

**Linking Disaster to Development: The Case of Community-led
Disaster Management in Nepal**

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Introduction

Nepal is a disaster-prone country mainly due to its young geology, sloppy terrain and widespread poverty. According to the Ministry of Home Affairs, between 1996 and 2001, more than 1,695 people have lost their lives, falling prey to several forms of disaster such as avalanches, floods and landslides, fire, windstorm and hailstorm, thunderbolt and earthquake and more than 189,270 families were affected due those natural disasters (Table 1). The losses of productive properties such as animals, agricultural land and crops, etc. are also overwhelming. Major types of disasters in Nepal include flood, earthquake, drought, landslide, disease epidemic, Glacial Lake Outburst Flood (GLOF), fire and ecological hazard. Other minor ones are avalanche, storm, hailstorm, stampede, transit and industrial accidents. Among the major disasters, flood, landslide and disease epidemic are the most recurrent ones claiming several lives annually. As seismic faults pass through the country, it renders Nepal vulnerable to earthquake disaster also. In fact, it is reported that the country's preparedness must be highest for major due earthquake in the region.

During the four decades of planned development efforts in Nepal (1950s to 1990s), disaster mitigation has remained awfully unplanned. During this period, the usual practice of development planners and professionals has been to borrow improved modern ways from outside, often termed as *helicopter solution*, and impose it (on an *ad hoc* basis) on local people whenever disaster strikes. In a situation where disaster mitigation and preparedness as a whole has never been a development priority, lack of sensitivity towards the existence

of indigenous technical knowledge of the local communities is not a starter.

The disaster problem and management trend in Nepal

Every year, one or more types of natural disasters occur in Nepal, causing heavy loss of life, property and infrastructure. His Majesty's Government of Nepal has traditionally dealt with disaster on a case-by-case basis, forming *ad hoc* committees for disaster relief at different levels. Past experience shows that disaster relief activities and the few disaster-related plans were prepared at the central level without having comprehensive information about the disaster on the ground, i.e., at the local level. Therefore, in many cases, the post-disaster relief and rehabilitation activities that were designed, neither reflected physical reality nor the needs expressed by the victims. At the same time, with limited trained human and financial resources, implemented activities were grossly inadequate and ineffective.

The 1988 earthquake and 1993 floods and landslides, however, have heightened people's awareness of the problems that can lead to disasters thus offering opportunities for those concerned to examine the past and to learn new ways to cope with disasters. However, in a "humane" attempt to hastily meet urgent needs created by disasters, donor agencies tend to bring in "technological packages", rather than *a priori* assistance to enhance and build the local capacities. This has increased dependence upon external technologies and supplies as and when disasters occur. More importantly, these programmes have, in general, failed to maximally utilize the opportunities for learning and building upon local knowledge and mitigation practices and have not succeeded in engaging local communities in disaster preparedness and mitigation.

The Natural Calamity Relief Act 1982 basically gives the priority to the post disaster activities and not much emphasis to the pre-disaster activities. Obviously, the Act was prepared by the Ministry of Home Affairs (MoHA) without consultation with other ministries or disaster related actors, otherwise the Act would have been much more comprehensive and would have covered the whole cycle of the disaster management thus linking disaster with development.

Probably because of the lack of appropriate policy/Act, the country does not have any comprehensive disaster management plan. The Disaster Management Plan prepared by the MoHA and published in 1996 seems like a very ambitious document and it clearly shows that the plan was not prepared in a participatory way with other ministries/stakeholders. Therefore, most of the activities mentioned in the plan are not yet initiated even after 7 years of plan preparation.

Proper coordination is always a challenge within the government and in many cases, between government and non-government agencies. The Act, the Disaster Management Plan 1996, are good examples of the poor coordination within the government. Had there been proper coordination among with disaster management actors, the Act could not only have been more comprehensive, but also many planned activities would have been completed by now. However, the 1993 floods and landslides and the 2001 earthquake in Gujarat, India, has awakened the interest of government and non-government agencies to work closely in disaster related activities.

Flawed development leads to disaster

In a developing country like Nepal, many development plans are poorly prepared at the central level without consulting the local communities and representing the felt needs of the target communities. Such development plans prepared without consulting the target communities are not only unsustainable but are also expensive and create negative perceptions towards the development activities on the part of the local communities. Such flawed development initiatives in many areas of Nepal have created disaster or hazard such as the breach of irrigation channels, building constructed in vulnerable areas, poor housing plans, etc. Due to flawed disaster management, the ratio of people killed to affected population in Nepal is highest in the region.

Linking disaster to development

Because of the geology, steep terrain, poor agricultural practices in slopes, the occurrence of water-induced disasters is taking place in an accelerating pace in

the country. The information published by the MoHA clearly indicated that during the last five years on an average 200 people are killed annually and another nearly 50,000 families are affected. We all know very well that every year one or the other forms of natural disasters occur in the country and, besides human deaths, significant/considerable number of animals and amount of properties and financial resources are lost or damaged. It is an irony that despite the knowledge of this reality, all the development actors (government, I/NGOs, multi/bilateral agencies) have been dealing disaster in isolation. Therefore, many development activities have been seriously disrupted/affected or rendered non-functional by different natural disasters in the country. The available information in the country clearly shows that we are losing about 20 per cent of the national Gross Domestic Product (GDP) due to disasters. This is an alarming figure for a developing country like Nepal.

Despite of this reality, none of the development activities implemented by either government or any non-governmental or any development initiatives in Nepal tried to link disaster to development. Therefore, many development activities have been suffering from natural disaster in Nepal adding additional financial burden to an ageing economy of the country.

This clearly indicates that there is a great potentiality of linking disaster to development in a disaster prone developing country like Nepal.

Community-led disaster management in Nepal

Many rural communities are isolated in Nepal due to several reasons like inaccessibility, locational vulnerability, etc. Therefore, such isolated communities have developed several indigenous mechanisms to manage and cope with their impending problems and odds. Wherever a particular disaster may strike, be it in rural or urban areas, it is the local community that has to respond first. Such situation is more pronounced in rural and isolated areas of the country. Moreover, being a developing country, the central government has meager resources to provide immediate relief, rescue and disaster preparedness/mitigation activities. Therefore, it is always the local community who has to depend on their own resources and capability to manage any natural

disaster.

Realizing this fact, and the importance of community involvement in sustainable disaster management, UNDP has been implementing disaster management programme with the local community in few disaster prone districts of Nepal.

Because of the unavailability of pre-disaster related information in the country to select most disaster prone districts, the district selection was based on the post-disaster information, particularly focusing on three main criteria – number of people killed by natural disasters, number of families affected and total cultivated crop area damaged in the last five years. Once a particular district is selected based on the above criteria, further selection of the most disaster prone VDCs was entrusted to the District Disaster Management Committee led by the Chairman of the District Development Committee (DDC). To select an appropriate site/community within the selected VDC, a GIS mapping and Risk Assessment exercise was done to identify which parts/community within the VDCs are prone to be hit by disaster. This information was provided to the local authority to facilitate them on the selection of the work site and community.

Once the site/community is selected, the community then formed responsible group to implement the activities effectively, to mobilize the local community, to generate local resources to implement the activities, and to serve as a bridge between the community and the project.

While forming such groups, special precaution were maintained to:

- Represent equal number of male and female,
- Equal representation of all political parties in the community,
- No membership to people outside the community, and
- Members trusted by the people in the community.

Once the group is formed, a four-day training programme on basic disaster related concepts such as – how it occurs?, what is our role in creating disaster?,

the importance of group mobilization in disaster management, how to maintain transparent financial records?, etc. are provided. After the completion of the training programme, the participants share the outcome of the training programme with their local community members. While sharing the outcome of the training programme with the community members, the community has to discuss possible disaster mitigation/ preparedness/ management activities to fight against the future disaster based on indigenous knowledge, locally available materials and the knowledge/ skill that the participants learn during the training programme.

Once such activities are prepared by the community, the activities are shared with the project personnel to discuss the time frame and the sharing of activities between the local communities and the project. Once the decision is made, the project provides a seed grant which is deposited in the community name in a convenient bank to be used in implementing the agreed activities. The cheque will be jointly signed by the community party (either Chairperson or Secretary or Treasurer of the group) and the project personnel based in that district.

Linking disaster to development: a success story

UNDP Nepal has tried to link disaster to development through a pilot project entitled “Participatory Disaster Management Programme” (PDMP) in four disaster (water-induced disaster; flood and landslide) prone districts in Nepal since 2001. The programme simply works with the local community to mitigate water-induced disasters based on indigenous knowledge and locally available materials. The activities are all designed by the local/target community who know the problem better and also have been somehow managing the disaster based on their local knowledge and locally available materials.

Linking disaster to development is much more visible in Chitwan district compared to other three districts where the project has been implementing its activities since 2001 (Map 1). The success in Chitwan owes to the fact that UNDP had implemented a one and a half year long project (1996–1997) entitled “Upgrading Disaster Management Capacity in Nepal” before implementing the

PDMP,

Chitwan district is centrally located in southern flat plain areas of the country where flood is the annually recurring phenomenon causing heavy losses of life and property. The 1993 floods did the most damage in Chitwan in last 32 years and this year it is already impacted half of the geographical area of the district and it continues to threaten further in the future. Two Village Development Committees (VDCs) namely Bhandara and Kathar have been selected by the District Development Committee to implement the project activities, where flood is the single most threat to the entire VDC. Therefore, the disaster mitigation activities in Bhandara VDC are much more focused to flood control/management through micro infrastructure like dyke construction, where as in Kathar, the biological measures such as flood control/management through large scale plantation, protection of degraded forest, zero grazing in community forestry, proper drainage of excess run-off water, etc. are adopted.

The community in Kathar VDC experienced that with a well protected forest the hamlets below such protected or dense forests were completely safe whereas the hamlets below a degraded forest was completely swept away by the same magnitude of flash flood. The project community were much more enthusiastic to protect the degraded community forestry through fencing, plantation and zero grazing. Within six months of zero grazing and large scale plantation, the degraded forest had good coverage of vegetation. The community itself decided to sell the abundant grasses available in the protected community forest with a little monthly fee to the community people. Within a short duration, the community was able to generate considerable amount of resources to enable them to buy few milch animals with soft loan to the community members. Now the community members have about 50 additional buffalos/ cow producing about 2–300 liters of milk every morning and evening. Once the milk output increased beyond their requirements, the community decided to set up a milk collection center and requested the district dairy authority to buy milk every morning. These days, the dairy center collect about 2–300 liters of milk and sell to the district dairy authority. The process of selling grass continues as before and community members now want to install bio-gas plants in each and every house for cooking meals. This provision will not only

reduce the workload of women as they are responsible to collect the firewood but also will improve their respiratory health due to no smoke. This will ultimately reduce the pressure in the near-by forest and improve the environment.

The majority of the community in the project area in Kathar VDC are Tharu, an indigenous people, fond of fishing. With the assistance from the Institute of Agriculture and Animal Science, Rampur, Chitwan, the community in the project area were able to construct 25 family fish ponds. These family fish ponds were also able to reduce the fish catching practices at the natural streams and rivers and also improve the family nutrition level.

The community in Kathar also constructed a picnic spot in the well-protected forest, where people from the adjoining areas are coming to spend weekends in festive moods. This activity also helps the community to generate funds as the picnickers have to pay the rent for the use of the created facility. The community in future are also planning to construct a watch tower in the forest, as many wild animals can be seen in the protected forest including the one-horned Rhino.

This is how a disaster torn community has been able to mitigate the flood problem and generate financial resources through different activities in the community.

Where should we go from here?

The available information and records on disaster management in Nepal shows that all our efforts to disaster management are run on an *ad hoc* basis without thinking about its sustainability and long term impact to the local community. Moreover, such efforts were mostly concentrated on post disaster activities such as relief and rescue. Such post disaster activities were also done in isolation without consulting the target communities and authorities at the disaster site(s).

The community work cited above clearly shows that there is a great possibility to link disaster to any development initiatives and variety of development activities can be implemented through a disaster mitigation initiative. However, the community achievement also indicated that this should be a continuous process as long as the community needs are met, activities are sustainable, and local people can manage the activities without much external interventions.

The experience of the community also clearly indicated that the sustainable disaster management activities in a disaster prone country like Nepal should be of integrated or holistic in nature and disaster should not be dealt in isolation.

Innovations offer hope for future

Facing one or other forms of disaster every year in Nepal, also offers some learnings for a sustainable disaster management through several innovative exercises. Many disaster management actors agree that for a sustainable disaster management in a disaster prone country like Nepal, an appropriate policy certainly helps all the actors to work much more in a coordinated way to make the maximum use of resources.

New concepts and planning disaster management tools such as the total disaster risk management (TDRM) approach will certainly be useful in this regard. However, any tool or approach should be well studied and planned before taking it to the ground.

Partnership is another area which has been largely ignored in disaster management in many countries. Partnership in disaster management is much more needed than any other discipline in this world. Many disaster actors clearly visualized that single institution in any disaster can not make significant change or improvement. Partnership is a pre-requisite to make a disaster free or safer world. Partnership can be fostered with any like-minded organization which views disaster as a common threat to a prosperous society.

Natural disasters can occur in any part of the world irrespective of whether it is developed country or developing, a rich society or slum. And we living in a

disaster prone country know well that we have to face disaster annually. Realizing this fact, we should aware/train the people to live with disaster, develop appropriate coping mechanisms so that we will not loose someone beloved and scarce property/ resources.

Community involvement in sustainable disaster management in developing country like Nepal has shown some hope for expansion to a larger geographical area prone to any natural disaster. However, dealing disaster mitigation in isolation will not bear any fruit that is likely to benefit the community in particular and the country in general.

Conclusion

Linking disaster to development in Nepal has shown some hope for both sustainable disaster management and development in the country. However, to make the development much more sustainable and development that bears fruits to all actors, the disaster management activities must be integrated. Dealing disaster in isolation in a developing and disaster prone country like Nepal does not only bear any healthy fruits but also spoils the environment and makes it more vulnerable to disaster. Therefore, disaster management should be a part and parcel of all development initiatives in a disaster prone country.

A clear road map on how disaster will be linked to development should be sketched before hand to guide the actors/ planners and the community. So, limited resources will be maximally utilized and the plan will be successful. A failure project/activity at the initial stage in many cases will lead to frustration and then to failure.

Managing half the disaster cycle, either pre or post, is also no less dangerous than the ad hoc disaster management practices. Therefore, it should be dealt in full management cycle or total disaster risk management concept.

Despite a developing and disaster prone country, Nepal has still hope for a sustainable disaster management through different innovative ideas and practices.