already discussed in the previous chapter. In addition to the villagers own efforts, this chapter also covers the steps taken by government bodies, NGOs, voluntary organizations and donor agencies in order to help local people cope with the floods.

5.1 Steps taken by Government Bodies at the Local Level

Since my study area is identified as a 'flood-prone' zone, a Disaster Management Committee has been formed at the Upazila Sub-district level, headed by the Upazila Nirbahi Officer (administrative head) in order to monitor the floods and any other hazardous situations. In the absence of a community level approach to flood hazard management, this local government body takes responsibility for tackling the flood situation. The Chairman of Uria Union Parishad (the lowest level local government body), elected members of this Union Parishad, some Upazila level officers and some NGO representatives constitute this committee. During my field research I had a discussion with the present Upazila Nirbahi Officer of Fulsori Upazila, Mr Zahidul Islam, who informed me that the Disaster Management Committee provides support to the affected local community on three levels, these being: (1) forecasting and warning (2) the preparation of flood shelters and relocation centers for affected people, and (3) supplying relief, medicine and other logistics.

5.1.1 Forecasting and Warning

Uria Union is one of five points from which CARE Bangladesh, an NGO - with the help of CGIS (a satellite information system), gives forecasts on floods and on the "rise and fall at the level of river water". This forecasting and warning point is

located at the meeting point of two villages: Uria and Char Kalasona, where the office of Uria Union Parishad is located. At this center, there is a long pillar marked with three colors – green, yellow and red from bottom to top, signaling danger if the water level crosses the yellow mark and touches the red. At the same location on the embankment there is a taller sign explaining to people what the three colors on the pillar indicate. The colored pillar and sign are shown below:

Figure 5.1 Pillar marked with three colors showing the water level.

Figure 5.2 Sign explaining to people the use of the color scheme on the pillar

I talked to the Chairman of Uria Union Parishad, Mr Mohatabuddin who was also one of my key informants, and he told me that CARE Bangladesh informs them (the Union Parishad office) about the rise and fall of the water level of the local rivers using a mobile phone through the Banglalink mobile operator. As soon as they receive a message, they circulate it to the villagers by flying a flag of the relevant color (green for no danger, yellow for get prepared and red for danger) at three points in the locality. However, when I questioned him about the complaint of the farmers - that the forecasting had not worked that year (2010) and the flood waters washed away the seed beds three times, he admitted that there are limitations in the forecasting system. He explained that the forecasting given for up to four days in advance is 100% accurate, but that the forecasting given up to ten days in advance is only 75%

accurate. So, due to weaknesses in the dissemination system, the villagers do not receive the full benefits of the satellite forecasting and warning system.

5.1.2 Preparation of Flood Shelters and Relocation of Affected People to the Shelters

As soon as the Union Parishad office receives a message regarding an impending flood, the Disaster Management Committee selects the appropriate flood shelters and prepares them by cleaning and making other necessary arrangements. In Char Kalasona, two centers are commonly used as flood shelters - one is the Char Kalasona primary school and the other is near Abul's house (an elected Union Parishad member for one village). Since there have been no serious floods since 2007, the flood shelter near Abul's house is now being used as a shelter for those who have lost their houses to river erosion. The flood shelter at Char Kalasona primary school is shown below:

Figure 5.3 Flood shelter at Char Kalasona primary school.

According to the Union Parishad Chairman, twenty *dinghy nouka* (small boats) are kept ready to relocate affected people to the flood shelters. The management workers involved in taking people and relocating them to the shelters are given life-jackets and raincoats. Some NGO workers, especially with GUK, are involved in boat operations and the relocation of people to the flood shelters. The poorer villagers complain; however, that the selection of people taken to the flood shelters depends entirely on the Disaster Management Committee and not on the intensity of the flood damage. Some people not seriously affected by the flood but who have a close relationship with a Committee member, a local political leader or a Union Parishad Member, get the chance to stay in flood shelters, while many poorer villagers, those seriously affected by the floods, may not get that opportunity. According to the Chairman's official records, Char Kalasona flood shelter has the capacity for only 150 people but during last big flood in 2007, it accommodated 500 people.

5.1.3 Supply of Relief, Medicine and other Logistics

The supply of relief to the flood victims has always been a controversial issue in Bangladesh, as if it were a part of the politics of the country, and it happens mainly because the party in power never involves the workers from opposition parties in the relief distribution process. As a result, the poor villagers who really deserve relief assistance are often deprived of their rights and the flood relief is distributed among party workers or supporting groups. Sometimes, the Union Parishad Chairman or the local political leader who is in charge of distributing relief appropriates the lion's share by distributing just a fraction among the poor in front of a TV camera, then keeping the rest. During serious floods, the government also allocates medicine, especially oral saline and water purifying tablets and clothes (*saree* and *lunge*), as well as food and money.

NGOs and foreign aid agencies also come up with assistance in the form of food, medicine or clothes, but as they do not have representatives in the local areas - they rely on cooperation from local government bodies or local political leaders. However, the poor villagers appreciate the role of the medical teams sent by different NGOs to the flood shelters. I talked to local, affected people as well as local

government bodies (members and Chairman of the Union Parishad), but I received contradictory responses from the two groups. The local government bodies spoke highly of their work, while the poor villagers spoke about the nepotism and corruption that takes place. There were also complaints among the many poor villagers I spoke to that the government spends a lot of money (though not enough) on relief, but that this relief does not reach the 'bottom', but rather gets divided in the middle layers.

5.2 Coping Strategies adopted at the Household/Family Level

The level of coping capacity is increasingly seen as a key component of a household or community's level of vulnerability. According to Pelling, "Vulnerability has three components: exposure, resilience and resistance. These components are simultaneously the products of political and socio-economic structures and the capacity of individual actors and social institutions to adapt to hazard stress." (Pelling, 1999: 250) Based on existing socio-economic structures and the capacity of individual actors and social institutions, the people of Char Kalasona and Uria usually take action (a) to prevent the spread and penetration of flood waters through physical means, and (b) to reduce the negative effects from flood waters through actions such as livelihood diversification, the relocation of belongings or the community distribution of emergency drug supplies.

Households bring differential resources to bear in their coping with the floods, and these include economic and material resources, human or personal resources - such as education, family and social resources - such as networks of reciprocity, and political resources - such as power and autonomy. Thus, the people in my study area, and in particular those in Char Kalasona, try to cope with the recurring floods in three ways: (a) through pre-flood preparedness (b) by coping during the floods, and (c) through post-flood coping activities.

5.2.1 Pre-flood Preparedness Activities

In preparation for the impending floods, most households try to protect their homesteads if possible by raising the plinth (*bhiti* or *bhita*), by changing any weakened pillars, raising the level of the plinth in the cattle-sheds and by collecting pipes so that they can elevate the level of the tube-well if necessary. They also get the

family boat ready (if there is one) and collect enough bamboo to make a makeshift bridge (*shanko*). In addition, they construct some elevated stages to (a) store food and seeds (b) store fuel (c) keep fodder, and (d) store family assets and valuables.

Agriculture is the major economic activity that takes place in the rural households here, so to avoid large-scale losses due to flooding some farmers harvest the premature standing crops - if there is a threat of inundation. Some also develop adequate and alternative seed-beds in flood-free areas so that they can make the best use of the remainder of the cropping season. For those who farm fish, those who have ponds raise the banks of the ponds using tree branches and nylon nets in order to stop the fish from escaping. For the poor people though it is difficult to prepare because it requires money; some poor households told me that they try to earn more by working hard so that they can at least save something for the forthcoming danger.

5.2.2 Coping Activities during the Flood

It is during the floods that 'living with the floods' starts in the real sense of the term. Flooding within the house creates big problems for the poor households who sleep on the floor, so these households have to build makeshift high platforms, while others have to raise their existing cots or beds. Moreover, most houses in both villages are built in such a way that almost every house has a flat platform above the ceiling under the roof – a place where households can store their valuable belongings. Sometimes, depending on the situation, some people also sleep on this platform. The households also have to erect makeshift bridges using bamboo to connect the kitchen and toilets, since most houses in both villages have a separate kitchen and toilet away from the main house. Many households' kitchens possess raised earthen ovens, while others have to build makeshift, raised platforms for cooking too.

After the household comes the question of managing the livestock and poultry. According to my primary data, every household in both villages more or less keeps livestock or poultry. Some poor households do not have livestock of their own, but they still raise others' based on *adi* (a sharing arrangement). Some farmers who have more high land in the homestead manage livestock by raising the cattle-shed higher using reeds (*kaas*), but many households from both villages told me that they relocate their livestock to the BRE embankment during floods and take animal feed there. To

feed the livestock at these times, they have to rely on straw, water hyacinths, banana leaves, rice husks, a urea-molasses mix and oilseed residues. For the poultry, many households have a makeshift cage where they keep their chickens and ducks during the floods. The following picture shows how livestock is managed on the embankment during the floods.

Figure 5.4 Management of livestock on the embankment

Still, for the poor women or widows, the management of livestock becomes very troublesome in terms of feeding and caring, and in this situation the owner either has to sell the livestock or the livestock dies due to lack of care. Akitara Begum, a woman of 37 who has been abandoned by her husband, told me that she had to sell her only cow during the flood of 2007, as she could not maintain it.

A boat or *bhela* (raft) is the only means of communication, especially for the villagers of Char Kalasona, though very few people in my study area have their own boats. Previously, many households had boats but most have sold them. According to my data, only five out of 84 households have their own boats now, so during serious floods most of the households make rafts using banana trees. Those households who have neither a boat nor a raft use others', usually a neighbor's – and Scott's moral economy works here for communication during the floods.

Coping with livelihood disruption is the most complex task for the villagers, especially for the day laborers; moreover, there is disguised unemployment in the agricultural sector during the flooding period (August to October). This means that those who previously worked in the agricultural fields become unemployed, so seasonality is one of the most important rural time factors. Chambers (Chambers, 1983; Chambers et al. 1981) has highlighted the impact of seasonality on health, nutrition and people's capacity for hard work in the normal annual cycle. The coincidence of a sudden hazard with the "hungry" season, (usually the wet season before crops have matured and are ready for consumption), when labor demands are at their highest, food reserves are low and diseases are most prevalent, can result in a much more severe disaster impact. This problem is very acute in my research site and this lack of "work and food" during what Chambers has called the "hungry" season is known as the *monga* season in Bangladesh. So, flooding and the *monga* together affect the lives of the poor very badly. This situation being recurrent, the Bangladesh government, along with DFID from the UK, has set up employment creation projects in the northern districts of Bangladesh, including Gaibandha, the aim of which is to cope with *monga* during the flooding season. The signboard stood outside an area office of the local *monga* coping strategy unit at Fulsori Upazila headquarters is shown below:

Figure 5.5 Sign outside the area office of the *monga* coping project at Fulsori Upazila

I visited this office and the area manager, Mr. Muskur Rahman, who told me that at present this project only gives training to women in terms of learning how to sew and weave. After three months training, the trainees are given sewing and weaving machines on credit so that they can earn and become self-reliant after paying back the credit. This is very positive and an encouraging initiative, but its scope is very limited - only twenty women from the Union have had this opportunity.

However, many villagers told me about the recent uncertainty and sudden changes in weather conditions. The elderly farmers in the village like Doctor Abed Ali and Kabizuddin Sarker (aged 86) told me that the climatic conditions in the past were very suitable for planned cultivation, but that recently things have become more unpredictable. They added that, nowadays, the drought continues when it is time for rain and that it rains continuously when it is time for sunshine, so, as a result,

cultivators have to cope with a greater level of uncertainty brought about by climate change, as well as the flood hazards.

Livelihood diversification is the key for most of the poor villagers, as it is said that "the poor are the strategic managers of complex asset portfolios" (Moser, 1998). Some of the respondents (about 15%) from my in-depth interviews told me that they had resorted to fishing for their livelihoods because during the floods all the submerged land becomes communal and so they had taken advantage of this opportunity. I asked them how they managed to fish because it requires a boat, to which they replied that they had borrowed money from an NGO called GUK and purchased boats as a three man group. They added that they had worked together and shared their earnings equally at the end of the work period. Some others (about 10%) reported that they had engaged themselves in boat operations by purchasing boats on credit from NGOs, but some households, finding no better alternative in light of their social position, had to rely on borrowing money from neighbors and relatives, and also on interest. For some families, coping during the flood becomes very complex; these families cannot take relief from the 'relief fund' provided by the government and the NGOs, nor can they adopt work activities like fishing or boat operations because of their social position and status. Those households with their heads as teachers at the primary school usually face this particular type of problem, and sometimes circumstances push them to take out loans from money lenders at high interest rates. However, about 20% of households have members who migrate to nearby towns and cities in search of work, and this supports the statement made by Shakur, based on a survey of squatters in Dhaka city:

> "The overwhelming majority of Dhaka squatters are rural destitutes who migrated to the city mainly in response to poor economic conditions (37%, particularly landlessness) or were driven out by natural disasters (25.7%, floods, cyclones and famines)."
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> (Shakur, 1987)

This has become a common phenomenon in Bangladesh; rural families who have become destitute as a result of the floods move to the cities in search of food and work. The table below shows the livelihood strategies adopted by the households in my study area during the floods:

Table 5.1 Livelihood strategies adopted by the villagers in Char Kalasona and Uria during the floods

Number of Households (out of 84)	Changed Livelihood/Means of Livelihood	Percentage
18	Borrowing	21%
17	Migration to towns (nearest 12 km) or cities (200/300km)	20%
12	Fishing	15%
08	Boat operations	10%
08	Domestic help	10%
07	Sale of valuable assets	08%
14	Use of savings/surplus assets	16%

However, the data in this table does not give the entire picture in terms of the livelihoods of the people who live on the margins, and there are some sporadic events which deserve attention. Sujju *Pagli* (*Pagli* means 'mad') is a widow (32 years old) who lives with her two children. She does not have any cultivatable land, except her homestead and when her husband died five years ago in 2005, they had a cow which gave milk. They used to earn the lion's share of their income by selling the milk from this cow, and after her husband's death, she managed to continue rearing the cow and it continued to provide an income to the family. However, misfortune befell them when flood waters submerged their house, and they could neither relocate to a safe place nor raise the land higher for the cow. As a result, the cow, the only source of income for this hapless family, died. After this sad incident, Sujju Begum (her original name) could not bear the abrupt impact and lost her mental balance, and since then Sujju Begum has been known as Sujju Pagli.

I was told another story by Nokila, a woman from one of the poorest households in Char Kalasona. Her husband collects *vangari* (old unused materials) from different houses in the village and sells them to the market, plus manages a family of five members with that money. During the floods, Badsha Mia, Nokila's

husband, cannot go out to work and cannot earn for the family, and as a result, Nokila sometimes goes out to work in others' houses to earn some extra money. Badsha usually receives some relief from the relief fund but that is not enough to maintain the family of five members, so one time Nokila went to the rich households where she works sometimes as help. Nokila told me that, at first the housewife of one of the rich households refused to help saying that they did not have enough money and food to help her. After some time, and upon discussion with her husband, the wife of the rich man agreed to help them on condition that Nokila let her only son of twelve of years of age work in the rich man's house.

Apart from livelihood diversification, many households, especially those with female heads in the family, adopt consumption diversification (Start and Johnson, 2004) by changing diets or using cheaper or more plentiful items, by reducing consumption through rationing or reducing the number of consumers (e.g. loaning livestock or sending family members such as children or the elderly to flood free areas). Sometimes, women remain half-fed or unfed because the total amount of food in their diet is inadequate for all members of the household. In these circumstances, the male members of the family use food normally, without thinking of what remains for the rest of the family members. These marginal families mostly rely on dry foods like *chira* (beaten rice), *muri* (popped rice) and easily available vegetables like water lily branches and *kolmi* (creeping plants which float on the water). Sometimes, neighboring households also co-operate with each other to share their home grown vegetables and other food-items, depending on their existing rapport. If any marginal households do not have enough social capital, that is, good relations with neighbors, relatives or other social powers, the suffering of those households may know no bounds. Maintaining a rapport with local powers or ruling political party members can allow a very poor household to cope with flood hazards with ease. This social capital (a network with local power) enables a particular family to gain the necessary relief from the fund, plus opens a door for earning a livelihood.

As I stated earlier in Chapter IV, the sanitation system in my study area is not up to the mark, so coping with health risks becomes a major concern during the floods. When all areas, including the floors of houses, become submerged in floodwater, it is practically impossible to keep any open water clean, and the village

custom is to use open water from ponds, rivers and canals for cooking purposes. As a result, when households use open, contaminated water for cooking, many people fall ill and suffer from diarrhea. Previously, many people died of cholera and diarrhea during the floods, but since 1998 with the widespread use of oral saline, it has been possible to save many human lives. This oral saline has been very effective in the treatment of diarrhea and it is very cheap and available everywhere; one can get oral saline in every grocery shop nearby every house. According to villagers' reports, there are five village doctors in Char Kalasona and about two MBBS (Bachelor of medicine and bachelor of surgery) doctors in Uria village. The five village doctors in Char Kalasona are not MBBS doctors, but are only trained to give primary treatment, and as a result, if some patients fall seriously ill, they have to be taken to Fulsori Upazila Hospital, which is about twelve kilometers from the village. However, what is positive in coping with health hazards is the feeling of urgency regarding the situation. The villagers told me that nobody talks about whether someone has taken a meal or not, but everybody talks about oral saline and halogen tablets (water-purifying tablets). Moreover, there has been so much training given on making the oral saline that even children can make it at home if they have some sugar or *gur*, a little salt and drinking water. However, Jorina Begum, the elected, female Union Parishad member for Char Kalasona village, told me that some women die almost every flooding period due to a lack of proper treatment or their delayed transfer to the hospital because of transportation problems. Though every household uses boats or rafts for communication in the locality, big problems occur when someone needs to go to Upazila town or to the hospital. Previously, people had more boats for communication purposes, but now the introduction of boats driven by steam-engines has reduced the number of boats, allowing power to be monopolized by "a few rich boat owners".

Uria village, which is just beside the BRE, is relatively safe from the flood hazards every year, and according to the 34 households I studied in this village, this BRE was not normally submerged, even during the disastrous floods of 1987, 1988 and 1998. The main problem for the villagers lies in breaches of the embankment. According to the Chairman of the Union Parishad, as well as the villagers, breaches in the embankment have occurred during all the major flooding years. In response to the

question: why do breaches in the embankment occur?, the Chairman replied that due to the many settlements on both sides of the embankment, it is not intact and as smooth as it was in the past, or as it should be if it is to function properly, and when I walked on the embankment, I observed proof of this statement. Another problem occurs in the maintenance of the sluice-gate for the embankment. Sometimes, the flood water enters through the gate even though the gate is kept closed, but when I talked to the local representative of the Water Development Board (WDB) in Gaibandha, he denied any mismanagement on their part.

The people of Uria village face flooding in a different form to those in Char Kalasona, as floodwater inundates suddenly and at greater speed than on the normal flood-plain; it may occur at the dead of night when everybody is asleep, as happened (elders' reports) in 1988. Therefore, flooding caused by breaches in the embankment causes loss of life, livestock and crops, because attempts cannot be made to prepare for and minimize the losses. However, as soon as the floodwaters rush through the village, the villagers first try to safeguard their valuable belongings in the household, relocate quickly or manage the livestock on the embankment and, if possible, harvest the crops early. The next strategy the villagers adopt is to gather people together and try themselves to repair the breaches in the embankment by adding more earth to the areas where there have been breaches. Sometimes, when the flooding occurs through the mismanagement of the sluice-gate, some villagers go to the local WDB in Gaibandha and put pressure on them to make the sluice-gate work properly.

The communication system in Uria village is also slightly better when compared to that of Char Kalasona. There are two *kacha* (non-metalled) roads which connect the embankment to Upazila town, but during the flooding season these *kacha* roads are underwater. However, according to Chand Mia (aged 57), a key informant for me in Uria village, they can transfer the serious patients to the Upazila hospital in an hour with the combined transportation of a dinghy and a rickshaw-van. Chand Mia added that the poorest households living in the worst housing condition cannot stay any longer in their houses after a sudden inundation. These households, in most cases, take shelter on the embankments by making temporary tents, though sometimes these homeless people are taken to the flood shelters. For their livelihoods, these people

depend on relief, loans or credit from the NGOs, or borrow from neighbors or relatives.

Finally, coping with floods is a complex process, depending on the individuals' and/or households' circumstances and capacities. Many coping strategies which are taken-on by individuals or households are quite instant and cannot be calculated because these steps are adopted based on emergency situations (so that human life is given more importance than livestock or property).

5.2.3 Post-flood Coping Mechanism/Rehabilitation

As soon as the flood waters recede, the flood-stricken people of Bangladesh start working again to get back to 'normal' life. Interpersonal relationships and kinship ties often play a vital role in the post-flood rehabilitation process. People who take shelter in the flood shelters return to their households and mend their damaged houses and sanitation facilities. According to the data I collected from the field, many households then have to borrow money to repair their damaged households.

For the regeneration of economic activities, the poor day-laborers grow vegetables in their homesteads and engage in house-repairing activities. The rich people start anew by collecting seedlings from non-flooded areas to cultivate early *boro* (an HYV paddy), whilst some also cultivate late *amon*. In my study area, I found that many farmers cultivate a late *amon* variety called *ganjia*. Some others reported that they get involved in fishing, as the fish catches are plentiful when the water recedes. Furthermore, some farmers, those who do not have enough to invest, start cultivating non-tillage wheat and maize. The villagers informed me that the government also comes forward in give agricultural loans to those farmers who have their own land, plus initiates employment generation activities for the poor by taking up projects like Food for Work (FFW) for infrastructure reconstruction.

5.3 Summary

This is the most important chapter of my thesis, as it elaborates upon the continuing struggle of the people of Char Kalasona and Uria village in Gaibandha District, Bangladesh, where flooding is a recurrent hazard. The local government also takes part in this struggle with a view to helping people to cope with the situation.

Centrally, this area is marked as a 'risky' zone; and as such the local government at the lowest level (UP) provides satellite forecasting and warnings, relocates flood affected people to flood shelters and distributes relief materials in the form of food, medicine and clothes, despite complaints of massive irregularities and nepotism in the management of the distribution process.

However, household level strategies are the key to coping with recurrent flood hazards, and here households initially prepare their homesteads including their sanitation systems and cattle-sheds, and carry out the premature harvesting of crops in order to reduce the negative effects of the floods.

During the floods, household members work together to save their lives, property, livestock and crops. Some households take shelter in the flood shelters, some relocate their livestock to the embankment while others migrate to the nearby towns and cities looking for work and food. For communications, every household uses a boat or raft, but for many households, simply getting access to a livelihood is the main struggle. Some adopt fishing, some operate boats, some depend on relief, loans and borrowing, while others seek help from neighbors, relatives or local political leaders. However, some households endure untold suffering, beyond the above coping generalizations.

Post-flood coping mechanisms are intended to rehabilitate households or get back to a 'normal' life. Those who have more land and other resources start anew and recover quickly, but the poor households usually fall back into the debt trap in order to regenerate their economic activities, despite government efforts through agricultural loans and employment generating projects like FFW.

Coping with adversity is complex and cannot always be placed into neat categories. Some coping steps are taken instantly based on the emergency situation in hand as well as the resources and capabilities available.