

Gender and Risk reduction through a community based system for flood monitoring

S.H.M.Fakhruddin

Water Resources Engineer and Gender specialist

Center for Environment and Geographic Information Services (CEGIS)

House 6, Road 23/C, Gulshan-1

Dhaka-1212, Bangladesh

Tel: 880-2-8821570-2

E-mail: suddin@cegisbd.com

As in any other country, water resources play a dominant role in the development process of Bangladesh either directly or through various life supporting systems, such as fish resources, mangrove forests and terrestrial ecosystems. The water resources system (WRS) is a productive system, which produces goods and services for satisfying human needs as well as for the upkeep of the ecosystem. The people living in flood prone areas face floods and disasters through coping mechanisms and survival techniques developed through traditional practices and family wisdom. Women and children are the most vulnerable in disaster situation. Because in Bangladeshi water sector, women bear most of the responsibility for the collection, transport, use and management of domestic water. Moreover, women and young girls are often involved in farming irrigated and rain-fed crops around the country. Every year before monsoon, most of these resourceful people raise the foundation i.e., the plinth of their houses. A small number of people, plant trees to protect their houses from wave erosion. It is a very common practice for village women to make movable earthen cooking stoves and preserve fuel materials in them for cooking during the floods. However, the preparedness measures are not organized and most of the people are not aware of what actions should be taken before, during and after the floods.

During and after disasters, communities are the first to respond to the situation. Earlier studies by the project team and literature stress the importance that communities need sufficient time and appropriate information to respond before, during and after flood disaster. Well-informed communities can substantially reduce risks and losses.

In more fully assessing the need for flood information at the community level, an initial task will be to identify the different stakeholders in the community and to determine their information needs at three different stages:

- Prior to the flood event
- During flood
- In the aftermath of flood

Preliminary needs assessment indicates that members of the community need appropriate warning in a timely manner for taking up measures that can help save life and property. They would also benefit from information regarding where they could obtain assistance in preparing for probable floods. Members of the community need certain information during the flood event as well, which would expectedly help affected people in coping better with the flooding situation in terms of availability of shelter, food, transportation,

etc. In the aftermath of flood comes the need for rehabilitation. At this stage, the flood-affected people would require information on what assistance is available from where in their pursuit for rehabilitation. Rehabilitation of homesteads as well as public infrastructure like roads, bridges and market places become essential to them in going about their day-to-day activities. Besides, measures toward agricultural rehabilitation are of utmost importance to most members of the rural community.

In understanding future needs for information, it is necessary to examine what information is currently available to the members of the community and what information is collected from the community for use by government agencies or NGOs. The needs of the stakeholders for flood information will be determined in addition to their recommendation on the mode and institutions involved in dissemination of flood information for different stages of preparation, coping and rehabilitation.

In rural Bangladesh farmers are a major stakeholder in the context of flood and flood management. Farmers constitute the majority of the population and some of their major crops are vulnerable to floods. The landless or marginal landowning households, who depend quite heavily on agricultural or non-agricultural wage employment, also face difficulties in the event of floods. Fishermen-- those involved with culture fisheries and engaged in capture fisheries--are confronted with different problems and prospects under different flood regimes. There are many households in the rural communities who are involved in trading of different commodities who are impacted by flood events mainly due to disruptions in transportation and marketing opportunities. Services of the boatmen are understandably more in demand during floods. However, when the waterways become rather hazardous due higher currents caused by onrush of large volumes of floodwater, the boatmen find it contrary to their interest. There are other occupational groups in the study area like the weavers and potters. They have their own stakes in terms of availability of inputs, transportation services, market conditions and the like. The womenfolk in rural Bangladesh, who are mainly engaged in domestic chores of various kinds, are affected in different ways by flood. One common concern for all stakeholders is of course the possible damage to life and their personal properties due to flood. All these issues relating to the different stakeholders would have to be addressed in conducting the needs assessment exercise. Seasonal and monthly prediction will help village women to safe the money in the crisis period and take decision regarding alternate source of income or even migration which will improve their livelihood. Above are based on limited field information and previous studies. Hence, a detail survey planned to assess the need of the community. The methods are explain the following sections.

Community stakeholders and issues flood-related issues

Stakeholders	Flood Issues
Farmers Own land cultivator Sharecropper	Ensuring suitable cropping pattern; reducing agricultural crop damage; marketing opportunities; reducing damages to life and property
Laborers Agricultural laborer Non agricultural laborer	Alternative occupational opportunities and employment potential during and in the aftermath of flood; reducing damages to life and property

Stakeholders	Flood Issues
Fishermen Open water fishermen Aquaculture households	Fishing opportunities during flood; possible losses for those involved in aquaculture; marketing opportunities; reducing damages to life and property
Traders Retail/small trader Wholesale trader	Availability of transportation services; marketing opportunities; reducing damages to life and property
Boatmen	Conditions of rivers for plying of boat; reducing damages to life and property
Other professional groups Weavers Potters	Availability of inputs for the production process; transportation services; product market conditions; reducing damages to life and property
Womenfolk	Impacts on domestic activities like cooking, collecting drinking water, looking after children, rearing livestock and kitchen gardening; reducing damages to life and property

The consultations indicated that the community people prone to flood disaster are not so concerned with flood warning and forecasting. The existing flood warning dissemination procedure is not appropriate in the local context. The people do not understand the official languages of weather forecasting on the radio and television. The flood warning and forecasting procedure should be area specific and people oriented and the dissemination should be in colloquial dialects.

A surveys were conducted using the Participatory Rural Appraisal (PRA) method, particularly with people with long-term experiences of floods and with landless people – the poorest of the poor. Through these surveys, information was collected on what people thought about flood warning and what they needed. The most important findings was that 100 per cent of the people said that they could not relate to the information provided through forecasting to their local situations – that the language and the metric system of forecasting were alien to their culture and system. The participants also identified the agents through whom they would like to receive forecasting information (e.g., imams, teachers, etc.) and the way they think dissemination could be done effectively (e.g., microphones in mosques, beating of drums, etc.). In an effort to improve the situation, identified change agents were trained, the danger level of river flow for every village was set, and flood warning in local language was formulated including posters, photos and audio tapes for illiterate people with additional information on crops, boats, cattle, women, children, emergency food, etc. It can be surmised from conversations with local people that the flood warning messages should be disseminated by the representatives of local government institutions with microphones at the mosques, and through drum beating at the markets and community centers. If the warning is given one week prior to the impending flood, the people are in position to save their belongings as well as take the crops ready for harvesting to a safe place. Some local people also informed the team that it requires 3/ 4 days for netting and other preparations, and that it would be helpful to

get messages at least 4 days before the floods occur. A comprehensive training programme needs to be conducted for people who are leaders of the community and they should be entrusted to disseminate information on preparedness measures