

## Living with Floods: Sheltering the People

Imagination is more important than knowledge  
— Albert Einstein

# Coping with Floods: A Report

Many of the participants urged that agriculture was the most important area of focus in the rehabilitation phase. The discussion on agricultural rehabilitation centered around alternative crop production in the coming months to meet the demand for food; disbursement of agricultural loans, seeds etc.

A roundtable on "Coping with Floods: Relief, Rehabilitation and Rebuilding the Economy" was jointly organized by the Center for Alternatives and The Daily Star on 15 September at the IBA auditorium, DU. The objective of the roundtable was to bring together people from various sections to share their ideas, perceptions, views on flood management. Since Bangladesh is a flood plain country and severe floods are likely to occur every few years, it is high time that flood management mechanisms, institutions and strategies are developed based on participatory process.

The roundtable was divided into two sessions. The first session focused on strategies for relief distribution and post-flood rehabilitation. The second session was on reconstruction of Bangladesh economy. In both the sessions the floor was open for discussion and suggestions which contributed much to the success of the roundtable. The recommendations that were made at the roundtable discussion can be divided into three categories: short-term, mid-term and long term steps. However, these categories are closely interrelated and should be implemented simultaneously. These steps should not be viewed in isolation—they are parts of an integrated process needed for flood management.

### IMMEDIATE STEPS

#### (a) Identifying Vulnerable Groups

The participants pointed out that it is often the adult and able-bodied men who form lines and take up positions at the front of the line, while the vulnerable groups stand at the end. Thus, it is the women, children and the elderly, who receive less or no aid and therefore, become victims of various diseases. Participants urged that the relief workers should be aware of this.

#### (b) Need for People's Participation

Atiur Rahman of BIDS suggested that people's participation in the whole process of relief distribution is important in alleviating the miseries of the flood affected people. Bangladesh does not have a social security system. But if a middle class family, which is not directly affected by the flood, could provide just one meal for five flood affected families a day including some necessary items, it would generate a feeling of empathy. And this example would motivate others to come forward.

#### (c) Need for Social Mapping

The participants pointed out the need for creating a 'social vulnerability map' containing basic facts about flood affected areas. As the magnitude of loss

is not the same in all the flood affected areas the need will vary accordingly. Moreover, a social vulnerability map also helps in identifying remote areas, which are often left out or neglected by relief workers. Absence of social vulnerability maps creates chances for maldistribution or misuse of relief goods. Therefore, such a map would help in assessing the appropriate needs of the people.

#### (d) Preventing Politically Motivated Use of Relief

Regarding relief distribution, the participants identified another problem, i.e. the 'politically motivated use of relief.' The politicians have a tendency to divert relief indiscriminately to their respective constituencies without considering whether or to what extent relief is needed. In this process, the more needy areas are often neglected and granted less aid than the less needy areas.

#### (e) Scarcity of Safe Drinking Water

Participants mentioned that ironically the acute shortage of safe drinking water was the main cause of suffering for the flood victims. Efforts have been taken to distribute water purifying tablets (WPT) among the flood affected people by government and NGOs. However, very little information is provided to the flood victims about potency, methods of using WPT (water quantity, contact time). Some of the participants (from Oxfam, Red Cross) pointed out that most of the WPT distributed were ineffective because their expiry date was over. In all the cases the recipients are not aware of this and the expiry labels were torn off from the bottles. So awareness needs to be raised about the proper use and shelf life of WPT.

#### (f) Combating Water Borne Diseases

The scarcity of safe drinking water is interlinked with water borne diseases, which are common phenomena of the flood affected regions. Diseases like diarrhoea, dysentery, scabies, skin diseases are already evident in relief centers. While confronting the challenges, several problems were identified in this field. First of all, there is a shortage of adequate ORS, WPT and other related medicines. Apart from resource constraints, participants stated that there was a shortage of skilled medical persons for treating the afflicted persons. Participants stressed that the people need to be made aware of the proper ways of using WPT, bleaching powder and water cans. They also need to be made aware of ways to prevent water borne diseases and prepare cures at home. The electronic and the print media can play a vital role in this regard.

#### (g) Including A Gender Perspective

Some of the participants drew attention to some specific gender needs such as being aware about the needs of women and the socio-cultural constraints which they face while receiving relief (women do not push and shove with men), insecurity of women in the flood shelters and violence against them. Women are the worst victims of flood, and they suffer the most because of gender blind relief and rehabilitation strategies and plans. Several participants pointed out the lack of adequate security measures for women living in flood shelters. (Flood center run by the imam of Tara Mosque can serve as a model, the women sleep separately—the older women from and circle around the younger women). Hasn Hena of World Food Program specifically mentioned the lack of sanitation facilities for women in flood affected areas. The women in the flood affected areas have to wait till dark to respond to the call of nature as the toilets and bushes all have gone under water. The relief workers, rehabilitation and disaster management planners should take these facts into account.

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### MID-TERM STEPS

#### (a) Agricultural Rehabilitation

Many of the participants urged that agriculture was the most important area of focus in the rehabilitation phase. The discussion on agricultural rehabilitation centered around alternative crop production in the coming months to meet the demand for food; disbursement of agricultural loans, seeds etc.

#### (b) Employment Generation, Micro-credit Programs and Reconstruction

Linked with agricultural rehabilitation is the issue of rural credit. The NGOs have a major role to play in this area. Moreover, micro-credit programs that sustain many families have been devastatingly affected and will require immediate attention. Furthermore, employment generation by GO-NGO will be crucial since people's purchasing power (for basic necessities) will have to be sustained in the coming months.

#### (c) Small Business and Industrial Rebuilding

Participants also highlighted the need for damage assessments and reorganization of formal economic sectors. Mirza Mowla of Bangladesh Institute of Labor Management suggested that a social industrial map should be developed for assessing the damages in the industrial sector. He stressed that issues such as how the factories would be rebuilt, what types of technology would be used, types of houses that would be built for workers need to be dealt with. He suggested that a social security network needs to be created for the industrial workers.

He made some specific suggestions for agricultural rehabilitation: (a) seeds should be distributed immediately for wheat cultivation, (b) the land should be tilled for maize/corn cultivation (GOB may advise flour mills to mix 70% wheat and 30% maize), (c) vegetable seeds need to be distributed by well-known national and local NGOs. Agricultural foundations for even brought through informal trade.

Kazi Farooq Ahmad of Proshika also made substantial suggestions in this regard. He presented the following options for food production to overcome the food shortage: (a) the 'Shali' seeds can be collected from Mymensingh and replanted in other places.

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#### (d) National Coordination Committee

Many of the participants suggested that a National Coordination Committee for disaster management should be created. This committee can serve as a focal point for exchanging information about damages, relief distribution, rehabilitation and reconstruction measures. The National Coordination Committee may help to coordinate the flood management and rebuilding efforts of government-NGO-private sectors at all levels (district, thana, etc).

### LONG TERM STEPS

#### (a) Flood Forecasting Mechanism

Participants thought that the flood forecasting mechanisms need to be developed and strengthened. AKM Jahruddin Chowdhury of BUET said that with the available technology it is possible to forecast flood/

be created for the industrial workers. Atiur Rahman suggested that commercial banks should disburse wholesale credit to group traders and group borrowers.

#### (b) Macroeconomic Issues

Debapriya Bhattacharya of BIDS said that flood is a big shock to Bangladesh economy. He stated that damage assessments in various sectors is still being conducted. He identified various sectors that have been damaged severely: (a) export oriented sectors (shrimp, garments), (b) domestic market oriented sectors, (c) infrastructure (roads, schools, health centers, irrigation facilities, embankments), (d) agriculture. Bhattacharya pointed out that only after the completion of damage assessment projects the magnitude of macroeconomic shock can be comprehended.

#### (c) Drainage and Maintenance of Infrastructure (special focus on Dhaka)

The engineers and hydrologists present at the roundtable pointed out that proper drainage system was needed in urban and semi urban areas. They also noted that unplanned urbanization in Dhaka and other cities has led to waterlogging in these areas. Environment friendly plans and strategies to prevent waterlogging in urban areas were deemed as crucial. SM Hossain raised the issue of polythene clogging the drain/sewerage in Dhaka.

#### (d) Awareness Raising and Developing Institutional History

Many participants stressed that awareness raising about flood mitigative strategies, health hazard is vital. Anunur Nishat pointed out that all types of information is available about [previous flood (1954, 1974, 1988)] yet, mechanisms, strategies, institutions have not been developed based on these information. Besides, information on the lags in relief distribution system, flood management at local level need to be documented and analyzed as well. Participants stressed the need for the development of institutional history on flood management.

A poor household totally submerged in Kaliganj. The family floats on the boat.



— Photo: Philip Gain

## Initiatives Needed for a National Mobilisation

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tion need to be cherished and as far as possible sustained. The sight of so many of our citizens volunteering their energies to mobilise resources and distribute relief gives us a sense of national solidarity and enhances the morale not just of the flood victims but of the nation. For a sitting government this moment of regeneration is a valuable opportunity to reach out to their political opponents as well as their fellow citizens to seek their cooperation at the operational rather than at a rhetorical level. It is thus more useful to accept the good intentions of all people seeking to contribute in a recovery process at their face value than to question their motives for being in the field.

A spirit of national renewal carries with it a universal expectation from the people of Bangladesh for a move towards national political reconciliation as well as for national as opposed to partisan leadership. In the prevailing political context in Bangladesh, reconciliation implies that the opposition should avoid making exaggerated and inflammatory statements about the mismanagement of the government. Such sobriety in their public declarations should be without prejudice to the political responsibility of the opposition, as elected representatives, to point out the limitations of the official effort and to offer constructive advice as well as support for the recovery process. The government, in turn, would need to also demonstrate that during such a national crisis they are a government of all the people and should present pragmatic suggestions to the opposition as to how they can collaborate with the govern-

ment in the recovery effort. The last thing that the flood victims wish to witness is the traditional provocative exchanges between government and opposition questioning each others bonafides.

In a political environment where the government views all observations which do not show its performance in the best light as motivated criticism and the opposition can only view all government relief efforts as malfeasance, there is thus need for a moratorium on such adversarial politics. How such a moratorium may be achieved and for how long is a task for the political leadership to work out amongst themselves. In this respect it is always advantageous in such a moment of national crisis, for the government to take the initiative to break the impasse. Such a statesmanlike gesture would be politically more credible rather than to invoke the failures of past governments to consult the opposition during a similar crisis, so as to justify similar inaction by the present government. If the opposition does not respond to such conciliatory gestures by the government to seek their cooperation during a period of national crisis then it is the opposition which will have to explain to the people why they chose to make political capital out of a national disaster. I may be wrong but I firmly believe that at the best of times political generosity is a blessed act, but in moments of national calamity such as today it is thrice blessed, by the disaster victims, by the opposition and eventually by the people in their capacity as the electorate.

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The topics of the next issue is: "Living with Floods II: Sustaining Production and Job Opportunities" to be published on 8 October 1998. Creative suggestions are invited from our esteemed readers. Please send your materials to: Imtiaz Ahmed, Executive Director, Centre for Alternatives, Room No. 431, Lecture Theatre, Arts Building, Dhaka University, Dhaka-1000. Tel: 9661900-59, Ext. 4550; Fax: (8802) 836769; E-mail: imtiaz@bangla.net

## Floods: No Cause for Complacency

by Zebun Nasreen Ahmed

Higher rainfall in the Himalayas this monsoon was also a direct effect of the increased global temperature. A third of the approximately 2 billion tons of Himalayan rubble, due to deforestation, that drain through our waterways into the Bay are deposited in our land, reducing the depth of our rivers and causing extensiveness of the flooding, though not directly affect its duration.

THE worst of the floods of 1998 might be over. But in its aftermath of disease and destruction, this is the time for us to evaluate the situation. It is appalling that as a nation, we were caught completely unaware about the extent and duration of the floods. These floods in comparison with all previous floods in this country, were of a very long duration. An examination of the main accepted reasons behind the long retention of surface water can allow us to seek ways in which the situation can be rectified in the future.

The fact that global human activities are contributing towards a major climate change is an accepted reality. Its degree however is still unclear. But there has been a notable global temperature increase and, with it a measurable rise in the main sea level (MSL). Undoubtedly, the long duration of these floods can in part be attributed to this high MSL. This year the above phenomenon was further compounded by the earthquake of 9-10 August deep in the beds of the Bay of Bengal.

Higher rainfall in the Himalayas this monsoon was also a direct effect of the increased global temperature. A third of the approximately 2 billion tons of Himalayan rubble, due to deforestation, that drain through our waterways into the Bay are deposited in our land, reducing the depth of our rivers and causing extensiveness of the flooding, though not directly affect its duration.

Another cause of the long run-off time may also be attributed to the network of roads and embankments slowly eroding up in different districts. These roads and em-

bankments may possibly have acted as obstacles to the proper draining of the plains whenever they run along the east-west direction in opposition to the natural flow of water southwards.

Considering the above three major factors that have influenced the floods of 1998, it may be important at this stage to apportion the responsibility for each of the factors so that in future the responsible sources can be monitored. Such an approach can help keep future floods within containable magnitudes.

The responsibility for the higher global temperature and consequent increase in the mean sea level lies globally - Bangladesh contributes only 0.06% to the world's total emission of green house gases, which are raising the average temperature and the MSL. The responsibility for the sediment carried from the Himalayan drainage system must be with the specific countries of Nepal, China, Bhutan and India.

Clearly we have to pay for the consequences of others. Under these circumstances we need to demand compensation from the relevant governments for their parts in our disaster. It is only then, that they in their turn will be more cautious about despoiling the environment. Any compensation received from these sources can be

utilised as relief for the flood victims during the disaster period.

It is only in the third component of the flood mechanism that we in Bangladesh can be directly held responsible for. Planners, water and drainage engineers and policy makers need to carefully investigate this phenomenon. The mechanism of sanctioning road building at the moment is not scientific. Politicians in an attempt to appease their constituencies are the main decision-makers in matters of development.

There is no organised system in Bangladesh of calculating the traffic load due to present or future projection of development and basing decisions of future road layouts on it. A system needs to be developed by which all future decisions on a national scale can be given the go-ahead only after a careful study of its environmental impact has been assessed by a national-level environmental team consisting of the relevant technologists.

Each profession must immediately strategically gear itself for the inevitability of floods in the years to come. Environmental acceptability should be the highest priority in this effort. In the broad scale of architecture and planning for instance the following can be undertaken immediately: A construction-guideline

map of Bangladesh should be created with recommended plinth levels and material recommendations for future construction, based on flood levels reached during these floods. The traditional method of building on stilts, still practiced along the riveride and border roads in the flood plain can be investigated for suitability.

Flood shelters should be built for groups of villages in the worst affected areas, similar to the cyclone shelters of the coastal regions. These can be built in a suitable high ground, accessible to a number of surrounding villages. In the absence of such high ground, mounds can be created artificially and reinforced by plantation and retaining walls to withstand currents from future floodwaters. These mounds should serve the community throughout the year and should be heavily planted with trees for greater soil strength. Planning for the waterlogged period, there should be space for health clinics; community kitchen and toilets within the mound in addition to the shelter proper. Some grazing ground for cattle will also be required. Area requirement can be fixed, dependent on population, after a survey.

Short-term research, with the objective of being implemented immediately, must be

initiated for affordable houses that can withstand the effects of floods for different income-groups. Such a study should look into alternative materials as well as construction techniques. A range of structures available at varying prices can be developed for greater choice among villagers. Since many structures which were not completely inundated, still had waist high water, the priority will be to provide living and storage space within the abode at lowest extra cost. At present villagers use alternative building materials like rice husk, cow dung, etc to strengthen their shelters, but these are largely experimental and have not found to withstand inclement weather in many cases.

For Dhaka city a careful evaluation of the flood vulnerability of different areas should be made. The overall drainage of the city can be undertaken along the main roads, in a way similar to the waterways of Moghul Dhaka. Areas outside the main Embankment should be kept free of construction so that it can serve as natural low land for drainage of excess water. Planning authorities should be strict in the implementation of their land-use policies. Regulatory bodies should also ensure that once the drainage system is installed, it is kept in good maintenance condition. If necessary, the pub-

lic should be educated in refuse disposal and other relevant matters.

In the long-term, architectural education needs to create more orientation towards environmental aspects so that both urban and rural structures receive proper emphasis and are energy efficient. Architectural education should be sought at the rural arena till now. Undoubtedly this has to be rectified to facilitate the proper utilisation of resources and the creation of harmonious physical form. The introduction of a rural base to architectural education would involve three basic steps: studying existing rural patterns, analysis of form in terms of socio-cultural, climatic and construction technological aspects and the development of alternatives by examining options of newer materials, technology and environmental awareness.

In general, all future strategies should be oriented towards living with the floods. Awareness of the hazards of irresponsible intervention with nature should form a basis for education at the general level in schools and colleges. Let these floods be a lesson to us of the consequences of all future development schemes. Environmental awareness needs to be instilled at all levels, even among technologists, so that sustainable development can be achieved. We must preserve the environment for our future. We cannot afford to be complacent any longer.

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