A Guide To Identification Of Affected Persons, Damage Estimation And Need-Assessment During Flood

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Contents

Abstract

Bangladesh's topographic and climatic systems make it one of the most water-related disaster prone countries in the Asian region. Its unique geographical location makes it especially vulnerable to excessive rainfall both in the catchment area and within the country, and predisposes to annual flooding which at times becomes catastrophic (as in 1988 and 1998). Floods have caused a greater loss of life and property, and have affected livelihood of more families and communities in Bangladesh than all other natural hazards combined. In a poverty-stricken country like Bangladesh, resources are always less than needed, especially in a disaster situation. Therefore, the question arises: whom to give assistance? And how do we identify them? This report reviews the experience of BRAC as well as other NGOs during the flood in search of these queries and proposes a step-by-step guide for rapid identification of affected households, damage estimation and need assessment, combining both quantitative and qualitative methods and modified as the circumstances demand. Issues discussed are: selecting the areas and households for interventions, procedure to be followed for rapid survey, damage estimation, needs assessment, and maintaining and building Social Capital.

I. Introduction

Throughout history, people have settled next to waterways because of the advantages they offer in transportation, commerce, energy, water supply, soil fertility, and waste disposal. However, these benefits are associated with some drawbacks as well. Unfortunately, Bangladesh's topographic and climatic systems make it one of the most water-related disaster prone countries in the Asian region. Its unique geographical location (formed by the confluence of the great river systems of the Ganges, the Brahmaputra and the Meghna and draining annually a vast basin about 12 times its own size) makes it especially vulnerable to excessive rainfall both in the catchment area and within the country, and predisposes to annual flooding which at times becomes catastrophic (as in 1988 and 1998). It is frequently struck by destructive cyclones, devastating floods and crippling droughts. These hazards cause severe agricultural losses and place great strains on country's economy and its ability to achieve sustainable development. Floods have caused a greater loss of life and property, and have affected livelihood of more families and communities in Bangladesh than all other natural hazards combined.

In a poverty-stricken country like Bangladesh, resources are always less than needed, especially in a disaster situation. Therefore, the question arises: whom to give assistance? And how do we identify them? This report reviews the experience of BRAC as well as other NGOs[1] during the flood in search of these queries and proposes a step-by-step guide for rapid identification of affected households, damage estimation and need assessment, combining both quantitative and qualitative methods and modified as the circumstances demand. It is hoped that this will help the future flood-related activities of the NGOs who usually work with the poorer section of the population. In a disastrous flood situation, their work will supplement and/or complement those of the Government and as such the primary audience of the methodology suggested here are the NGOs, both local and national.

[1] see appendix for list of documents reviewed

II. Selecting the areas (villages) for intervention

A three-step procedure may be followed to narrow down areas for intervention in the initial stage (see Fig. 1). The first step is to identify the worst flood affected districts; this can be done from information via the Government sources and the newspapers. Also, reports from regional offices of the NGOs and other non-government sources can be used. The next step involves categorisation of the thanas under the above districts into severe, moderate and minimally affected areas. This has to be mainly based on the subjective assessment (of the NGO's local field staff/govt. thana officials) on considerations like the flood-affected areas in the thana, extent of inundation, duration of flood, loss of properties, lives and livelihood, estimated no. of people marooned, reported health hazards and prevailing sanitary condition, availability of food and water, residual communication, pre-flood poverty level etc. Initial relief work by the NGOs may be concentrated in the moderate and severely affected thanas thus identified.

Some tentative examples:

---severely affected: about 2/3rd of the area inundated for more than two weeks[2]; communication totally collapsed; people marooned; people left their homes for shelter in high places; scarcity of safe drinking water; lack of dry place for cooking; outbreak of diarrohoeal episodes; 2/3rd households lost homesteads and other productive assets like poultry etc; no opportunities for income-earning for the poor households

---moderately affected: about ½ of the area inundated for about two weeks; some communication possible; people can move with great difficulty and risk; people living in their own homes in makeshift *matchas* and roofs of the homesteads; safe drinking water has to be collected from far-off with great difficulty for women; ½ of the households lost

[2] this is an arbitrary number; it is assumed that by this time, the resources at the household, neighbourhood and community level in a poor community may be exhausted altogether

homesteads and other productive assets; some opportunities for income-earning available like ferrying by boat; sporadic cases of diarrohoeal diseases etc.

---minimally affected: all other categories

Next, villages under the moderate and severely affected thanas are to be categorised similarly into three groups using the same criteria as for the thanas, and again, initial relief work by the NGOs should be focused in the moderate and severely affected villages. The data collection begins with the village and then the data are consolidated by the three categories of villages, then three categories of thanas and finally, three categories of Unions, which is used by the Union Disaster Management Committee (proposed) of the Government and the NGOs for necessary planning and action.

III. Procedures to be followed for rapid survey to investigate flood

A team of at least two person, preferably one of them a woman, with previous experiences in disaster works in NGOs will visit the identified village(s) by boat and will go as deep as possible. Personnel from the local field office of the NGO(s) will accompany the team to guide them to the village and the community to be investigated. People taking shelter into high and dry places in the villages, in makeshift shelters on embankments, roads or schools should be approached by the investigating team for gathering information and assembled in a convenient place where there would be minimum distraction. At times, this will prove very difficult and requires lot of efforts from the investigators. If no convenient place could be located, the discussions are conducted on the boat carrying the team to the village. After briefly introducing themselves, the investigators explain the purpose of the discussion to the people and their consent taken before proceeding further. Active participation from the people will help the team to identify individuals who could give the kind of information required. At all times, adequate participation from the women should be ensured. Also, due to the special circumstances prevailing, an atmosphere of informality has to be maintained. Every attempt to guard against overstatements regarding damage should be undertaken and

crosscheck done before arriving at a conclusion. For smooth running of the session, one of the team members organizes the discussion while the other takes note. The discussion may be opened on broad issues like current state of flood in the area, people's sufferings, problem of safe-water and sanitation, disease breakout etc. with the group of people assembled. After giving some time for rapport building, business sets in.

Beside data collection through the above procedures, non-participant observation by the members of the investigating team may provide additional dimension for damage assessment. This presents another source of cross-check (triangulation). A checklist is used for the purpose. Extent of inundation of the homesteads, agricultural fields and trees, damages to physical infrastructure like roads, culverts, schools etc. can be verified by direct observation. A look into their current life-styles (e.g., cooking, makeshift shelter etc.) gives an idea about loss of their household assets. Similar observation will yield useful insight in assessing institutional damages.

IV. Identification of households for intervention

Data are collected by key-informant interviews and group discussion with villagers assembled as described above to identify the better-off households and they should be excluded from targeting[3]. In selecting the target households, priority should be given to the following types of households:

households with severely damaged homesteads and household assets, and which are,
i) landless and marginally landless (<0.5 acre of land) households
ii) labour-selling households
iii) households with loss of means of livelihood (e.g., rickshaw-van puller, grocery shop owner etc.)
iv) households with no or invalid male members
v) destitute households e.g., households which are eligible to receive VGD cards

[3] However, life-saving aids like safe-water, oral saline and medicine can be given to them as well, if they can't procure it from other sources.

vi) ethnic and religious minorities

Group discussion with NGO group members, community leaders (e.g., teachers, Imams etc.) and UP Chairman and members can help in identifying these households quickly (see Fig. in annexure). Every attempt should be made to reach the inaccessible and remote areas of the particular village. Women and children deserve particular attention, because 'women are the worst victims of flood, and they suffer the most because of gender blind relief and rehabilitation strategies and plans'[4]. Name of the heads of identified households along with total number of household members should be noted. This will help to estimate the relief requirements for a particular village.

V. Damage estimation

This task is harder and requires lots of skill and effort from the investigating team. The estimation should be done separately for each of the three categories of villages through on-the-spot visit. The number of villages sampled in each category will depend on logistic considerations. However, the sample size should be such that it is not too large, but at the same time good enough for valid decision-making. Disruption of communication may necessitate a compromise of randomness in sample selection. Here also we can follow the 'rule of three' i.e., select three villages from each categories. The methodology is based mainly on group discussion, key-informant information and observation, all modified according to the prevailing situation. Use of professionally trained persons instead of interviewers in the survey will ensure validity and reliability of the data collected without loss of time required for training and supervision.

Damage is estimated at two levels: the household and the community:

a) Households: For estimating loss of homestead and productive assets group discussion is done. At least six to eight members (of BRAC and/or other NGOs organised poor people's groups) are assembled with some knowledgeable members from group's

[4] Coping with floods by Sohela Nazneen and Latifur Yasmin. In: Living with floods: an exercise in alternatives. Chapter 3, pp17. ed: Imtiaz Ahmed. UPL, 1999.

management, if available. Information on loss of homestead and productive assets (e.g., livestock, valuable trees, rickshaw-van, plough, shop, small mobile trade etc.) are recorded for as many members (who may or may not be present) as the discussants could recall in a structured form. While estimating loss of homestead, cost for repairing the damage is considered. Damage to productive assets is estimated on the basis of what the particular asset would have fetched if sold in the market, excluding the salvageable. Information on household assets (e.g., utensils, furniture etc.), poultry, loans and savings recorded for only those members present in the group discussion. A pre-tested structured form was used for data collection on asset losses while checklists were used for group discussion.

Table: Water and sanitation condition of the Village

% of tube-well contaminated	% of pond contaminated	% households without access to drinking water	% of households without sanitation facilities

Table: Record of damage to homesteads

Total households in the village	Partially damaged[1] %	Fully damaged[2] %	Estimated average loss per household (taka)

[1] *Those that salvaged most of their house's building components*

[2] *Those that lost completely their houses and building materials and need to construct a new house*

Table: Record of reported damage to household's assets

	% households incurred loss		Estimated average loss per household (taka)
	Partial	Full	
Poultry (hen/duck)			
Livestock (cow/goat)			
Non-productive assets (e.g., utensils, furniture etc.)			

Other productive assets (e.g., big trees, rickshaw/rickshaw-van, grocery shop, vegetable garden etc.)			
Total			

b) Community: crop loss, food availability, disruption of safe water sources, outbreak of diarrohoeal and other diseases, disruption of neighbourhood networks etc. The Crop loss is estimated on the basis of discussion with knowledgeable members of the community (usually the well-offs) and also, discussion with key informants (village leaders, religious leaders, teachers, UC officials etc.) on the expected yield this year for selected rich households in the villages compared to previous year's yield for specific crops. All information is crosschecked before recording.

Table: Record of estimated damage of main crops in the village

	Estimated loss of standing crops		
	Partial	Full	Comments
Paddy			
Jute			
Vegetable			
Cash crops			

c) Physical infrastructure: Experiences from our work in 1998 flood showed that this estimation of damage to physical infrastructure and assets of the providers is best done by the local field management. Programme monitoring data provides additional valid source. However, if thought necessary, on the spot verification can be done on a small sample of field establishments. Usually, structured interview schedule along with physical verification of the damages will serve the purpose.

Table: Record of damage to infrastructure of the village

	Partial	Full	Comments
Paved Road(s)			
Culvert(s)			
Bridge(s)			

VI. Needs assessment

Needs assessment aims to define the level and type of assistance required for the affected population identified through the above exercises. The ultimate aim of this exercise is to save lives and help the flood-affected people to better cope disaster in the short run while in the long run, prevention of sliding into poverty trap and take them back to the mainstream of development (see Fig2). The assessment should be done through participatory group discussion as well as key informant interview as described above. Only target households should be included in this discussion. While making assessment, special attention should be given to the needs of the destitute households (e.g., VGF card holders) and the gender needs of the women. Prioritisation is to be made for life-saving measures. The following issues need discussion:

Immediate needs: It should identify the services needed immediately to save and sustain the lives of the affected population---

- *Shelter:* Whether search and rescue operation needed for anyone/any families missing; arrangement of temporary shelter, especially in severely affected areas; organizing a management committee to look into the affairs of a flood-shelter, either in the existing shelter(s) or the new ones established; safety, security and equitable distribution of relief/resources needs especial attention;
- *Food and water:* food security of the target households; fuel for cooking, provision of dry-food and safe-water, jerry cans for carrying water, match and candles etc.;
- *Sanitation:* provision of make-shift latrines for the women with especial attention to safety and security; provision of bleaching powder, sanitary disposal of human excreta and waste as far as practical to prevent epidemic outbreaks;
- *Communication:* means of communication available for movement of relief workers; boats/rafts to be procured if needed; transportation of persons with health emergencies;

- *Essential Medical supplies:* like ORS, skin ointments, antibiotics for ARTI of the children, emergency kits, delivery kits, provision of health-care services for the seriously ill, supply of family planning materials etc.;.
- Need for *cash money*;
- *Perception* of the poor households about the composition of relief package;

Short-term needs: This looks at measures needed beyond immediate survival---

- providing *alternative employment* for the target households (e.g., food for work, cash for work like rehabilitating damaged culverts or roads etc.);
- *prevention of distress-selling* by advancing cash against productive asset(s) of household;
- provide *alternative source of credit* so that the poor need not borrow from the money-lenders at exorbitant interest;
- education on *health and nutrition measures* to undertaken in flood disaster situation
- planning for post-flood rehabilitation of *livelihood* etc.

Simultaneous with the fulfilling of the above needs, on-going planning should be done for post-flood rehabilitation needs based on damage estimation and assessment of the above needs. In all of the above need assessments, the team should be careful about gender needs of the women in particular.

VII. Maintaining and building Social Capital

Social capital, based on trust, reciprocity, networks and collective action, is an important community asset and takes time to develop. In disaster, there is no alternative to community self-help and this was vividly seen in the flood of 1988 and 1998 in Bangladesh. It is now well recognized that the initial and most vital response to a flood disaster must be at the local level and that the community must be well informed about disaster-preparedness measures and be alert at the time of disaster. In order to ensure community involvement in flood disaster prevention and preparedness, various existing

social networks and relationships among the members of the community should be nurtured and developed. This may take, for example, the form of indigenous community organizations (e.g., boy's clubs, mosque or temple committees, a sport's club or a local library etc.) working for conducting the disaster preparedness campaign and training volunteers for flood disaster management. These training programmes will incorporate community awareness and educational programmes relating to warning systems and other aspects of disaster preparedness. Committees including representatives of non-governmental organizations and the public, beside representatives of local government, have to be established at the local level to monitor and guide disaster-relief and rescue operations. The sense of mutual trust, cooperation and respect has to be built up in the community, for a common cause.

Fig1: Identifying flood-affected households

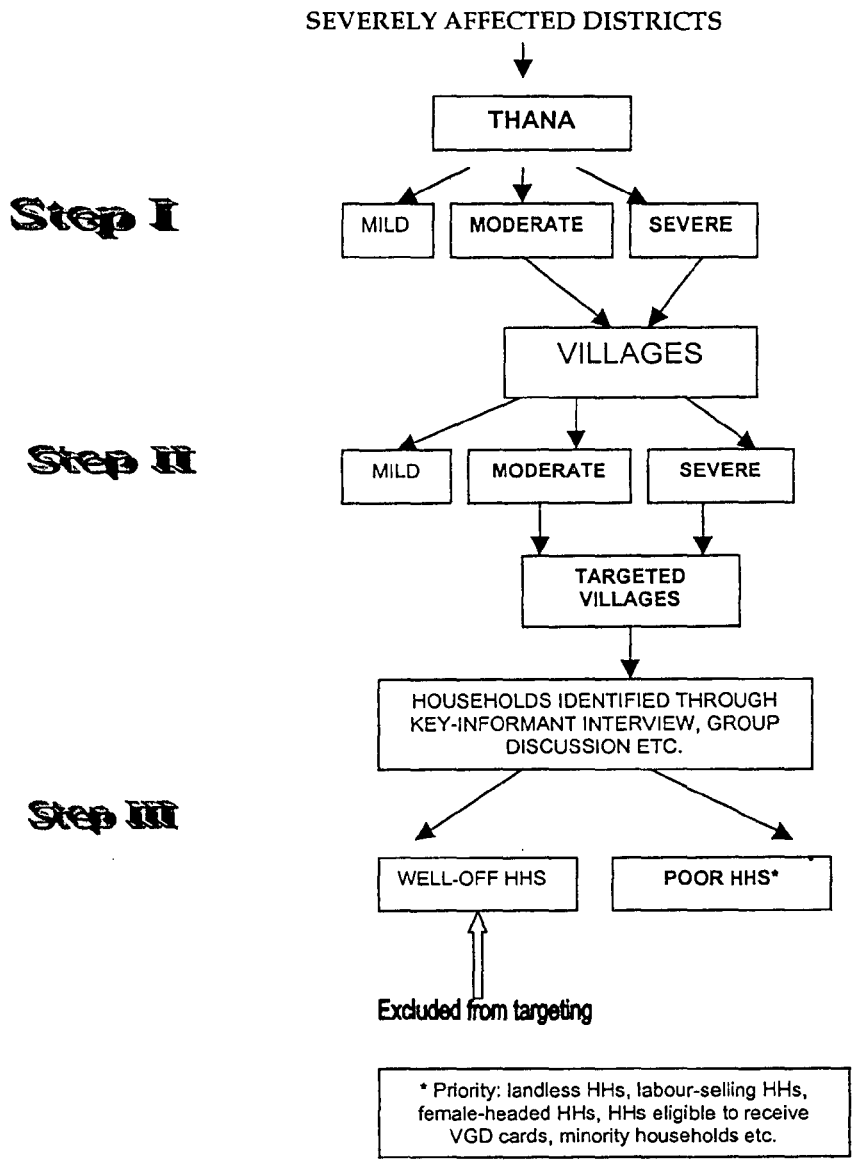

Fig2: Integrating damage assessment and need identification for a comprehensive post-flood rehabilitation