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CHAPTER 11. **Gender and Society in Bangladesh's
Flood Action Plan**

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Author Summary

This chapter discusses the integration of gender-related issues and other social constructions into a national-scale development program, Bangladesh's Flood Action Plan (FAP). The program, based on thirty different studies of flooding in Bangladesh, began in 1989 and ended in 1995. Every phase of the FAP, which was originally intended as an engineering and planning exercise, was marked by complex machinations of several economic, political, and social interest groups. In response to criticism, a Gender Study was added to one component of the FAP, the Flood Response Study, in 1991. The results of the Gender Study focused attention on the unrecognized role of women in agricultural production. Although the effects of the Gender Study on the FAP were mixed, it may serve to broaden the social perspective of future development programs.

Introduction

Foreign aid programs operate within sometimes difficult donor-recipient power relationships. Requirements to reduce government spending or otherwise change economic and social processes are common and controversial aspects of contemporary aid programs. Recipients may want aid but not want to comply with its terms and conditions, and some among the recipients may challenge the wisdom of accepting assistance at all. Such tensions, which exist to some degree in most international development projects, can produce byzantine relationships among donors and aid recipients in large projects. In large, long-term aid programs, the interests and agendas of "insiders" and "outsiders" may come to intersect and cross, despite obvious differences among the various parties. Some foreigners may join with some local people against other coalitions of foreigners and locals, and so on. Anthropologist Sarah White describes such overlap Bangladeshi "women and development" programs:

To maintain that foreign aid has had a highly significant impact on the way that gender has figured in public discourse in Bangladesh is not to assume any simple opposition between outside intervention and some kind of indigenous culture. On both sides there is considerable diversity, controversy, conflict and manipulation of the issues to suit particular ends. It is not true that local gender relations are set and specifiable, as many "women and development" approaches assume. Rather, gender is a

"contested image" also within Bangladesh society, and external intervention articulates and integrates with this. (White 1992)

This chapter discusses the integration of gender and other social considerations into a national-scale development program, Bangladesh's Flood Action Plan, here referred to as the FAP (see figure 11.1). The FAP was a program composed of thirty different studies of flood problems and issues in Bangladesh that began in 1989 and ended 1995. It was funded by a consortium of fifteen donors, including the World Bank, which at times served as donor coordinator. The government of Bangladesh created a new unit, the Flood Plan Coordination Organization, to oversee the project. Every phase was marked by the complex machinations of several economic, political, and social interest groups. The stakes were high: successful planning efforts might result in lucrative future construction contracts, but poorly planned flood control structures might harm the delicate delta environment and human livelihoods.

The FAP began as a response to severe floods that covered nearly three-quarters of Bangladesh in 1984, 1987, and 1988. These floods disrupted the lives of residents and received significant media attention, arousing international concern for the people of Bangladesh. The final outcome of the FAP was to be a set of plans that would give Bangladeshi farmers enough protection from floods to allow them to increase food production. This improvement, it was argued, would ensure an adequate food supply for the increasing population into the next century.

The thirty FAP studies were meant to serve this common goal. Some were designated as supporting studies that would provide essential background information to five regional teams developing local flood action plans¹. The authors of this chapter worked on one such supporting study, the Flood Response Study, funded by the U.S. Agency for International Development, which investigated the flood experiences of 2,264 households in thirty villages throughout the floodplains (see ISPAN 1992c)². Another, British-funded, supporting study investigated the experiences of communities that already had flood control devices in place and compared them with the experiences of some communities that did not (see Hunting Technical Services Ltd. 1992).

Two kinds of action were planned. One was flood control—the design and construction of embankments or other structures to control water flow during the rainy season. The other was called "flood proofing"—the development of ways to help local populations survive floods with minimal disruption of work and social life. Socially defined programs were never given high priority, but they did serve to broaden the scope of some follow-up projects.

The Flood Action Plan was surrounded by controversy from its inception. Its scale and cost (more than U.S. \$155 million) were grand. A coterie of Bangladeshi and foreign critics outside the FAP continually questioned whether the program represented the best use of such a large amount of money. There were numerous disputes both inside and outside the FAP about the ways in which construction planning, cost-benefit analysis, social analysis, environmental protection, and other FAP activities could or should relate to one another. Outside critics alleged that conflicts of interest pervaded the program.³ The case against the FAP is summarized in Adnan 1991 and Haggart 1994.

One debated point was the definition of the much-discussed "flood problem," which in the FAP's view meant riverine flooding but not the cyclonic storms and tidal waves that periodically devastate coastal lands. Bangladesh, once the eastern part of the colonial Indian state of Bengal and an independent nation since 1971, is situated on the delta of the Ganges, Brahmaputra, and Meghna Rivers (see Figure 11.2). During the summer monsoon season (May–October), heavy rainfall normally causes water levels in one or more of these rivers to rise. Human and animal life is more or less adapted to the delta environment. Village homes are built on high mounds. Floodplain fishes are an important part of the Bangladeshi diet, and floods provide the conditions necessary for the fish to spawn.

Bangladesh's official language, Bengali, distinguishes normal "seasonal heavy rain and flooding" (*barsha*) from unusually deep and prolonged "severe flooding" (*banna*), which may drive people from their homes and endanger livestock or crops. In a normal year, 30 percent of Bangladesh's land surface is flooded by overbank spills during the monsoon season. But in a severe flood year, nearly all the national territory may be underwater⁴ (see Figure 11.3).

Monsoon season problems of greatest concern to the general public include not only unwanted water flow but also drainage congestion and waterlogging caused by railroad lines, roads, and even flood control structures themselves. Flash floods, resulting either from normal processes or from breaks in embankments, are another source of danger. Local experiences of floods and reactions to them vary from year to year and from one section of the country to another. Thus, it soon became evident that there was no single, clear "flood problem" for the FAP to solve.

Introducing a Gender Focus

Because the FAP framework, as defined by the government of Bangladesh and most donors, emphasized the mechanical aspects of flooding and its

control, government officials showed little interest in the social effects of flooding. Nonetheless, several FAP studies did include social research along with mechanical studies of water dynamics, and eventually the government and like-minded donors modified their approach somewhat. Outsiders were especially critical of the early lack of attention to women's interests on the part of the government of Bangladesh and the U.S. Agency for International Development (AID).⁵ In response to noisy criticism at a 1991 workshop, the U.S. government, with permission of the government of Bangladesh, added a Gender Study component (our project) to the AID-funded Flood Response Study. At first, the consideration of women's points of view made some people in both the donor and the recipient camps nervous. But outside critics were politically troublesome, and quieting them was a priority. Bangladeshi politics, services, and development schemes were (and still are) largely in the hands of men, and thus the contribution of women to agricultural production—a key goal of the FAP—was not widely acknowledged in policy-making circles.

Such biases tend to become self-perpetuating, as several generations of development researchers in Bangladesh have observed. One early report observed, "People in foreign agencies, evaluators and the elites of [Bangladesh] have no confidence in women, nor do they think that money spent on them will actually help the development of Bangladesh" (McCarthy, Abdullah, and Zeidenstein 1979, 375). The challenge facing us as FAP gender researchers was to determine whether it was necessary to include women's concerns along with men's in this significant environmental planning effort. If we found that it was, we would then have to persuade policy makers that women had standing to be included in new ways in water development projects and programs.

Interviewers for the Flood Response Study were encouraged to write case studies on subjects that interested them, and some of these focused on gender issues related to floods. These case studies helped us to understand many of the dilemmas facing women during severe floods and described some women's coping strategies. Rahima was one of the first to tell her story:⁶

Rahima

Rahima is a housewife. She is thirty-six years old and has two sons and one daughter. Her husband is a sharecropper. The family lives in Chhoto Bashalia Village in Tangail District. At flood time, Rahima's house was underwater for fifteen days. This case study describes the problems Rahima faced during the 1988 flood and how she managed to save her family from danger.

She was very disturbed by the unclean and dangerous conditions in which they had to live during the flood. Their house was surrounded by paddy fields, and at flood time all sorts of creatures came to her house from the fields. This gave her the feeling that the place was filthy. Also, snakes came, flushed out of their underground hiding places, into the house looking for dry places. Her fear of snakes kept her awake at night. She tried to keep her children, especially the youngest one, on the bed all day so that they would not fall into the water and get leeches on them. Of course she also very much feared that her children would be bitten by snakes.

During the flood time Rahima fed her children early and took them to a neighbor's house at night to sleep. She was afraid to have them sleep in the house because of the snakes. Her husband, who insisted on sleeping in the house [to prevent burglary], demanded that she keep him company. So she had to spend her nights in the flooded house without her children and in a state of fear.

One night she saw a poisonous snake wrapped around the neck of the vessel (*koishi*) in which she kept rice. She had that vessel on the corner of the bed, so she was terribly frightened and called to her husband. He, however, did not show any anxiety and went to sleep, but she could not sleep the whole night. Even after this frightening incident she could not leave the house at night.

Her kitchen garden was only partially submerged by the flood waters. Although the fruits and vegetables she grew were not sufficient, the family was fully dependent on this source of food. Every day she had to go by herself through flood waters barefoot to the garden to gather her produce, but she felt this was very difficult and unsafe, mainly because of snakes.

For cooking purposes Rahima made a portable mud stove before the flood time, and she gathered some dried leaves and twigs, straw, and wood for fuel. She stored her fuel on a tree, and kept a bamboo ladder to climb up and get it. She did this job alone, as she is always in charge of cooking and feeding the whole family.

As her husband was quite aware of the bad effects of drinking and using flood water, Rahima had to collect water from the nearest tubewell, which was between a quarter and a half a kilometer away in Member's [that is, an elected union or area council member's] house. This was not an easy task. Each day she walked barefoot through the water with her pitcher (*koishi*) on her head, constantly aware of the possibility of being bitten by leeches. Because of the rules of society, which she has to obey, she had to do this job. Under no circumstances would her husband ever go and get drinking water; and because the job was so hard, she could not send her children to do it.

The division of work in the household meant Rahima had to do a lot of extra work, and she suffered from mental pressure too. Though men do some things during flood that they otherwise do not do, the burden of work

falls mainly on the woman's shoulders. At times her husband became very impatient and petulant. He did not want to help her with her housework; rather, he decided to stick to traditional men's work. He took on a passive role. When he became angry she did not quarrel with him. She just accepted the situation and went on with her work. (Report collected by Kazi Rozana Akhter)

Rahima's was a situation like others we encountered in which the customary division of labor was only slightly modified during the severe flood crisis. Also like others, Rahima made good use of her limited resources. In her struggle to feed her family during the flood, the vegetables she had grown were of life-saving importance (see Photo 11.1).

This family relied on local "patron-client" power relationships cope with the situation, as did others we encountered. A prominent household provided Rahima's family with access to safe drinking water; other villagers also mentioned relying on local elite families for loans or food to survive the severe flood and its potentially devastating economic aftermath.

FAP Studies on Women and Floods: An Overview

FAP researchers working on at least eleven different studies, including ours, reviewed gender issues from a variety of perspectives. Nine studies devoted substantial attention to women's concerns, and two gave gender issues minor treatment (see note 1). From this large corpus of data and recommendations emerged some common themes relating gender to the FAP. Virtually all the studies were concerned in one way or another with women's economic position vis-à-vis men's. Another common theme was the division of labor within rural society and the ways males' and females' normal roles and responsibilities were affected by floods and their aftermath. The distinctive position of female-headed households was another gender-related topic receiving attention in more than one FAP study.

Economics, Gender, and Floods

Economic status affected people's flood experiences more than did any other factor. Wealthy people were far less disturbed by severe floods than were poor people; men were less disturbed than were women of the same socioeconomic class. Gender also affected people's capacity to cope with severe floods because of women's weaker economic position in Bangladeshi society. Key elements were women's employment, assets, and uses of credit.

The largely poor and landless Bangladeshi population experiences hunger every year during the monsoon season, when there is not enough day-labor employment to enable people to buy their daily food. The ruinous economic impact of severe floods, during which there is no day-labor work at all, on families already chronically seasonally unemployed is an intensified version of the hunger they endure every year. Some of the worst problems caused by severe floods, then, are more the result of economic inequities than the result of the floodwaters themselves. Most of the FAP studies of laboring people underscored some well-known facts of life in Bangladesh. For one, the majority of poor women not working in subsidized employment programs are employed as household servants or post-harvest workers and are paid not in cash but in meals and perhaps some grain. Their husbands (if they have husbands), however, are more likely to receive daily wages for their labor. The Noakhali North Drainage and Irrigation Project (Southeast Regional) quoted upper- and middle-class farmers' wives as saying that **it** was difficult to find female laborers to help during the harvest because poor women were employed in subsidized Food for Work jobs with CARE. According to the women working in these subsidized jobs, the remuneration for housework was so minimal that **it** was not worth their while to take such jobs if they could get any others (Sir M. MacDonald and Partners Ltd. 1992).

The Land Acquisition and Resettlement Study found that despite suffering economic losses when displaced by government land acquisition for flood embankment construction projects, destitute women seeking laboring jobs in those same projects were denied these moneymaking opportunities (Multi-disciplinary Action Research Consultants 1992). This case represents an extreme example of unjust gender discrimination, but **it** is sadly typical of a general situation in which lesser economic opportunities for laboring women reduce their own and their families' capacity to recover from economic dislocation. Differences between typically male and typically female assets affected the flood experiences of men and women. Women's hold on major economic resources, primarily land and draft animals, is weaker than is men's, and what women do have is less valuable than what men have. Their possessions (jewelry, kitchen utensils, small animals), often referred to in Bengali as "small things," are sold or mortgaged first to help their households survive.⁷ This represents a rational decision on the part of the family, as women's things are not as important economically as the "big things" men tend to own, the forced sale of which is considered tragic. Despite their lesser economic significance to the family as a whole, however, the sale of a woman's possessions may leave her with no economic reserves whatsoever.

Borrowing money is one means of recovering from a flood; some of the FAP studies investigated men's and women's uses of credit. The Northwest

Regional Study found that several women had taken loans at extremely high rates of interest and sold off valuable assets in order to physically survive. This report commented that such actions could be financially ruinous to families (Overseas Development Administration 1992). Our Gender Study found that borrowing money was part of the coping and recovery strategy for two-thirds of the eighty-six women in our subsample (more than three-quarters of the landless), who had used monsoon season loans to meet basic survival needs (72 percent) or for purposes such as house repair or health care.

The flood experience of a destitute woman, Korimon, depicts a pattern of economic deprivation by now sadly familiar to most social researchers in Bangladesh.

Korimon

Korimon and her family live in Rampur Village in Brahmanbaria District. Every year, river erosion takes away a good portion of land in this village. By 1991, the village was little more than one small neighborhood with houses jammed together in its shrinking space.

Korimon's family is from the southern neighborhood. Korimon is the second daughter of Mustafa Miah, a day laborer who lives in another village of the same Union (jurisdiction). Poor Mustafa Miah could not give any of his children an education due to shortage of money. Korimon had to go to work at a very early age. When other children started going to school, she was collecting cow dung and also shaluk (*shapla* root) in the water. Sometimes she used to go to the field to give tobacco to her father and to help him in his work. From an early age her life was one of hardship.

As she grew up her father worked hard to arrange a marriage for Korimon. So one day she got married to a man of Rampur Village. Korimon went to her husband's house with a lot of things in her mind. She wanted to make a happy family. Her husband was a very nice man. He loved her, and they were leading a happy life. Korimon was not at all unhappy in her husband's family. And she managed quite well with her husband's earnings, even though he was only a day laborer. She had her first child three years after getting married.

This happiness did not last long. Within one year her family faced a terrible natural disaster. Huge flood waters destroyed her house. They became refugees and took shelter on the property of a rich man, where Korimon and her husband constructed a thatched hut. As the flood waters started receding her husband died of cholera. This time it seemed to her that she had lost everything. This was the end of her married life, the beginning of a new chapter in her life.

Korimon had to look for a job to support herself and her baby boy. Going to other people's houses seemed to be the only option she had left.

But she found it was very difficult in this village to get any sort of work, because half the year this village remains under water. At that time there is very little chance of getting any work. Only one or two months in a year could she get some work; the rest of the time she could do nothing. Finding it impossible to support herself and her boy, she had to go for begging. One or two months in a year she worked in other people's houses and the rest of the time she begged from door to door.

The toughest time for Korimon is the [monsoon] season. In reply to the question, How do you live at flood time? Korimon said, "Flood has taken everything away from me. It has taken my house, my husband, my happy family life and everything else. It has taken my only shelter place. Now, as soon as flood water comes, I go to Nasirnagar or to some other places where there is no flood water. At flood time, no one wants to give money or food to beggars." Sometimes she goes without food for the whole day; and sometimes she does not eat but still manages to feed her child.

According to Korimon poor people like her in this village do not get relief supplies. Sometimes they hear about relief, but they never get it inside the village. If they go from "door to door" [office to office] in the *upazila* (regional headquarters), then they might get some help.

Korimon still feels for this village. Once she had a house in this village, though she lost it. In the same way she lost her husband. She can not forget all those memories. She loves the people of this village. That is why she does not leave this place. She constructed a small thatched cottage in the rich man's property and lives there. This house is not waterproof. When it rains water runs inside the house. Even then, she lives there. When her husband died she could have gotten married again, but she did not. She thought about her child. She would rather spend the rest of her life with her only child. That is why without a proper house and without a husband she is still living in this Rampur Village.

Korimon's life up to the time of the interview represented many women's worst fear—a series of grievous losses driving a poor, illiterate widow to beggary. Riverbank erosion contributed greatly to the family's decline by taking their house,⁸ and polluted floodwaters may well have caused her husband's fatal cholera. It is noteworthy that despite her total dependence on charity, Korimon did not receive public relief assistance during times of severe flood. Like Rahima's, her family depended heavily on a patron-client relationship to survive hard times.

Gender-Based Division of Labor

Information on the division of household labor between the sexes highlighted the need to avoid stereotypes about the economic significance of women's agricultural work as compared with men's. Women are very much involved in agriculture in Bangladesh, if agriculture is seen as including more than just field cultivation of staple crops such as rice. In its broadest sense, agriculture includes many tasks assigned

to women, such as animal husbandry, food preservation, homestead cultivation of fruits and vegetables, and harvest and postharvest activities, as well as field crop production. But even in crop production, women's role is more significant than is usually acknowledged in government circles. One important, but not often recognized, female responsibility in crop production in Bangladesh is the storage and germination of seed grain.

In storage, rice and seed are the women's province. They watch over them to prevent loss from dampness, insects, and rats. . . . They determine how much is needed for the family (and therefore how much can be sold), when it is to be husked or milled . . . , and how much each person gets. . . . It is the responsibility of rural women to test the seed, which they have stored, for germination quality before men take it to the fields to sow. (Abdullah and Zeidenstein 1982, 30, 24)

Our Gender Study collected detailed information on the division of household labor during floods, as did some others.⁹ Nearly all routine household tasks are likely to be affected in one way or another by floods. There are various ways in which this occurs. Some tasks will of necessity cease during floods: plowing, planting, and irrigation of crops or watering of kitchen gardens, for example. Some tasks, such as open water fishing, are likely to be problematic in rough currents and monsoon storms; others, which must be performed consistently to maintain the family and its animals, become extremely difficult—sometimes impossible—during severe floods.

Men's responsibilities during floods typically are more limited than are women's. Men build rafts and platforms, purchase food, trade, and fish; they also gather some fuel and fodder. Women set up stoves and cook, gather fuel, fetch drinking water, care for small animals, and protect and redry stored food and seed grains. Men and women cooperate in caring for children and large livestock, building indoor platforms, guarding the home, helping neighbors, and repairing damaged homestead mounds (*bhiti*). Men and women both care for animals during floods.¹⁰ In the northeastern district of Sunamganj, men and women work together after severe floods to rebuild homestead mounds. Women, however, do most of the routine mound repairs and mud replastering after each monsoon.¹¹

Most of the normal work of adult women—protecting granaries and seeds, cooking, getting drinking water, and caring for animals, for example—is in the required-but-difficult category. Chores such as getting fuel or drinking water, usually performed by children or teenagers, may be taken over by adults during floods because they become especially difficult or dangerous.

The 1988 flood experience of Nahar, a woman of Tangail District, shows how one ingenious and determined woman struggled to protect her livestock, conform to modesty standards, and perform household chores.

Nahar

Nahar is a housewife whose husband works as a day laborer. They and their son, a student in the ninth grade, live in the village of Chhoto Bashalia in Tangail.

As the water level rose Nahar became very worried and started preparing for a flood. She built a raft out of banana tree trunks, and she gathered fuel, storing it on a tree. To keep the bed above water level, she gathered some bricks, wading out into the flood water to search for them. She succeeded in raising the height of the bed by putting the bricks under its legs.

In preparing food, she found that fish were easy to get but not easy to keep. Once she had some live fish to cook on the raft but as she had no place to put them, they all jumped back into the water while she was getting ready to cook them and were completely gone.

She was especially anxious about the safety of her cows and goat, which were her only source of income. She was paying for her son's education by selling their milk, although her husband objected to her doing this. He wanted the boy to go to work as a day laborer like himself instead of going to school, and he had beaten her a few times for encouraging the boy to continue his education. The public road was the only safe, dry place where she could keep her animals, so she walked about one kilometer through the water with the cows and goat and kept them there during flood time. Every day she brought straw she had stored for her cows, and when the supply was exhausted she collected water hyacinth for them. Feeding the goat was even more of a problem. The goat needed leaves. But, as many others were picking leaves for their animals too, she quarreled with her neighbors about rights to village trees. Because he got no income from the animals and they were her property, her husband was unwilling to help her with all this work. He even seemed to enjoy her trouble and spent the days gossiping in the marketplace.

When asked why her husband did not help more with household chores, she replied, "This is not the work of the male. His duty is to build and repair the house."

Nahar's bland comment accepting her husband's lack of effort masked the fact that the 1988 flood had exacerbated a marital conflict about continuing their son's education. Her husband's refusal to help care for the livestock was not typical of households we interviewed; most couples cooperated to protect animals. Nahar, however, used her animals to defy her husband's wishes, educating her son so that he would have a chance to escape the menial labor rut her husband was in.

One lesson a planner might take from this report is that spouses need to be treated as individuals because they may have different economic stakes at risk in a severe flood. Most government programs still operate on the assumption that a married couple's interests are uniform and adequately represented by the husband.

Female-Headed Households

Female-headed households account for 9 to 15 percent of all households in Bangladesh and possibly as much as 25 percent of all agricultural households. (Hamid 1992). There are several reasons for considering female-headed households separately in development planning; one of the more important ones is that such households tend to be small and economically vulnerable. But despite their handicaps, female-headed households in developing countries such as Bangladesh too often are neglected by most service providers (agricultural or veterinary extension workers, for example). It is common for agencies in Bangladesh to direct services to men on the assumption that this will benefit the women in their households. Thus, women without husbands or sons to represent their interests tend to be treated dismissively by officials conducting business in offices where women are rarely seen or, even worse, in rural markets, defined as "for men only," where women are treated rudely and insulted. Three of the FAP studies, the Flood Response Study, the Environmental Study, and the Fisheries Study (see note 1), gave special emphasis to female-headed households.¹²

The economic position of the female head of household is different from that of her counterpart senior married woman. Our study found that more women in female-headed households were employed outside the home than were women in the female sample as a whole. Another difference was found in landownership. In our total survey sample of 2,264 households, 4 percent of which were female headed, approximately the same percentage of female heads of households owned land (presumably most of it inherited from their husbands and kept in custody for their sons) as did male heads of households. This finding provided another reason to consider the special interests of female heads of households in the FAP. Because they controlled land, they had an even greater economic interest in the floods' impact on agricultural production than did other women. But their lack of male assistance put them at a greater disadvantage.

Analyzing the division of labor between the sexes, we found that female-headed households had different patterns from others. These women had responsibilities that women in other households did not. Tasks performed only by males in male-headed households, specifically by the male heads of households themselves, were performed by females in their households. These included going out into fields or marketplaces, plowing with a spade (*kodal*),¹³ planting seeds, transplanting (plucking and replanting) rice seedlings, weeding, and cutting crops.¹⁴ In the male-headed households, there were sufficient personnel to maintain more conventional divisions of labor.

Female-headed households were more vulnerable than others during severe flooding. It was clear that all or most female heads of

households—contrary to the stereotype of the sheltered female—were managing, for better or worse, “on their own.” If they were already poor, however, they were at risk of becoming destitute. If FAP planners wished to understand their concerns as people who own land, as agriculturalists, as wage laborers, and as people with the usual female obligations, there was no choice, we suggested, but to speak directly with them because of their typical lack of representation in the male social spheres.¹⁵

Mamata

Mamata is thirty-seven and has been divorced for seven years. Her husband was a rickshaw puller, and Mamata was his first wife. Since he divorced her, her husband has married three more times. Now Mamata lives with her son in Bararia Village in Tangail District. She makes money as a cigarette (*bin*) maker. She is paid Tk 2.50 (U.S.\$0.06 cents) for every 1,000 cigarette covers she makes.

Mamata lost her house in the 1988 flood. She used to live on the bank of the Pungli River, but her house was washed away by flood waters. She then went to live on an embankment with her ten-year-old son. She built a bamboo platform there for them to live on, and they stayed on **it** for one month. She put a mosquito net with some paper around the platform to maintain her *purdah* Ifemale seclusioni. One night **it** was raining, but there was no cover on the platform. So Mamata got completely wet. She just had to sit under the mosquito net and get soaked with rain water. There was no latrine, so she used to leave stool into the flood water directly from the platform, even though she was using flood water for cleaning purposes.

Mamata had become sick when her house was washed away by the flood water, just at the time she had to go to the embankment to live. She was suffering from dysentery, malnutrition, and fever. She became very weak from not getting any medicine, health care, or proper food.

Getting help at flood time was a big problem. She was too weak to get fresh drinking water from the nearest tubewell, and there was no one to help her. She asked one of her neighbors to get her a pot of drinking water, but she refused; so Mamata had to drink flood water. She became so sick that she was unable to take a bath for one month (the whole time she stayed on the platform), and her body and clothes smelled very bad. The only help she did get was from her eldest daughter, who was married and five months pregnant. She helped her mother prepare food on the platform. Though it was not proper food, somehow Mamata survived by eating it. Her daughter also helped her by getting medicine from the village “quack” [paraprofessional] doctor. Because she was pregnant, the daughter found it very difficult to walk against the current of the water. Once she fell down and almost got washed away. Apart from her daughter she did not get any help from other sources. Neighbors were not at all helpful.

This is an unusually bitter report of illness, poor sanitation, embarrassment, and extreme discomfort suffered by a female head of household who was isolated from normal sources of social support. It is interesting that Mamata found her married daughter to be her only friend in this situation. Married daughters are not usually so free to help their parents because marriage shifts women's allegiance and primary responsibility to their husbands' parents.

Mamata's comment about the lack of help from neighbors was not typical of others we interviewed. In fact, friends and neighbors often helped one another as much as they could while coping with their own problems, sharing food and even providing dry spaces in which to give birth.

Neighborhoods in Bangladesh, of course, are not the same as those in Western countries, whose mobile populations easily form and break mutual assistance relationships. In a village in Bangladesh, a high value is placed on friendship, but a neighborhood (*para* or *pratibeshi/ parshi*) is likely to be settled by cousins and siblings who are economically interdependent and whose reputations and relationships have as much to do with their parents and grandparents as with members of their own generation. Most rural households also are allied with local factions (*samaaj*) whose members provide all sorts of aid to one another in exchange for strict loyalty. Like positive bonds, familial and factional resentments and breaks also can span the generations, however. We did not question Mamata in detail about her situation, but it is possible that she was isolated because of some local conflict, perhaps one in which she had no direct role apart from being a member of a certain kin group or faction.

The Argument for Gender Balance in the Flood Action Plan

Like other crises, severe floods test people and relationships. They force difficult decisions and reveal deep "fault lines" within a community. Survival needs are social as well as physical, and mental pressures can seem intolerable. Every case of life on the raft or platform testified to women's resourcefulness and persistence in coping with adversity. None of these women, not even Korimon, took a passive approach to the problems she faced. Their stories belie official views of women's childlike dependence on male relatives.

Study findings eventually did demonstrate that women and men alike have standing to participate in programs and projects emerging out of the Flood Action Plan, though there never had been a question of

including men. The most important arguments for including women were as follow:

- Women have clear interests in the impact of floods on agriculture, the main sector to benefit from the Flood Action Plan.
- Women's normal household responsibilities¹⁶ are such that they shoulder a greater burden of household flood-coping activities than do men, most of whose normal responsibilities, except for shopping, cease during floods.
- Female household heads deserve special consideration in the FAP, because there are more female-headed households than most planners seem to think, and they are typically smaller, more economically vulnerable, and have unusual ways of performing household tasks when compared to male-headed households. Female heads must perform tasks that only males perform in homes with male heads. Female household heads were equally likely to own small plots of agricultural land as were the male household heads in our study sample and faced similar risks of crop damage in severe floods. However, in seeking public aid they were at a great disadvantage, as social mores make government officials typically reluctant to conduct business directly with women.
- Economic effects of severe floods on rural households are more significant than are physical effects. The physical effects are shared more or less equally by people of different socioeconomic classes, but more affluent groups are far less likely to suffer economically. Married women or female heads of household with independent economic responsibilities tend to have even less secure and lower-paying jobs than do poor men. Emergency borrowing patterns put women at greater risk than men of long-term flood-related economic loss.

The results of the FAP gender studies support the need for participatory approaches to local planning. Such approaches seem most likely to accommodate the inevitable complexity of interests - women's and poor people's included - in water management and flood control in Bangladesh.

Conclusion: Culture and Power in the Flood Action Plan

The FAP's social and gender studies stimulated much local and international discussion and debate. Conferences and workshops, which continued through 1995, at times were scenes of acrimonious disagreement about the FAP's approach (or lack of approach) to social change. Some Bangladeshi officials and donor country representatives continued to believe that it was inappropriate for the FAP or other water-oriented development programs to tackle basic social problems such as gender inequality. Others, hearing about women's and poor people's experiences during severe floods, broadened their concept of the FAP's goals and added social factors to their approaches. These debates set off powerful

feelings on all sides. One Bangladeshi official took strong objection in a public forum to the social change advice of people he called "hop, skip, and jump" consultants, people who rushed in and out of Bangladesh and had no serious commitment to the country. Another official incredulously asked us in a workshop discussion about gender, "What do you want us to do, change our whole society?" Bangladeshi and foreign critics of the FAP continued to accuse government officials of taking a hard-hearted approach to their own citizens' problems. Such accusations wounded those at whom they were directed, prompting outraged public responses. On and on it went.

Arguments that it would be inappropriate for a flood planning program to attempt to reform gender relations and other societal inequalities seemed at first to have a commonsense logic. But this logic is weak in the Bangladeshi context, in which water and human society are closely interconnected. Water regime modifications, even minor ones, have profound effects on all forms of life, humans included, over large areas. Water is, after all, the dominant feature of the landscape in most regions of Bangladesh. Therefore, the capacity of civil engineering projects and programs to affect life cannot be denied.

Power relationships affected the local and international FAP process in various ways. An early debate took place among the G-7 industrial nations about whether or not floods were always disastrous in Bangladesh. Early warnings stressed the potential for flood control structures to harm the region's delicate delta environment. Even as they signed on as FAP donors, the large international powers continued to disagree among themselves about the direction the FAP should take, and throughout the life of the program they used their clout with the government of Bangladesh to tilt the research and planning agenda one way or another.

Within Bangladeshi society, the FAP studies emphasizing gender and social issues tested some existing power relationships. As our case studies and others demonstrate, in times of crisis, poor people in rural areas of Bangladesh depend on patron-client ties to locally influential people, ties still basic to peasant life worldwide. These ties, though necessary under present conditions, are maintained at a high price to the poor, who tolerate exploitative working conditions and survive at only minimal economic levels.

The most serious issue raised by our Flood Response Study was that of socioeconomic class as a key factor determining people's ability to cope with severe floods and their aftermath. The observation that economics caused more problems than floodwaters was, in its own way, a radical one. Had this observation been heeded (it was largely ignored), it would

have shaken the nation's class system and the bureaucratic service delivery arrangements that reinforce it.

All the studies that included social analysis provided an opportunity for multiple rural voices to be heard in the nation's capital. But the voices were heeded by only a few elite decision makers. Nongovernmental organizations, though more important in Bangladesh than in many other developing countries, never were formally included in the FAP. Some, however, managed to create a brief political stir by organizing an anti-FAP demonstration in Tangail District in 1993.

Gender relationships—though they vary by region, class, and religious orientation—also affect flood-coping processes. The economic and social powerlessness of women relative to men handicaps them during crises such as severe floods and their aftermath. Codes of modesty make shame and humiliation inevitable when women are forced to live on rooftops, embankments, or rafts. Women's customary lack of access to public spaces and their rude treatment in queues and offices discouraged all but the most fearless from seeking certain kinds of assistance in a crisis.

Cultural values and meanings meandered in braided streams through the FAP, much as delta waters flow through the Ganges Delta. Vague and shifting ideas about the uses of the big rivers; about the dangers or benefits of floods, whether normal or severe; about proper (as opposed to actual) male and female roles and responsibilities; and about family and household organization underlay FAP discussions and disputes. Staff members of the technically oriented Ministry of Irrigation, Water Development, and Flood Control and some donor representatives were reluctant to acknowledge their roles as powerful social change agents despite pressure to do so. More comfortable with engineering plans and diagrams or staple crop production quotas, male officials participated in sociological or environmental discussions only with resentment and impatience. The Gender Study and other socially oriented FAP projects did increase their level of comfort with sociological discussion and broadened the views of some, yet those within the system who changed their views were, we have heard, disregarded by colleagues more firmly committed to existing procedures and approaches. The dialogue had no sweeping ideological or policy effect, but it absorbed much public and private energy for a few years and produced a few programmatic shifts.

One specific result of the FAP's gender discussion is a current initiative of the Ministry of Irrigation, Water Development, and Flood Control to encourage women's participation in local water users' associations. Such efforts are faltering, but the ministry is dedicating resources to the initiatives. Another result of the general clamor about including social factors was the writing, by a Bangladeshi-led work group, of guidelines for people's participation in the planning of water

regime changes (Adnan 1992). The guidelines received mixed reviews from the FAP audience, but they thd represent a position to which the government of Bangladesh was officially committed. Although future FAP-inspired projects and programs may continue to spark tensions, it is clear that adding a social and gender focus to the FAP served to expand the important, multivocal Bangladesh development dialogue in ways likely to prove socially and environmentally beneficial in the long run.

Food for Thought

Most of the chapters in this book examine the impacts and implications of water management projects. Here, we consider at a very human level that which prompts large-scale water projects in the first place. Flooding in Bangladesh is part of the natural cycle of the bioregion. Life on a floodplain requires people to develop strategies that allow them to carry on the daily functions of life while floodwaters swirl around them and to exploit the opportunities provided by regular flooding. The nutrient capacity of the soil is enriched by annual floods, and aquatic ecosystems thrive in the marshy settings. When the waters recede, people carry on their productive strategies—fishing, growing rice, cultivating gardens on mounds and levees.

Although flood times are always dangerous times, some floods pose greater risk than do others. In recent years, floodwaters have claimed hundreds of lives and washed away tens of thousands of homes. Bangladesh's Flood Action Plan was formed to design strategies for minimizing the adverse impacts of annual flooding. This chapter reports on attempts to introduce an awareness of the sociocultural dimensions of flooding into the Flood Action Plan's process.

In exploring the experiences and coping strategies of families affected by flooding in Bangladesh, we begin to understand how cultural values, traditions, and behaviors structure different experiences and create different burdens for men and for women. For reasons of culture and class, women are more vulnerable than are men to the disasters created by flooding. Yet "project culture" severely inhibited the authors' ability to get this point across to policy makers and flood plan engineers. The culture and power dynamics that influenced the way the plan was designed also created tensions and barriers to modifying the plan. Future efforts might benefit from a critical examination of the culture and power dynamics that make Bangladeshi women more vulnerable than men to disaster during flood times, the strategies utilized in surviving the effects of flooding, the potential role of government in improving women's ability to recover from flood-induced disasters, and the ways in which framing of the problem directly influences the design and implementation of response strategies.

RESOURCES

The Global Water Partnership has initiated an electronic conference on gender and water. Their website is <http://www.gwp.sida.se>

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NOTES

1. The Bangladesh Flood Action Plan (FAP) was a national-scale development program, funded by a consortium of 15 donors, including the World Bank, which at times served as a donor coordinator. The FAP was a program of 30 different studies of Bangladesh flood problems and issues that were begun in 1989 and completed in 1995.

- The Flood Control, Drainage, and Irrigation (FCD/I) Study, FAP 12, which analyzed the impacts of seventeen different projects and compiled substantial information on women's concerns (see Hunting Technical Services Ltd. 1992).
- The Flood Response Study, FAP 14, which covered thirty villages throughout the floodplain and focused on gender-related issues in a subsample of households—emphasizing female-headed households— in seven villages (see ISPAN 1992c). The Flood Response Study presented a framework for discussion of gender in the Flood Action Plan. The authors of this chapter were responsible for the design and implementation of the Gender Study, a component of the Flood Response Study.
- The Land Acquisition and Resettlement Study, FAP 15, which included interviews with twenty-seven women from displaced households and examined the destructive impact of the Jamuna Multipurpose Bridge project on their economic position (see Multi-disciplinary Action Research Consultants 1992).
- The Environmental Study, FAP 16, which incorporated focus group discussions carried out with women and men in the process of conducting special studies in three subject areas. This project also included a life study (with gender analysis) of *char* people living on sandbar islands of the great rivers (see ISPAN 1992a, 1993).

- The Fisheries Study, FAP 17, which included a "women in development" component in its socioeconomic analysis of fisheries-related activities and structures in four regions (see Overseas Development Administration 1994).

- The Flood Proofing Study, FAP 23, which included observations and recommendations about incorporating women's needs and interests into plans to lessen the harm caused by severe floods in vulnerable locations (see ISPAN 1992b).

Regional studies included the following:

- The Northwest Regional Study, FAP 2, in which 100 women were interviewed and asked to rank their own needs during flooding and in the context of general development (see Overseas Development Administration 1992).

- The North Central Regional Study, FAP 3, which, based on results of a household sample survey, compiled general comments on women's employment, household division of labor, and ways in which women's interests could be served in agricultural development planning (see BCEOM 1992).

- The Southwest Area Water Resources Management Project, FAP 4, which was limited to some general comments about women's employment patterns in the region and locally accepted stereotypic notions about the limited possibilities of expanding economic opportunities for women (see Sir William Halcrow & Partners Ltd. 1992).

- The Noakhali North Drainage and Irrigation Project (Southeast Region), FAP 5, which included a survey of ninety-eight female-headed households as well as focus group interviews. Participation data were based in part on sixteen women's group meetings, four in each zone of the area (see Sir M. MacDonald and Partners Ltd. 1992).

- The Northeast Regional Water Management Project, FAP 6, which included observations on women's roles in five case studies on locally initiated water management programs (see Shanwinigan Lavilin Inc. 1991).

All studies are available in Dhaka at the Flood Plan Coordination Organization's office or at the offices of the World Bank, Dhaka Mission.

2. The authors worked as consultants on the U.S. Agency for International Development (AID)-funded Flood Response Study (ISPAN 1992c) and Environmental Study (ISPAN 1992a, 1993) under contract with the Irrigation Support Network for Asia and the Near East (ISPAN) in Dhaka between 1991 and 1993. Rozana Akhter was responsible for the Women in Development component of the British-funded Fisheries Study from 1993 to 1995 (see ODA 1994).

3. Bangladeshis are well known for their love of debate and rhetoric, and very few members of the Dhaka elite managed to avoid discussion of the PAP during the first half of the 1990s. University professors took leave to serve as consultants to FAP studies. Others applied and were rejected. Some refused to work for the FAP and hosted regular meetings at which the program was criticized. Journalists, Bengali and European, gave running commentaries. Expatriates and Bangladeshi professionals crossed traditional boundaries and

formed friendships and animosities based on their opinions about the PAP—some leaking information and others publicly accusing one another at conferences, in articles, and in newspaper editorials of all sorts of official malfeasance.

The social walls separating FAP insiders and outsiders were not high, and internal documents were circulated more widely than some officials wished. (There was a widely resented tendency, in fact, for the government to regard all FAP reports as private communications unavailable to the public.) Relatives, friends, and colleagues disagreed about the program, which was a source of employment for large crews of otherwise unemployed or underemployed nationals. Some outsiders objected to the fact that such an extensive research program was controlled by foreigners and made efforts to form locally staffed research organizations independent of the foreign aid business.

4. Another widely discussed problem is sloughing, or erosion, of riverbanks as deltaic streams shift around, breaking down the region's typically soft soils. Besides eroding riverbanks, sloughing creates and destroys sandbar islands, called *chars*. These processes, although studied, were of marginal significance to the PAP because no engineering strategy could affect them. The AID-funded project included a detailed survey of riverine *char* peoples and landforms in six different regions (ISPAN 1992c).

5. Opponents of the FAP formed a group with shifting affiliations. Some were professional research scientists or independent intellectuals; others were representatives of nongovernmental organizations and the press. On a couple of occasions, opponents managed to rally demonstrations against specific government decisions, but they expressed themselves mainly at conferences and in printed critiques.

6. The case studies presented here were collected by Kazi Rozana Akhter and translated by Jesmin Akhter (Hanchett, n.d.). All subjects' names have been changed to protect their privacy.

7. Women can and do own cattle and goats, which they can purchase with low-interest loans from the Grameen Bank or other credit plans. They are more likely, however, to take young animals for fattening and resale or to hold rights to the milk production of other people's cows temporarily in their care.

8. Riverbank land in erosion-prone areas is often purchased by poor families at low prices from others seeking to retreat farther inland. Such purchases are, of course, worthless investments; but a landless family may be willing to take the risk to get a chance at landownership.

9. See the Flood Response Study (ISPAN 1992c); the Flood Control, Drainage, and Irrigation (FCD/I) Study, *Project Impact Evaluation Reports* (Hunting Technical Services Ltd. 1992); and the North Central Regional Study, *Human Resources and Socio-Economics* volume (BCEOM 1992). The division of labor has also been analyzed by social researchers over the years. Two basic sources are Cain 1977 and Cain et al. 1979.

10. This information was gathered in interviews conducted by the Flood Response Study team in a village in Jamalpur District.

11. T. Abdullah, personal communication, August 1992.
12. Hamid 1992, 119. Female-headed households are usually one of two types—de jure or de facto. The former are headed mainly by widows or divorced women. De jure female heads of households have full legal responsibility for their families and property. Households in which the husband is absent, typically working elsewhere and sending back support, are de facto female-headed households; the women are married but are managing affairs of the home without their husbands' assistance.
13. In our experience, women never plowed with plows.
14. This analysis was conducted by Jesmin Akhter.
15. This suggestion was received more sympathetically than were many others we made.
16. The responsibility for a specific job must be distinguished from its actual performance, as Abdullah and Zeidenstein (1982, 22) point out: "When we describe 'women's' work, we do not mean that it is done exclusively by adult women, but rather that this work is typically and traditionally the responsibility of women."

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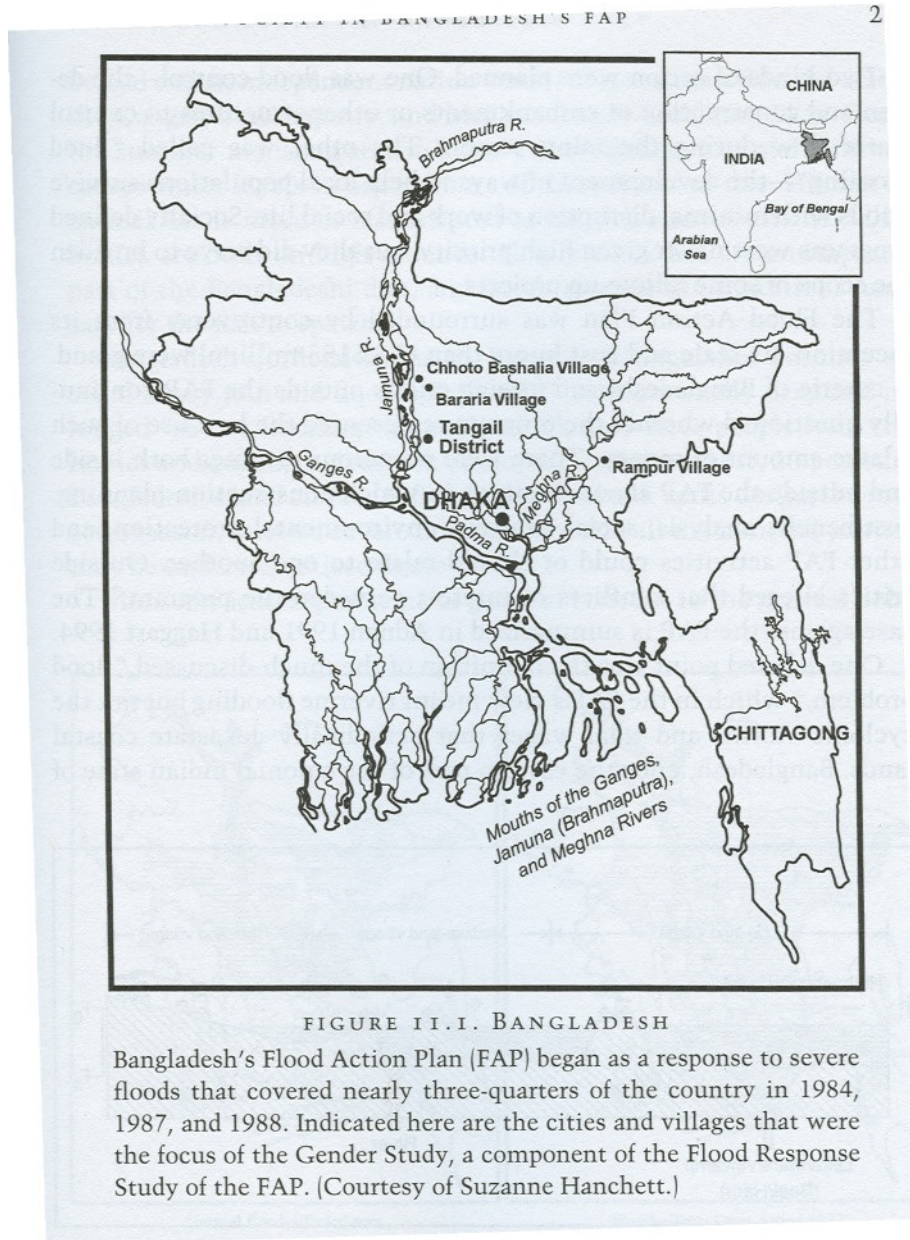
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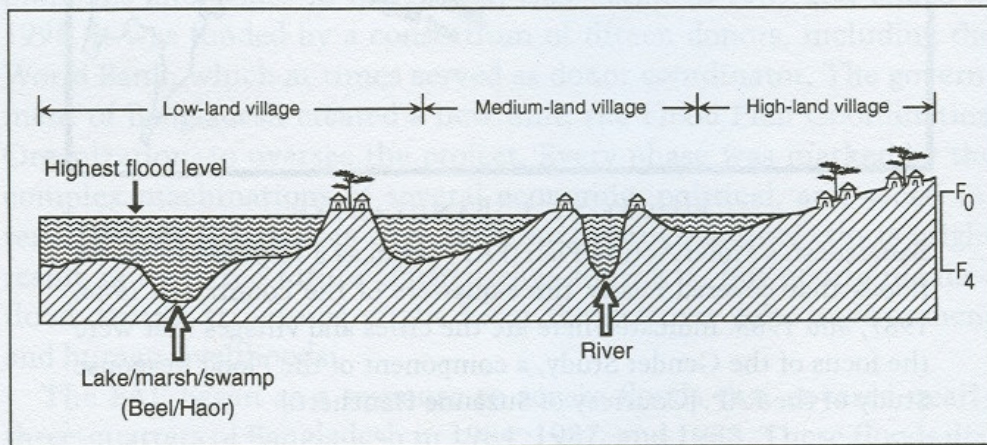
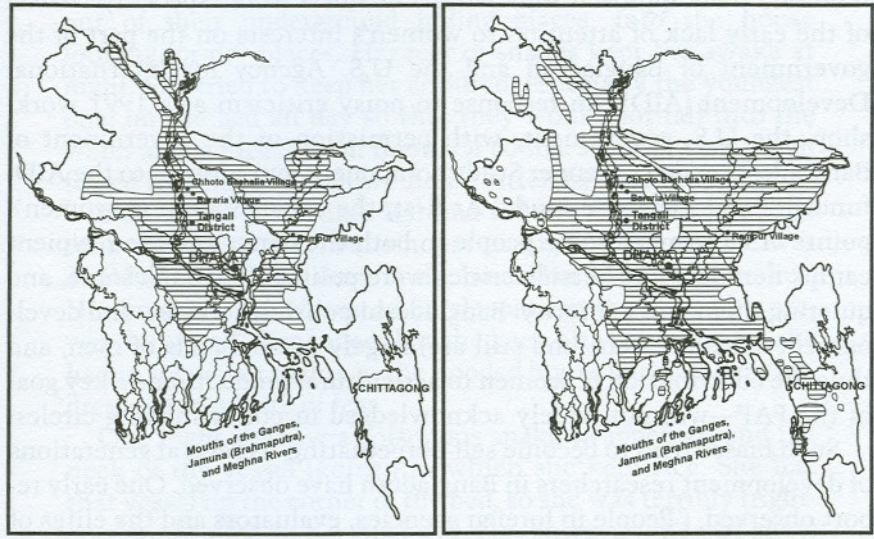


FIGURE II.2. VILLAGE TOPOGRAPHY IN BANGLADESH

During the summer monsoon season (May–October) heavy rainfall normally causes water levels to rise in the Ganges Delta. Human and animal life are more or less adapted to the delta environment. Village homes are built on high mounds. Floodplain fishes are an important part of the Bangladeshi diet, and floods provide the conditions necessary for the fish to spawn. (F-levels refer to degrees of inundation.) From Irrigation Support Project for Asia and the Near East, *Flood Response Study (FAP 14): Draft Final Report* (Dhaka, Bangladesh: Ministry of Irrigation, Water Development, and Flood Control, Flood Plan Coordination Organization, 1992).



Normal flood-affected area

Flood-affected area during 1974

FIGURE II.3. COMPARISON OF AVERAGE AND EXTREME FLOODING IN BANGLADESH

The map at left indicates the area of Bangladesh that is normally flooded during the summer monsoon season. Although this annual flooding is extensive, it is not considered out of the ordinary. The map at right shows maximum flooding in 1974. Such unusually severe floods occurred again in 1984, 1987, and 1988, arousing international concern that led to the creation of the Flood Action Plan. Adapted from Mahabub Hossain et al., *Floods in Bangladesh: Recurrent Disaster and People's Survival* (Dhaka, Bangladesh: Universities Research Center, 1987), A.T.M. Amihu Islam and Sanat Kumam Saha.



PHOTO II.1. BANGLADESHI FAMILY IN FRONT OF THEIR FLOODED HOME

People of Bangladesh do not consider flooding to be a problem until the water covers the floors of their homesteads, as in this home in Char Bhadrasan in 1993. Courtesy of Dr. Khurshida Khandakar.