COPING WITH DISASTERS

Preparedness key to management

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BANGLADESH is considered as one of the areas most vulnerable to natural disasters in the world due to its geographic location and demographic as well as socioeconomic condition. Earthquakes, cyclones, floods, landslides, river bank erosion and also man-made disasters are not any sudden phenomenon here. These are very regular and common events.

Bangladesh has been rated as the nation most at risk from extreme weather and geophysical events according to a study ranking 229 countries on their vulnerability to natural disasters (NDRI 2010 - 2011). The history of disasters in Bangladesh gives a devastating scenario with the country ranking first among 162 countries based on human exposure due to flood-related hazards and third based on economic exposure. It is ranked sixth among 89 countries based on human exposure in terms of cyclone-related hazards. For earthquake, the country ranks seventeenth among 153 countries based on human exposure and forty-second among 153 countries based on economic exposure.

In different disasters over the past 20 years, a total of 135 million people have been affected, out of which 16,513 were fatalities. The total amount of resulting damage in terms of economy was US$11.7 million. In 1970, a severe cyclone took a toll of 0.3 million human lives in Bangladesh while the toll figuered 0.14 million in April 29, 1991. In 2007, devastating 'Sidr' hit the country affecting all the 32 coastal districts, killing more than 3,400 people and leaving 55,000 injured and livelihood immensely destroyed while cyclone 'Aila' caused significant livelihood losses subsequently in the coastal districts. Again, the flood in 1988 was devastating, which affected 52 districts resulting in the loss of 1,517 human lives. In this context disaster preparedness is the key strategy for saving lives and resources.

Disasters in Bangladesh are created by many factors of nature. Human induced factors are also liable such as global warning leading to climate change. Moreover use of chemical fertilizers, excessive withdrawal of ground water, shrimp cultivation and unplanned urbanisation and industrialisation can contribute to create disaster.

Preparedness is the measure that ensures the organised mobilisation of personnel, funds, equipment, and supplies for effective relief. Disaster preparedness is building up of capacities before a disaster situation prevails in order to reduce impacts. Its measures include availability of food reserve, emergency reserve fund, seed reserve, health facilities, warning systems, logistical infrastructure, relief manual, and shelves of projects.

Disaster preparedness is defined as a state of readiness to respond to a disaster, crisis, or any other type of emergency situation. More broadly it is stated as the leadership, training, readiness and support, and technical and financial assistance to strengthen citizens, communities, local and tribal governments, professional emergency workers as they prepare for disaster, mitigate the effects of disaster, respond to community needs after a disaster, and launch effective recovery efforts.

Preparedness includes designing warning systems, planning for evacuation and reallocation, storing food and water, building temporary shelters, devising management strategies, and holding disaster drills and exercises. Contingency planning is also included in preparedness as well as planning for post-impact response and recovery.

Preparedness consists of three basic steps: preparing a plan, training to the plan, and exercising the plan. Preparedness deals with the functional aspects of emergency management such as the response to and recovery from a disaster, whereas mitigation attempts to lessen these effects through pre-disaster actions as simple as striving to create "disaster-resistant" communities.

Preparedness is commonly viewed as consisting of activities aimed at improving response activities and coping capabilities. However, emphasis is increasingly being placed on recovery preparedness -- that is, on planning not only in order to respond effectively during and immediately after disasters but also in order to successfully navigate challenges associated with short- and longer-term recovery.

The Capability Assessment for Readiness (CAR), identifies thirteen elements that should be addresses by states in their preparedness efforts. Those elements are: laws and authorities; hazard identification and risk assessment; hazard mitigation; resource management; direction, control, and coordination; communications and warning; operations and procedures; logistics and facilities; training and exercises; evaluations and corrective actions; crisis communications; public education and information; finance and administration.

Promoting a culture of safety is possible through enhancing preparedness practices in a comprehensive way both in urban and rural areas. It is really a matter of hope that not only the government but also some non-profit organisations have realised the issue and taken some comprehensive disaster management programmes where promoting preparedness measures is one of the major agenda.

The major preparedness for disaster in Bangladesh are awareness building; building early warning and communication systems; mapping risks, resources and capacities; formulate strategies to increase resilience; skills development; networking and knowledge exchange; capacity building; practice of safety measures, learning about first aid; improving health care and access; preparation and implementation of family and community disaster plans; participation in the test disaster plans; learning infrastructure construction skills; securing land, housing and shelters; engaging with institutional actors; maintaining strong partnerships with local and national government; membership in decision-making bodies; organising communities; conserving natural resource; accessing institutional funds. Proper monitoring of all these initiatives can accelerate the preparedness practices of people.

Cities are also becoming more vulnerable to hazards. Due to rapid urbanisation, increasing trend of migration from rural to urban areas, growing trend of population, poor living standards, building construction without consideration for safety measures, lack of public awareness to hazards or risks, and lack of comprehensive disaster management plan are making the cities more vulnerable to disasters specilly earthquake.

For making the cities safer and for reducing urban disaster risks, there is no alternative to promoting reduction risk measures, building capacity of local government for ensuring effective services in emergency situation, decentralising resources and empowering the decision making bodies.

There is a pattern of gender differentiation at all levels of the disaster process. In fact there is a vast difference between men and women in emergency communication; household decisions about use of relief materials; voluntary relief and recovery work; access to evacuation, shelter and relief goods; and employment in disaster planning, relief and recovery programmes. Gender inequalities with respect to enjoyment of human rights, political and economic status; land ownership; housing conditions; exposure to violence, education and health, in particular reproductive and sexual health, make women more vulnerable before, during and after disasters. Women and girls are more than half of the world's population and are among the most affected by disasters. For an example, in 1991, during the cyclone disasters in Bangladesh, of the 140,000 people who died, 90% were women.

Women play a significant role in disaster preparedness. They are the first line of defence for their families in all kinds of emergencies and are often proactive in disaster preparedness. Unfortunately, in our society contributions of women in preparing, protecting, recovering and reconstructing their families and communities before, during and after disasters have unfortunately remained unrecognised.

Bangladesh is one of the disaster prone countries of the world, with extremely limited resources, its real development is not possible without the integration of disaster mitigation programmes in development planning. Our planning thrust is therefore diverted towards disaster management as a major consideration in regional development. Bangladesh is striving hard to establish an elaborate and experienced disaster management system from national down to community level to mitigate the effects of disasters.

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Adapting to climate change

Crop diversification at Hakaluki Haor

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AT present climate change has assumed the status of burning issue across the world and in the situation Bangladesh is considered one of the countries most vulnerable to its effect. Two parts of the country are supposed to be more affected by the changing climate -- the coastal belt and the north eastern part. Bangladesh is mainly an agrarian country and its production made a great stride but at present the sector is particularly turned shy to climate variability and extremes. In this context, under the Community Based Adaptation in the Ecologically Critical Areas through Biodiversity and Social Protection Project (CBA-ECA project) the Department of Environment is trying to motivate the local community how can they adapt with adverse impact of climate change by crop diversification. The project in question is at Hakaluki haor ECA basin. This area is more affected by drought, water shortage, early flood, cold wave and insects. With support of Department of Environment and help of Bangladesh Rice Research Institute and Bangladesh Agriculture Research Institute in addressing the climatic influence, that means to promote agriculture in the haor basin, they have taken an innovative strategy.

Maize (above) and sunflower are new crops at Hakaluki Haor ECA.

Though the region is quite fertile nonetheless there has appeared some frustrating sign in agriculture sector. The local community is trying to grow new crops in the haor basin with some facilities from Department of Environment through CNRS (Center for Natural Resource Studies Association). The adapted crops are Sunflower, Groundnut, Soybean, Garlic, Onion and Potato (Onion and Potato in organic method), Mustard, Maskalai and Paddy BR 45. The farmers have taken yet another initiative to develop crop production and identify insects that are helpful and harmful for agriculture by taking an "Integrated Pest Management" system.

Most of the crops are hybrid so their yield pattern is very high in short duration. However, these species are produced as alternative crops in the Haor basin while performance of these varities is found very much potent in the ecologically critical area for addressing adverse impact of climate change. This crop diversification in this haor basin has attracted all communities involved in the agriculture sector here. It was observed that the crops pattern in the haor had changed for worse over the past 30 years with production reducing and insects increasing may be for climate change scenario. It is mentionable here that the largest grain yields are usually obtained in the Kharif season. At present it is no more happening. So, they want to take alternative cropping patterns to intensify crop yield in the region. Some farmers want to change from low to high yielding and short duration variety. They could harvest high quantity but sort of poisonous food grain by using unlimited chemical fertilizer as well as pesticide in the crops field. But it is not so. They are using organic fertilizer (vermin, general compost) and adopting alternative agriculture pattern.

The farmers have been cultivating new variety in the Hakaluki Haor basin for two years. Here, the farming part is more significant for this Ecologically Critical Area (ECA) while other accompanying activities are biodiversity conservation, livelihood support and new strategy for adapting to climate change. Basically, sunflower, groundnut, maize are fully new crops in this area and are being profitably cultivated for two years by farmers. When cultivation started there was curiosity in the local community for they did not see it happen before in their native village. Now they are happy with the yield and hope to happily withstand apprehended climate change effect.

The writer is an environment activist.

SURFACE WATER TOO STINKY

WASA still dependent on ground water

STAFF CORRESPONDENT

ALTHOUGH WASA started its second phase water treatment plant, to supply drinking water to Dhaka city dwellers, the situation has not improved as the government failed to stop river pollution.

The second phase of Sayedabad water treatment plant adds 22 and half crore liters of water to the supply which increases the use of surface water to 22 percent from 13 percent.

But yet the usage of ground water is very high compared to many other mega cities.

During dry season, the pollution level reaches such a stage that the river water looks opaque black and stinks too foul. Quoting WASA's official sources, different newspapers report that if the pollution continued at this rate, then WASA would not be able to run their water treatment plants and supply water to the city dwellers in a decade.

In that case, the city water supply will be solely dependent on the ground water source which is very alarming for us.

It was possible to pump out ground water sinking tube well just 80 feet deep during sixties. Now it requires 360 feet long pipe to get the water as the water level is going down 3-6 feet every year.

A recent visit to Demra, Sarulia's Shitolokkha, from where the authority is collecting water for their Sayedabad second phase plant, made one amply convinced that the water there still stinks too foul.

Though the government pledged in 2009, just immediately after taking the chair, that they would stop river pollution at any cost, it is very much there.

The enforcement and monitoring wing of the department of environment conducted several drives against the polluter industries and many other industries which installed Effluent Treatment Plant (ETP) but left them inoperative to save cost appreciation due to their lack of awareness.

Though the department of environment caught and fined the polluters but later many of them were released on just realization of fine.

The environment and forest minister Dr. Hasan Mahmud had claimed in a press conference in December last that water situation of Dhaka rivers had improved a bit. But the environment ministry and all other concerned authorities have lot more to do to keep this city livable and its water potable.