Sustainability and Community Empowerment in Disaster Management

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Abstract   The community is at the frontier of any kind of natural hazard and disaster. Empowering the community by internalizing the tools and methods of disaster risk reduction is a good way to deal with future potential risks. Community empowerment is a type of capacity development where its members decide on the goals and strategies for disaster risk management, contribute some, if not all, of the resources needed, and monitor their performance *(Asian Disaster Preparedness Center,2013).*The most common elements of community involvement are partnership, participation, empowerment and ownership by the local people. Unless the disaster management efforts are sustainable at individual and community level, it is difficult to reduce the losses and scale of the tragedy. The objectives of this paper are: 1) to discuss the emerging needs of survivors during the various phases of the post-disaster situation; 2) to emphasize the need for designing interventions incorporating the principles of sustainability and community empowerment and; 3) to focus our attention toward management of disasters technologies and disaster preparedness programs that foster the resilience.The utility of the empowerment approach in addressing the socio-economic conditions of local communities   and   the   active   involvement   of disaster-affected people in the pre- and post-disaster initiatives is argued as a   requisite to deal with disasters in a more effective and efficient way.

Keywords   Empowerment, Sustainability, Disaster Risk Management, Andaman & Nicobar Islands

Introduction

According to the Center for Research on the Epidemiology of Disasters (2013) annual disaster statistics review, 357 natural disasters occurred worldwide in the year 2012, which was less than the average natural disaster frequency from 2002 to 2011(394). 9,655 people were killed in 2012 by natural disasters and 124.5 million people were affected globally. Hydro-meteorological disasters accounted for 74% (US$2.6 trillion) of total reported losses, 87% (18,200) of total disaster events, and 61% (1.4 million) of total lives lost. From 1980 to 2012, disaster-related losses amounted to US$3,800 billion worldwide. Some 87% of these reported disasters (18,200 events), 74% of losses (US$2,800 billion (Munich Re 2013). The economic damages from natural disasters in 2012 were estimated at US$ 157 billion.

Disaster management, which involves prevention, mitigation, preparedness, response and rehabilitation efforts, has been discussed for a long time. In short, such management stages can be classified into before, during and after event activities. Disaster preparedness can be referred to as all measures taken to prepare in advance, aiming at reducing the impact of possible disasters (R. Osti and K. Miyake, 2013).

Disasters, Communities and Empowerment: Disaster risk is on the rise throughout the world. Over the past two to three decades, the economic losses and the number of people who have been affected by natural disasters have increased more rapidly than both economic and population growth. The physical, social and economic losses caused by these disasters are particularly harsh for developing countries since they have a long-range effect in the development process. The impacts of the disasters are deeply related with the socio-economic conditions, traditions, cultures, and climates of communities. The most common elements of community involvement are partnership, participation, empowerment and ownership by the local people. The emphasis of disaster management efforts should focus on communities and the people who live in them. Unless the disaster management efforts are sustainable at individual and community level, it is difficult to reduce the losses and scale of the tragedy. Opportunities are needed where people can be involved from the initial programming stage of disaster management activities.

The significance of community–based activities where people participate alongside government officials and experts group, as the direct stakeholders of these activities, is imperative. While people should own the problems, consequences and challenges of any mitigation and/or

preparedness initiative, it is also necessary to take people's involvement further, into policy and strategy. This process induces a sense of ownership for people and can result in their continuous engagement and long-term commitment to these activities. Involvement of communities is important in both pre-disaster mitigation and post-disaster response and recovery processes. Major benefits of the community based risk assessment, mitigation planning and implementation processes include building confidence, pride in being able to make a difference, and enhanced capabilities to pursue disaster preparedness and mitigation. Additionally, individual and community ownership, commitment and concerted actions in disaster mitigation, including resource mobilization, produce a wide range of appropriate, innovative and do-able mitigation solutions, which are cost-effective and sustainable. The most common elements of community involvement are partnership, participation, empowerment and ownership by the local people. Unless disaster management efforts are sustainable at individual and community levels, it is difficult to reduce the losses and scale of the tragedy (UNCRD, 2004).

This paper highlights the various needs and concerns of disaster-affected people in each phase of the disaster, especially in the post disaster context. The empowerment of the community will be attained only through sustainable planning and supportive activities. Needs assessment, analyzing, priority fixation, and implementations all need to be considered in a post-disaster situation. Policy level changes, adherence and stakeholder participation in the total disaster management function are imperative and meaningful. The following brief literature review explains the empowerment and sustainability concept in disaster management and presents concrete steps to be taken to ensure effective disaster management.

Review of Literature

Effective community participation is an educational and empowering process whereby communities identify the problems and needs and assume responsibility to plan, manage, control and assess the collective action that are necessary. While disasters can strike a region or a nation, their impacts can be felt at the community level. It is these communities that constitute what is referred to as "disaster fronts". Being at the forefront, communities need to have the capacity to respond to threats themselves. It is for this reason that communities should be involved in managing the risks that may threaten their well-being. While different community empowerment programmes related to disaster mitigation have achieved their objectives, they are often short-term, and issues of sustainability in these efforts are rarely addressed. Government, non-government and international organizations implement various programmes before and after the disasters. Most of them are very successful during the project period, but gradually diminish as the years pass. There are many reasons for this kind of

phenomena, however, lack of effective participation and capacity building of the local communities to peruse programs remains a major factor for lack of sustainability. In the past, top decisions came from higher authorities based on their perception of the needs. The communities serve as mere "victims" or receivers of aid. In practice though, this approach was proven to be ineffective. It fails to meet the appropriate and vital humanitarian needs. Moreover, it increases requirements for unnecessary external resources and creates general dissatisfaction over performance, despite exceptional management measures. This is due to the fact that the community, as the primary stakeholder and recipient of the direct impact of disasters was involved in the implementation of activities. On the other hand, communities, if left alone, have limited resources to fully cope with disasters. In many developing and underdeveloped countries, those who suffer the most are the poor, who, in the first place, have limited survival resources and do not enjoy adequate infrastructure and access to social services.

It is also significant to say something about Sustainability in Community Based Disaster Management. Sustainability can be thought of either as a fundamental system property, or as a long term, probably unattainable, social goal, and sustainable development as the immediate policy agenda attending that goal. Societies looking for sustainable development are characterized as being resilient, responding in an organized manner and recovering more efficiently from a disaster. Incorporating risk management into the planning process, both for the sectors as much as local authorities, allows those countries with public policies orientated towards development and growth to have a better chance of success than those which do not take them into account (Toro Joaquin, 2014).

In the Year 2002, UNCRD launched a three-year project titled "Sustainability in Community Based Disaster Management", to study the effectiveness of grass-root projects and to suggest policy input for sustainability (which would be useful for the different communities to take future actions). This was to help to understand the gaps in community initiatives, and to take corrective action in future. The study would be an evaluation of what has been done so far in Community Based Disaster Management, with specific examples from field experiences, and what should be done in future for the sustainability of these efforts. In this study, the inter-linkages of government, non-government, academics, and international organizations should be reflected in terms of concrete projects and initiatives, and a model of cooperation would be established (Rajib Shaw & Kenji Okazaki, (2002).

Sustainability means recognizing and making best use of the interconnection between social, economic and environmental goals to reduce significant hazard risks. This entails the ability to reduce one's exposure to, and recover from, infrequent large-scale, but also frequent smaller scale, natural and human driven events. The bottom line for any country, especially the poorest, is to build sustainable communities thriving from generation to generation, with a

social foundation that provides for health, respects cultural diversity and considers the needs of future generations. They require a healthy and diverse ecological system that is life-sustaining and productive, with a healthy and diverse economy that adapts to change and recognizes social and ecological limits.

The author explains the emerging needs of survivors during the various phases of the post-disaster situation. Many of the relief agencies were keen to address the immediate physical or mental health needs and not the long-term and changing needs of the survivors. This myopic view of the needs of disaster victims may result in lopsided disaster interventions which can have detrimental effects on vulnerable groups, especially the powerless, relocated, poor, elderly, women, and children. Moreover, in this paradigm, concerns regarding employment, sustainable livelihood, rebuilding the social institutions, and capacity building to weather future threats, arise much later. Hence, a comprehensive disaster needs assessment is essential in any disaster situation and must include the following components: (a) it must be on-going and capture the emerging needs of the survivors; (b) must assess the psychological consequences of the disaster, especially on vulnerable groups; (c) must include a framework to assess the economic and social impact of the disaster; and (d) must examine the various vulnerabilities of the community that put them at risk for future threats.

The post-tsunami period in the Andaman and Nicobar Islands offered an opportunity to restore affected housing and living conditions of the large number of people whose homes were destroyed or badly damaged. Such a process of restoration of people's lives needed to take place, keeping in mind basic human rights principles of gender equality, nondiscrimination and participation. The feedback which the author collected from various stakeholders, especially disaster survivors from Bambooflat, Tushnabad, Vandoor and other parts of the South Andaman, points out in detail the inadequacy of response from the authorities. Secondly, it is inevitable to emphasize the need for designing interventions incorporating the principles of sustainability and community empowerment. Fulfilling long term needs of the survivors of disaster, community driven approaches and interventions are required. The active involvement of an affected community in each phase of disaster management operations is a great pressing need. That engagement will be helpful in a successful and sustainable emergency management initiative and, thereby, ensure the resilience and coping of community members and the overall empowerment of the community.

Management of Disasters: Focusing the Crucial Linkages

The best learning from all disasters in the past is imperative to change our attention towards a more proactive way of managing disasters using cutting edge technologies

and disaster preparedness programs that foster the resilience of people prone to hazards.

Why should we have Community-based disaster Preparedness?

Community is the first to suffer and the first real-time responder in any disaster

• It is the ultimate target of any disaster preparedness and mitigation plans

• It provides a reservoir of time tested indigenous knowledge of coping mechanisms

• It has the most authentic local knowledge on risks and vulnerabilities

• Community prepares vulnerability and risk maps by 'default' and those plans are connected with their daily lives and livelihoods

• Community is the best assessor of disaster damages

• It can also be the best evaluator of disaster recovery

• It will assume ownership of plans and programmes

• It facilitates social mobilisation that empowers community.

• It facilitates easier identification of vulnerable groups. (Dasgupta, 2011).

While everyone living in disaster-prone areas is vulnerable, some groups such as children, the elderly, and people with disabilities are more vulnerable than others. Therefore, the needs of vulnerable groups should be addressed specifically in preparedness and relief operations. In Sri Lanka, district committees and NGOs have prepared lists of the elderly and disabled people in their areas, and some NGOs have formed groups of volunteers who are responsible for caring for the elderly during emergencies. The Department of Meteorology is conducting several programs to improve disaster preparedness in coastal schools from Panadura to Hambantota (BEDROC, 2006). These programs teach children how to identify evacuation routes and prepare for disasters. Children then share this information with their families (Oxfam Field Studies, 2006). A study jointly conducted by Oxfam International and Bedrock (2006) on communities' perceptions of disasters, aid their own response capacity. While occurrence of these natural disasters cannot be prevented altogether, their adverse impact can be reduced substantially by undertaking various preparedness and mitigation measures by community involvement. Minimizing the loss of precious human life is the first priority in disaster management. Significant achievement has been made in the designing of disaster resistant houses and inventing quality building materials to withstand the fury of natural disasters (Kumar, 2008).

Disaster Management- Learned Points- Recommendations

Capacity Building/ Training Local Youth

It is a weathered fact that the local communities' role in a

disaster situation is crucial in saving lives and other aspects. Therefore, it is essential to train the local youth in basic emergency response, be it paramedical, forming communication links or responding to emergencies. Community Based Disaster Management Plans and mock drills will be undertaken to ensure better preparedness. Efforts will be made to minimize vulnerability of disadvantaged groups like women, children, elders, physically and mentally challenged, and other marginalized groups. Aspects of reducing/minimizing the long-term impacts of various disasters on these vulnerable sections will be an integral part of the strategic plan.

Linking Traditional Knowledge & Technology

Disaster management authorities need to ensure that early warning systems (to be used in disaster prone areas) and the dissemination of warning and plans for risk avoidance actions are people-centered (i.e., they are tailored for local use and they incorporate the traditional knowledge of the local communities with regard to coping with natural disasters). The disaster management apparatus needs to catch early warnings from the disaster-prone areas and take prompt action subsequently. Other important recommendations are: the development of effective communication systems in the country; public awareness and education campaigns on disaster management; the application of latest technology for disaster preparedness (e.g., Geographic Information System, Remote Sensing, Communication Satellites, etcetera.); and the promotion of risk transfer options like insurance.

Role of Public Health Institutions

The Government must take strong initiatives for expanding the network of public healthcare institutions, especially in the rural areas, improving their manpower and infrastructure and giving proper guidelines regarding their role in the wake of a disaster. In post-disaster some of the agencies expressed similar kinds of suggestions on various platforms. In Tamilnadu and Kerala many of the leading international agencies, including UN bodies, were keen on teaching the community or specific targeted groups to understand and practice various technologies in connection with the disaster preparedness programme. In Kerala where health systems are comparatively well established compared to other States, it would be possible to integrate disaster management programmes through Primary Health Centres and Community Health Centres. The changes should come within the self, groups, and in the community itself. Therefore, Government should organize and facilitate such activities in the coming days to ensure people's participation and coordination in the pre and post-disaster and emergency context. In this context, it is very important to strengthen the primary healthcare institutions, which must be accessible to a widely divergent population. Healthcare institutions at different levels – primary, secondary, and tertiary – should be given well-defined and mutually supportive roles

vis-à-vis disaster management. At the village level, emergency healthcare providers, with proper training in life-saving skills, need to be deployed so that they can provide essential services to local communities during disasters.

Decentralizing Disaster Management

There should be decentralization of disaster management efforts – in terms of involving the village Panchayats and other local bodies in both planning and implementation of disaster preparedness measures specific to their areas. As we have already noted, the processes of dissemination of warning and risk avoidance action necessarily depend on the active participation of local people in a disaster-prone area. Hence, the Panchayats and other local bodies should have substantial roles to play in these activities. In fact, the planning towards management of natural disasters has to combine both the 'top down' approach and the 'bottom up' approach. Among the various measures for disaster mitigation mentioned above there is the need to:, ensure that development plans incorporate disaster mitigation norms; catch early warnings; predict natural disasters in time, issue warnings from the disaster management authorities; ensure the availability of necessary hardware (such as, search and rescue equipment, high wind-proof radio masts, emergency communication infrastructure, etcetera); have an emergency response plan; activate the emergency response plan promptly during a disaster; and provide comprehensive as well as effective relief and rehabilitation to the people affected. These actions could be undertaken with a top down planning approach. However, several important activities also need to be undertaken, such as: creating awareness among people; promotion of disaster mitigation and preparedness measures among the local communities; dissemination of warning among people in the affected areas; evacuation of people to safer places in the event of a disaster; and taking precautionary measures in the post-disaster situation (such as against epidemics) all need to be undertaken with a bottom up planning approach. The local self-government bodies must have a major say in the latter.

Integrating Disaster Management with Development Planning

All aspects of disaster management need to integrate with the normal development planning at all levels. Additionally, relevant departments should earmark a certain portion of the plan budget to undertake preparedness and prevention measures. Disaster risk reduction activities need to strengthen in the country.

Preparedness Needs

Locally appropriate prevention measures such as bio-shields, sea walls and other measures must be erected to prevent further erosion and disasters; a Disaster

Preparedness Plan must be drawn up for action at various levels and must be part of the Annual Development Plan; there must be Regular Disaster Preparedness Drills at community and institutional levels (Orissa Model) on fixed dates to prepare local communities in disaster preparedness; Government officials must be easily accessible and available on all days (even on holidays) in times of Emergency, as in the days following December 26, 2004.

Empowering the Local Community

Disasters can be mitigated if local communities and Government are adequately equipped to handle them. While appreciating the overwhelming solidarity with the victims of the Tsunami, the participants asserted that local communities must be made capable to spearhead any relief and rehabilitation operation in the wake of a disaster in a participatory manner. What is needed is the creation of "hazard-resilient bio-regional communities" (T.Karunakaran,2006) with emergency reshuffle plans handled by fully-equipped and well-prepared Disaster Prevention and Preparedness Committees of village clusters. He also said that it is not out of place for each Panchayat Raj to create some kind of emergency corpus funds so that people can have immediate access to relief. This would enhance their self-esteem and make them proactive in times of disaster. In addition, identifying the immediate needs to combat any further deterioration in disaster management and effective reconstruction, such as the installation of early warning systems; streamlining of relief distribution systems; launching public awareness campaigns; and issuing guidelines to relief workers all aid in effective disaster management.

Disaster Management in Educational Curriculum

To inculcate a culture of preparedness and prevention, disaster management will be incorporated in the education system and curricula at all levels. The students should be exposed to mock drills to develop requisite intuitive skills.

Crucial Community Participation

The Government will actively promote, through its own agencies, NGOs and other stakeholders, active community participation in risk assessment, vulnerability analysis, mitigation, planning and implementation of response and rehabilitation activities. Since the communities face the brunt of any hazard, strengthening their coping mechanism will receive the highest priority.

Revision and Updating of the Policy

The government should revise and update the disaster and emergency related policies as and when required.

Conclusion

In brief, it is evident that disaster management is not a stand-alone activity. A well-structured people-centric, coordinated and integrated effort is the need, of the hour, to deal with disaster and emergency situations in the country. The work should start from the bottom to the top: the community should take up the ownership of the activity. The community can act immediately in a cohesive and efficient manner, when they are well trained with their boosted and they recognized. The role of local self-government in managing natural disasters is of paramount importance and effective, technical and practical oriented capacity development exercises need to be provided to the Panchayathi Raj Institutions throughout the country, as India is considered the "theatre of disasters". Undoubtedly, we can say that team effort, with the "effective" participation of government and community, can make a difference to disaster management programmes. Effective management is possible only if a comprehensive plan and implementation mechanism programmes are chartered out. The post-tsunami scenario gives us a grave lesson to learn concerning the do's and don'ts that should be practiced giving insight into activities that need to be employed; the role and responsibilities of each and every person who are directly or indirectly affected by the disaster; and so on. Such a study, analysis and implementation could help contribute in reducing or eliminating the consequences arising in the wake of a disaster or any kind of emergency which shakes the entire fabric of a community or the lives of the people.

The linkage between urban growth, climate change adaptation, and sustainable development should be self-evident. Measures to manage urban growth and adaptation to climate change will need to be integrated into strategies for poverty reduction to ensure sustainable development. The land management perspective and the role of the operational component of land administration systems, therefore, needs high-level political support and recognition. The active involvement of disaster-affected people in the pre and post-disaster initiatives is not a need but a requisite to deal with disasters in a more effective and efficient way.

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