

Capacity Building for National Disaster Mitigation

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Natural hazards in India, mainly earthquakes, landslides, cyclones and floods have been occurring in India, since time immemorial. Ancient heritage in the country, when critically analysed, provide sufficient evidence, that ruling dynasties in the past have been quite aware of these events and their impacts. Careful design & provision of drainage systems, watershed management and use of available building material and heights of retaining walls are all indicative of their knowledge base and skills developed over years in coping up with these hazards and preventing them from turning into disasters. The management system of the kingdoms depended mostly on communities to manage available water resources or develop innovative technologies and held them responsible for their sustenance and maintenance. Kings or rulers only provided incentives and facilitation for creation of such facilities of common goods.

During occurrence of natural hazards it is the communities who need to react first. Time gap between occurrence of disaster and arrival of emergency rescue and relief, needs to be taken care of by the communities themselves.

This requires enormous efforts to raise awareness of the communities' with respect to type of disasters and the coping mechanisms. The thrust areas of awareness include information on the institutional setup, first aid, medical help, evacuation and transport to safer sites at the time of emergency. Apart from these, it is important that communities understand geology, hydrology and climatic conditions of their areas with historical information on frequency and intensity of occurrence of these disasters and other impacts in the past. This information becomes basis of any mitigation efforts, not only by communities but also by the relief authorities. Infact surveys have proved that historical information on frequency of occurrence of disaster is a must for risk assessment exercise and hazard mapping exercise. Therefore, it is important that community based institutions at local level be built up, so that during an episode they are able to help themselves and are able to save the most vulnerable ones in the country, like women, children and the aged. Apart from historical information, it is important that hospitals & the schools in the district are identified as "safe shelters" or "safe shelters" are built for emergency camping and used for schools, health centres after emergencies, as has been done in case of cyclone shelters in Andhra Pradesh. The community needs to be trained to use built shelter facilities during emergency and after emergencies.

Institutional Framework in India

In India, there is a well organised National Emergency Response System, which has evolved over number of years. Relief & Rehabilitation is a State subject but lead role rests with central government for coordinating at National and International level.

The stress of the response system so far has, always been on the damage control and post disaster relief and rehabilitation in the past. But during last decade, under the larger umbrella of goals set up by **International Decade of Natural Disaster Reduction**. There has been a paradigm shift from relief to preparedness and pre-disaster mitigation activities. The change has been brought about by the level of awareness raised by IDNDR during the last decade and occurrence of frequent disasters causing enormous economic loss. There have

been concerted efforts, to generate more community participation and self help practices in vulnerable communities.

In order to adapt to new roles and goals set up by Yokohama conference, in 1994 emphasis was given to strengthening and setting up of institutions to lead nations towards safer tomorrow. Ministry of Agriculture, which is the nodal agency for relief management in India, has set up, **National Centre for Disaster Management (NCDM)** in March 1995 at IIPA, New Delhi. The NCDM besides building up the capacities at National, State and District administration level, to handle natural disasters, also co-ordinates various research and training programmes, it builds data base on natural disasters and their impacts. Centre has been able to conduct many training programmes. Also, similar centre for Disaster Management have been set up at State levels. Infact, Ministry of Agriculture has been making efforts to set up a network of State disaster management centers, which are funded partially by the Ministry of Agriculture.

Need for Strengthening Institutional Mechanism for Disaster Mitigation

Although there has been a greater recognition of benefits of preparedness, not much headway has been made, in drawing action plans and implementation of strategies focussing preparedness activities.

Nodal agency is still called relief & crisis management group. Allocation of funds are also only for relief and are operated upon only at the time of crisis and not before occurrence of a disaster. Even the local level Institutions responsible for disaster management are not geared to act before occurrence of disasters. Preparedness and pre-disaster mitigation require concrete efforts towards developing district wise preparedness plans, which would comprise of Risk assessment including vulnerability analysis, hazard mapping, identification of volunteers and Institutions, who are trained to implement the plan.

Preparedness could take up many forms and one of them is preparedness of human settlements. Disasters do not distinguish between people and places when they strike. They only come and destroy. Therefore it is important to integrate preparedness for disasters into the project formulation and in the form of internalising costs covering of risks due to natural disasters.

India being a vast country with variable environmental and cultural conditions suffers on account of different disasters, in different regions. Traditional living styles and technologies used in built environment are different. It requires extensive effort to build database on landuse, inventory of locally available building materials, to be able to conduct research, and, analyze use of appropriate disaster resistant technologies for respective regions. Hudco has initiated the process of promoting such research and transfer skill to the grass roots through training of grass root level masons and supervisors through building centres and Habitat polytechnic.

One of the greatest achievements of the decade has been preparation of the **Vulnerability Atlas of India by BMTPC**, under the Ministry of Urban Development, Government of India. But still there is lot to be done to draw maximum benefits of the basic information in the Atlas.

For such efforts, there is need for preparedness cells within the existing system at local and state level. These cells would be responsible for preparing disaster mitigation plans at district and state level, mobilise funds for implementation of the plan, involve communities and conduct drills on emergency action. An example is **Preparedness of Maharashtra Disaster Mitigation Plan.**

It is therefore important that disaster Mitigation is not thought of, as an isolated domain, of relief management team in the Ministry of Agriculture, but a concern for urban planners, rural developers, engineers, urban managers, municipal managers, administrators and communities as well. Therefore, their roles need to be defined in the disaster mitigation process. The benefits of co-ordination and networking between these organisations can be realised only by appreciating problems and requirements of each, for better management, before and during crisis due to natural hazards. Infact, these can be achieved by holding seminars training workshops at local level, district level and national level with proper allocation of funds for networking and exchange of information.

HSMI, HUDCO has been involved in conducting training in the area for the last 5 years and has been focussing on issues of **Disaster Mitigation in Human Settlements.** The programmes have been successfully targetted at Senior

level executives from multi-disciplinary organisations and NGOs with an objective of sensitising each on the inter-dependence of actions related to these organisations for disaster management.

Efforts of HSMI have been well recognised at National and International level. Recently HSMI has entered in collaboration with Asian Disaster Preparedness Centre, (ADPC, one of the Asia's Premier Institute in disaster mitigation) as a national partner Institute for conducting training programmes on Urban Disaster Mitigation. HSMI has collaborated with ADPC to successfully conduct, a Regional Training Programme on **Technological Risk Mitigation** in Nov. 1998, in partnership with National Safety Council at Mumbai. The networking with institutions provides a common platform for information sharing and resource sharing on best practices, research and curriculum development.

Although country is making all out efforts to build the capacities of professional from all walks of life, impacts of the efforts made are still not felt. It has still a long way to go to be able to realize the fruits of preparedness, which may allow communities to build up resistance against impacts of disasters which are occurring frequently in different parts of the country. HSMI and HUDCO are committed to the cause.

"Mitigation Strategies work best when they concentrate on the preparedness phase with emphasis on awareness building and training"

Roland S. Parker, World Bank

asian disaster preparedness center



As the lead regional center committed to the protection of life, property and the environment, the center assists Asian and Pacific communities in developing their capabilities and policies through training, information and technical assistance to mitigate the impact of disasters. -ADPC Mission Statement

About ADPC

The Asian Disaster Preparedness Center (ADPC) is the lead center in the Asia and the Pacific regions dedicated to protecting communities and the environment from the devastation of disasters. ADPC, which is located in the outreach building on the **campus** of the **Asian Institute of Technology** in Bangkok, was established in 1986 to assist countries in the region in formulating their policies and strengthening their capabilities in all aspects of disaster management. A decade of providing disaster management services throughout Asia and the Pacific region has brought international recognition to ADPC.

Along with offering an extensive range of training programs, providing information, and maintaining a network of highly-placed experts working throughout the region, ADPC provides consulting services to all levels of government, international agencies and non-governmental organizations.

Over the past ten years, ADPC has trained over 2,000 people and developed a strong regional knowledge base concerning disaster policy, prevention, mitigation, preparedness and response.

ADPC programs demonstrate a wide diversity in application addressing all types of hazards, natural as well as technological, and covering all aspects of the disaster management spectrum.