

Conclusions and Recommendations

Conclusions

Looking at the national environment in terms of disaster preparedness for floods, landslides, and earthquakes, there is an overall consciousness on the part of key actors in Nepal working in the fields of disaster management that natural disasters need to be faced with full preparedness, and they are working towards that end. There is also a realisation that natural hazards cannot be avoided, but at least their effects can be minimised if timely measures to mitigate them are taken. The key actors also realise that local communities must be involved in disaster preparedness for pre- and post-disaster activities.

The MoHA's institutional capacity to deal with natural hazards and disaster management should be improved. In doing so, the importance of disaster management should be reflected by giving it more prominence within the institutional structure of MoHA.

Hazard mapping as a tool for disaster management is important. Within the country, a system for sharing hazard maps and making them available to all key actors should be introduced. The CNDRC could undertake to do so.

Activities and components of the National Action Plan should be mainstreamed into the activities of the relevant implementing organisations working in the field of disaster preparedness.

Schools and school children are among the most vulnerable to earthquakes. Utmost care should therefore be taken in school construction and retrofitting should be carried out on structures that have been built without concern for seismic safety.

As general awareness can be created through knowledge and information, education about disasters should be taught in schools right from the preliminary stages. Students often work as propagators by carrying the message to their parents and through them to the community. Some schools have already introduced curricula on disaster preparedness with the support of the Department of Water Induced Disaster

Prevention (DWIDP). Disaster mitigation education (DME) has to be developed through a proper curriculum and training teachers.

The Institute of Engineering (IoE) already runs a course on disaster management in water resources for Master of Science level students. The course has received the support of DWIDP over the years to develop a curriculum and train teachers from the IoE on DME. Similarly, Nepal Engineering College (NEC) has introduced a course on disaster risk management as an elective subject for the undergraduate course leading to a Bachelor's degree in Engineering. Recently, a Centre for Disaster Studies was established in NEC with the support of Ehime University, Japan. This will help to institutionalise research into natural hazards and disasters in Nepal.

The Government of Nepal has approved the National Building Code of 2003. The building code outlines bylaws and standards of building construction such as design guidelines for earthquake-resistant buildings. So far, it has been enforced in Kathmandu metropolis and Lalitpur sub-metropolis only. Taking into consideration the urgent need for earthquake preparedness, it should be enforced in the country's remaining 56 municipalities.

Many NGOs and INGOs are active in the field of disaster management in Nepal. It is high time their activities were channelled properly so that disaster management can be carried out effectively with wide coverage of disaster-prone areas and without duplication and waste of precious resources.

Observations and remarks

Based on the preceding conclusions, this report makes following recommendations.

Institutional matters

In view of the heavy responsibility taken by the Ministry of Home Affairs (MoHA) in disaster management countrywide, the disaster management section should be raised to the status of a department with proper staffing as an independent unit reporting to MoHA. If this cannot become effective immediately, the section should at least be upgraded to division level with appropriate staffing under the joint secretary within the ministry. This will help to facilitate its multifarious activities related to disasters throughout the country in a more efficient manner and enhance the image of MoHA as a centre for disaster risk reduction in the country.

Extension of the district offices of DSCWM to 75 districts

The district offices of the Department of Soil Conservation and Watershed Management (DSCWM) now operating in 55 districts should be extended to all 75 districts, considering

the wide ramifications protected watershed management and soil conservation measures could have in maintaining smoother and safer river regimes and preventing flash floods.

Hazard mapping

Hazard maps are instrumental to all implementation plans related to natural disaster preparedness. As a priority, hazard maps for different categories of natural disaster; e.g., for flood-prone areas, possible landslide and mass wasting areas, and areas susceptible to frequent earthquakes, should be prepared. Natural disaster preparedness plans could be implemented on the basis of hazard maps, starting with the most vulnerable areas and moving to less vulnerable areas.

Raising awareness in the community

Disasters like floods and landslides have a certain periodicity, hence their occurrence can be predicted to some extent and their effects can be minimised through community mobilisation. It is a common belief in the community that structural measures are the only effective means of minimising disasters. The role of the community and non-structural measures often are overlooked. Non-structural as well as structural measures through involvement of the community are effective in the mitigation of natural disasters. The work of NSET, JVS, and other organisations in this field is praiseworthy.

Many organisations work in the field of disaster management, but very few of them have worked with communities; some have but the coverage is not extensive. Some organisations work only occasionally in one field of disaster and with a limited number of activities. The number of organisations working in all the phases of disaster (pre, during, and post) is negligible. Organisations such as the NRCS, with its wide-ranging network, are working effectively with communities in all types of disaster and in all phases. Effective preparedness cannot be achieved unless we involve communities, the end users of the many plans and programmes. Efforts should be directed towards the community and its empowerment to cope with disasters.

Awareness through regular programmes

Awareness programmes presently being carried out about disasters such as earthquakes, floods, and landslides, should be continued by observing 'Earthquake Safety Day' and warning people to be cautious during the monsoon season through regular weekly radio programmes such as those run by Sagarmatha FM Radio in Kathmandu and Annapurna FM Radio in Pokhara. Other FM radio stations should also run awareness programmes on natural disaster preparedness following the examples of Sagarmatha and Annapurna radio stations.

Disaster management education

Disaster management education (DME) should be introduced in schools. Students should work as propagators to disseminate information about natural disasters at home and in the community.

The Master's level course on disaster management introduced by the Institute of Engineering (IoE) could be extended to other campuses gradually with the introduction of an appropriate curriculum and training of teachers. The IoE should be encouraged to introduce a disaster management curriculum at undergraduate level.

The other engineering colleges, now numbering 30 throughout the country, should also be encouraged to follow the path taken by the Institute of Engineering and Nepal Engineering College, Bhaktapur, and develop a suitable curriculum for disaster management.

Implementation and enforcement of the National Building Code

For safety's sake, the Building Code approved in 2003 should be implemented and enforced in all municipalities. People in rural areas should also be encouraged to follow the Building Code through community awareness programmes on disaster preparedness against earthquakes.

Regular monitoring and evaluation

The activities mentioned in the National Action Plan should be monitored and evaluated on an annual basis by the Central Natural Disaster Relief Committee in order to take stock of the status of the Plan's implementation and measures needed to improve implementation.

District disaster action plans

Efforts should be made to prepare district disaster action plans for all 75 districts of the country, commencing with the districts most vulnerable to natural disasters, in line with the ones already prepared for Chitwan, Makwanpur, Sindhuli, Syangja, and Tanahun. These will work as prototypes for other districts.

Channelling the activities of NGOs and INGOs

The Government of Nepal should coordinate the activities of NGOs and INGOs according to types of natural disaster and location to promote wide coverage of disaster-prone areas and to avoid duplication of efforts.