International Research Journal of Management and Commerce
ISSN: (2348-9766)
Impact Factor 5.564 Volume 4, Issue 12, December 2017
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Evaluation of Government approaches in Disaster Risk Reduction Management

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Introduction

Historically, dealing with disasters focused on emergency response, but towards the end of the 20th century it was increasingly recognized that disasters are not only natural and man-made effecting human beings; and, that it is only by reducing and managing conditions of hazard, exposure and vulnerability that we can prevent losses and alleviate the impacts of disasters. In the recent past, the climate related disasters are regularly taking place in Urban areas across the globe. In India, Hyderabad, Mumbai and Chennai cities are flooding regularly due to torrential rains. The flooding of Rajasthan and Ananthapur (infertile regions) are also observed flooding which is a new phenomenon. Even developed countries are unable to escape from natural calamities like hurricanes, cyclones, earthquakes, tsunamis and volcanoes and as human beings we just remain silent sufferers. All these climate disasters are foreseen in advance by Environment Researchers and scientists and warned the Governments. With the help of technological advancements, we regularly get updating information and warnings related to the climate changes and their disastrous effects. However, Governance is not changing their traditional approaches towards DRR and not learning lessons from them.

DRR vs DRM

Anticipating and reducing risk is called disaster risk reduction (DRR). Although often used interchangeably with DRR, disaster risk management (DRM) can be thought of as the implementation of DRR, since it describes the actions that aim to achieve the objective of reducing risk.Disaster risk is an indicator of poor development, so reducing disaster risk requires integrating DRR policy and DRM practice into sustainable development goals.

Governmentsneed to manage risks, not just disasters.

DRR is a part of sustainable development, so it must involve every part of society, government, non-governmental organizations, professionals and private sector. It therefore requires a people-centered and multi-sector approach, building resilience to multiple, cascading and interacting hazards and creating a culture of prevention and resilience. Consequently DRM includes strategies designed to:

- **avoid the construction of new risks**
- **address pre-existing risks**
- **share and spread risk to prevent disaster losses being absorbed by other development outcomes and creating additional poverty**

Although DRM includes disaster preparedness and response activities, it is about much more than managing disasters (UNISDR, 2015a).

Successful DRR results from the combination of top-down, institutional changes and strategies, with bottom-up, local and community-based approaches. DRM programmes should not be standalone but instead be integrated within development planning and practice, since disasters are an indicator of failed or skewed development, of unsustainable economic and social processes, and of ill-adapted societies (UNISDR, 2009b, 2011, 2013 and 2015a). Approaches need to address the different layers of risk (from intensive to extensive risk), underlying risk drivers, as well as be tailored to local contexts. There is no 'one-size fits all' approach to DRM, but there exist a number of approaches and frameworks, which have been effectively implemented to reduce disaster risk. But, before being able to reduce risk, Governmentsneed to understand the hazards, and the exposure and vulnerability of people and assets to those hazards.

How do Governments reduce risk?

Disaster risk management involves activities related to:

Prevention

Activities and measures to avoid existing and new disaster risks (often less costly than disaster relief and response). For instance, relocating exposed people and assets away from a hazard area.

Mitigation

The lessening or limitation of the adverse impacts of hazards and related disasters. For instance, constructing flood defences, planting trees to stabilize slopes and implementing strict land use and building construction codes.

Transfer

The process of formally or informally shifting the financial consequences of particular risks from one party to another whereby a household, community, enterprise or state authority will obtain resources from the other party after a disaster occurs, in exchange for ongoing or compensatory social or financial benefits provided to that other party. For instance, insurance. Governments ought to give incentives liberally to attract Private sector investments in DRR domain.

Preparedness

The knowledge and capacities of governments, professional response and recovery organisations, communities, NGOs and individuals to effectively anticipate, respond to, and recover from the impacts of likely, imminent or current hazard events or conditions. For instance, installing early warning systems, identifying evacuation routes and preparing emergency supplies.

Source of text: UNISDR (2017)

Implementation of these activities and measures is rarely done in isolation and includes a number of associated activities, including:

- **Identification and measuring disaster risk**
- **Education and knowledge development**
- **Informing people about their risk (awareness raising)**
- **Incorporating DRM into national planning and investment**
- **Strengthening institutional and legislative arrangements**
- **Providing financial protection for people and businesses at risk (finance and contingency planning)**
- **Integrating DRR across multiple sectors, including health, environment, etc.**

Identifying and understanding risk: the foundation of risk reduction

Awareness, identification, understanding and measurement of disaster risks are all clearly fundamental underpinnings of disaster risk management (UNISDR, 2015b). Disaster risk reduction is about decisions and choices, including a lack of, so risk information has a role in five key areas of decision making:

Risk identification

Because the damages and losses caused by historical disasters are often not widely known, and because the potential damages and losses that could arise from future disasters (including infrequent but high-impact events) may not be known at all, DRM is given a low priority by Government. Appropriate communication of robust risk information at the right time can raise awareness and trigger action.

Risk reduction

Hazard and risk information may be used to inform a broad range of activities to reduce risk, from improving building codes and designing risk reduction measures (such as flood and storm surge protection), to carrying out macro-level assessments of the risks to different types of buildings (for prioritizing investment in reconstruction and retrofitting, for example).

Preparedness

An understanding of the geographic area affected, along with the intensity and frequency of different hazard events, is critical for planning evacuation routes, creating shelters, and running preparedness drills. Providing a measure of the impact of different hazard events—potential number of damaged buildings, fatalities and injuries, secondary hazards—makes it

possible to establish detailed and realistic plans for better response to disasters, which can ultimately reduce the severity of adverse natural events.

Governments need to invest in the collection, management and dissemination of risk information, including disaster loss and impact statistics, hazard models, exposure databases and vulnerability information. At the same time, they need to put standards and mechanisms in place to ensure openness and transparency so that users not only have access to the information they need but are aware of its underlying assumptions and limitations. The generation of understandable and actionable risk dataought to be particularly sensitive to extensive risk, which, because it is configured to a large extent by social, economic and environmental vulnerability, can be reduced effectively through risk management and sustainable development approaches.

Are Governments reducing disaster risk?

While all countries across globe have made some progress in reducing disaster mortality associated with intensive risks, increasing exposure of people and economic assets means that mortality and economic losses from extensive risk are trending up and absolute global economic losses from disasters are increasing, although not relative to GDP. Some low and middle-income countries may not have the financial resilience to accommodate the likely average annual losses from future disasters, which threaten the very economic existence of many small island development states.

Governments have been generating risk faster than reducing it.

More needs to be done to prevent new risks, which are already emerging owing to increasing urbanization, the threat of climate change and other risk drivers. In an increasingly interconnected world, we are seeing that disasters can also result in synchronous failures. Development can be sustainable; it is just a question of whether we can change our approach in time to prevent disaster risk from reaching dangerous levels.

Governments have made more progress in managing disasters than in reducing our disaster risk.

Over the last 10 years, there has been significant progress in strengthening disaster preparedness, response and early warning capacities and in reducing specific risks, according to the HFA Monitor. However, progress has been limited in most countries when it comes to managing the underlying risks.

Although Governments know how to reduce disaster risk, there is often a lack of incentive to do so.

Both individuals, governments and businesses tend to discount low-probability future losses and seem reluctant to invest in DRM. Despite the magnitude of disaster costs, reducing risks is often perceived as less of a priority than fiscal stability, unemployment or inflation (UNISDR, 2011). New evidence demonstrates, however that the opportunity cost of disasters is high and that many low and middle-income countries, and small island development states are financially unable to cope with the predicted future losses from disasters while also maintaining their capacity to develop (UNISDR, 2015a). In other words, they are not resilient.

The costs and benefits of disaster risk management need to become fully encoded into public and private investment at all levels, into the financial system and into the design of risk-sharing and social protection mechanisms. Cost-benefit analyses can be expanded to highlight the trade-offs implicit in each decision, including the downstream benefits and avoided costs in terms of reduced poverty and inequality, environmental sustainability, economic development and social progress (UNISDR, 2015a). They can also help to identify who retains the risks, who bears the costs and who reaps the benefits. Such a broad approach to cost-benefit analysis can increase the visibility and attractiveness of investments in disaster risk reduction.

The good news is that Governmentscan achieve great things when invest in DRR. There are countless success stories of reducing disaster risk ranging from community-based participatory approaches to the global reduction in disaster mortality associated with intensive risks.

However, Governments need to recognize that the impact of some DRM measures may not be immediate. It may take decades for the outcome of improved planning regulations and

building standards to translate into reduced disaster losses, as a critical mass of new, risk-sensitive building and urban development has to be achieved.

The future of DRR requires that Governments assess the costs and benefits of DRM, reform risk governance, move from risk information to knowledge and strengthen transparency and accountability.

Global loss trends indicate that the rapid growth of economic assets in hazard prone areas is increasing disaster risk.(Source:UNISDR (2015A) (GAR15).

Challenges

First and foremost the major challenge to action on Disaster Risk Reduction is the willingness and political commitment of various agencies including the Government and major donors which is further exacerbated by the resources available for the same. There has to be a deep analysis on what budget of the Government is spent on DRR activities. Governments also need to look at how many donors are supporting DRR programs and what % of their total budget goes for DRR interventions.

It has been observed that the poorest nations are most vulnerable to any kind of a disaster. The ability of the affected region as a whole to bounce back is even further limited. Even if there is commitment from the Governments, there is no resource to fulfill the commitment. Hence, Governments think out of the box and persuade Private sector to invest in disaster infrastructure development through offering incentives.

Very often we hear from the Governments whether they should take care of the basic needs of their people with the limited resources they have or whether they should invest on issues related with disaster. Inter alia, it is the moral responsibility of the international community to pitch in and help the countriesto reduce the vulnerability of the community. The problem could also be overcome by sensitizing and educating the Governments that money spent on DRR activities will help sustain the development initiatives which is otherwise lost in the event of a disaster. The linkage between development and DRR needs to be reinforced. Other major challenge that we see irrespective of the country and its economic status is the lack of coordination between various DRR actors.

Observance in Bangladesh

There was a study carried out in Bangladesh recently focusing on DRR interventions being carried out in the field. It was observed that there were some geographical areas where the concentration of agencies working on DRR was much more that other areas even if the other area is more vulnerable and it deserves better attention. After thorough analysis it was found that these areas were the areas with easy access and high visibility. These are the areas which are preferred for the donor visit or visit by other VIPs. The money which should have gone otherwise to the more deserving areas is not being utilized properly. With the shrinkage of resources with the donor and other agencies this needs to be given a serious thought. One of the ways of overcoming this type of problems is proper coordination between various agencies which is lead by the Government and supported by OCHA. Detailed vulnerability analysis needs to be carried out jointly and based on the needs the geographical location and the interventions needs to be planned. Of course, it has been observed that the Governments have taken some proactive steps in this regard. The CDMP (largest DRR program in Bangladesh) is carrying out the mapping exercise of the vulnerable areas and the required interventions. This will be made available in the Government websites and can be used by anybody for reference while planning any DRR interventions. It is high time that similar planning and pro-active approaches should be adopted in other countriesfor ensuring proper coordination among various DRR players.

Another major challenge that was witnessed is the inconsistency in DRR interventions and the lack of standardized approach. It was observed in the field that different organizations are using different training modules and reference materials to enhance the capacities of the community on DRR. One organization was giving the training for one day on a particular topic /issue while other doing the training on the same topic/issue but the duration was different. This leads to differential capacity enhancement of the community. Governments should be able to recognize this problem and come out with standardized training curriculum for different stakeholders.

Observance in Nigeria

There are so many obstacles and major challenges to action on disaster risk reduction and building resilience in Nigeria, where there is a federal system of government with three tiers of governments: the central, state and local governments.

(1) The powers of these governments are allocated according to the Exclusive, Concurrent and Residual lists as provided by the constitution. The ACT establishing National Emergency Management Agency (NEMA) provides for same three tiers or levels of the Emergency Agencies to reflect its federalism. However, this arrangement is militating against its efforts towards efficient disaster risk reduction and building resilience nation.

(2) Related to this, is a weak national funding framework. The government budgetary allocation for disaster Management is negligible and the private sector does not see the economic justifications for investment in disaster risk reductions projects.

(3) The various government agencies that ought to work hand in hand in disaster risk reductions are in complete disarray and do not complement one another.

The factors contributing to these challenges are:

i. Lack of Political will on the part of decision makers

ii. Priority of developmental activities as against protecting the hard earned developments achieved against disasters

iii. The Federal/Central government has not enforced the ACT that set up NEMA

iv. The aforesaid challenges may be tackled through:

i. The constitution review to move the NEMA activities/powers into Exclusive list, where the Federal/central government owns up to the full responsibility of disaster risk reduction throughout the country.

ii. Allocation of at least 5% of the annual budget for disaster risk reductions.

iii. The private sectors especially those that contribute toward global warming and environmental damages must be compelled to invest in disaster management through taxes.

iv. Creating a unified emergency agency that brings all relevant government participants under single umbrella, that is, The NEMA, Fire services departments, Road Safety Corps, Civil defense Corps, anti-terror squads, Military Disaster Response Units and so on should be brought under one Command for effective and efficient disaster Management.

Observance in Cameroon

The floods are badly affecting Cameroon. Since 15th August, 2012, areas in the North and Far North Regions of Cameroon have been experiencing heavy rainfall and subsequent flooding. The rains and floods have destroyed or damaged many houses, leaving about 25,000 people homeless. Most of them have found shelter with host families, but 5,000 have sought refuge in school premises. Almost all crops and granaries of the affected families have been destroyed, and livestock was lost as well. The flood situation is likely to deteriorate in the peak rainy seasons. The challenges here are the high vulnerability of local populations and their inability to anticipate on flood occurrence. These challenges could be tackled through building capacity and preparedness at local level.

Observance in Philippines

It is quite amazing with the updates noted about the Pacific Islands adopting their own regional framework on DRR. It should be underlined that in the Southeast Asia region there have been serious thinking and discussions as well on DRR within ASEAN and it has some active NGO participation in those discussions.

Governments would agree to the points raised earlier on the challenge of (1) political will of government to really put priority to DRR and HFA implementation and (2) resources generation for DRR action. Other than these two points, another challenge is still about mindsets and paradigms of communities towards disasters. In Philippines, many communities are still adamant and complacent in responding to the need for DRR. The prevailing trend that is happening is that people tend to realize the importance of DRR after they have

experienced extreme losses after a tremendous disaster event. For instance, in TS Washi in the southern island of the Philippines what happened in Mindanao event! Local people were taught that no typhoons will come to Mindanao because it is away from the typhoon "belt". So when there was a government warning on TS Washi some people in Mindanao was in disbelief and many have not acted on the warning thus resulting to huge disaster loses which until now is rehabilitation is still ongoing and DRR then becomes a major action. For Governments and organizations facilitating DRR, this is a challenge in terms of convincing local governments as well as communities to act on DRR before any disaster event strikes them.

Observance in Developing countries

The key challenge, as already mentioned above is lack of resources for developing countries. Resource is a huge factor in implementing DRR actions from the ground and up. Although the policies are there to have a sustainable source of funds for DRR, the governments are burdened with huge amounts of targeted spending to address the needs of the growing population such as more schools, public health (which every year, government has to build thousands of classrooms to absorb new students), more health care, housing and economic development. After facilitating risk assessments and risk reduction planning ultimately, the question of funding becomes dead-end on the road towards DRR work.

A challenge is also in the area of how resilience is understood but more importantly measured. Do we have minimum indicators or a clear understanding of what is meant of resilience at the community level. Many organizations have been doing a lot of good in the area of developing tools on how to facilitate community DRR actions but very few have been done about indicators for resilience which will serve as benchmarks for DRR actions and resilience building.

Lastly on the Government approaches in various countries, it is emphasized that there is a challenge of DRR being disconnected to the overall discussions for national and community level development. DRR is seen as another layer, another policy pronouncements that local governments have to comply instead of viewing DRR as something essential in order to achieve sustainable development, development that is safeguarded from hazards and climate change effects. Integrating and mainstreaming DRR in many development facets such as

linking DRR to health, livelihoods, education and ecosystems management have been a key theme in many DRR actions in developing countries.

How do Governments tackle and go beyond these challenges and underlying factors?

There have been positive "solutions" towards addressing these barriers. One way is to work with new and not so to be engaged stakeholders in DRR work. For example, Philippines have good actions on engaging the private sector to contribute in securing resources for community actions on DRR. Corporate social responsibility served as the entry point for channeling some CSR resources to DRR. Many NGOs in the country have also engaged the educations sector for DRR. Children are at risk to disasters because of their vulnerability and level of capacities and working in schools is also the best way to correct the traditional thinking towards disasters. Sometimes children becomes the best educators to their parents as well. Other than working with the private sector and education sector, some NGOs have also worked with the academe for research and development of technologies that will improve risk assessments and hazard specific and cost effective early warning systems. These are some of the solutions explored to address the challenges to resources and cultural mindsets towards disasters.

Another solution is that Governments understand the value of continuing linking and learning among DRR actors and players. It is through this linking and learning that best practices are shared, joint problem solving and advocacies are borne and pursued. Linking and learning also allowed for better understanding of the principles and practice of DRR which for has been quite interesting among many organizations. The concept and interpretation of vulnerability, capacity and disaster risk have been quite different among organizations resulting to differences in approaches and tools. It is a proven fact that tools and approaches need not be uniformed among organizations and agencies but it is true that all tools and approaches, definitions will all lead to the reduction of risks and to the resilience of the community. For all we know, at the eyes of the local communities, villages and community organizations--they don't care about any "DRR formula", what they care about is to keep their communities safe and resilient from hazards and climate change.

In Pakistan, An agency of Aga Khan Development network AKDN", is working in the field of Disaster management. There are Geo hazards, like floods,debris flows,landslides, GLOFs,

snow avalanches and many others affecting the human lives in the country. Climate change is one of the triggering factors which has activated these metro-logical and geological hazards worldwide. Flash floods 2010, which have affected 104 villages in Gilgit Baltistan leaving the population homeless,and destroying their all livelihood options. Atababd landslide in Hunza, which lost 19 human lives and blocked the river as a result 26 km long,and 125m deep landslide dam formed which blocked the international road (KKH) which connects Pakistan with China. 2500 population upstream of the lake has become disconnected to access the region. The lake is still intact for 2 years of its formation leaving an ongoing risk to the downstream population of the region.
During these disasters mentioned above government and other actors played their role to response the disasters. But there were many challenges in the way of taking appropriate actions.

Conclusion

In conclusion, some lessons Governments ought to learn while dealing such disasters are as follows:

Challenges:

1. Lack of awareness regarding the disasters and its lack of training in DRR initiatives.

2. Non-availability of emergency funds for DRR

3. Formulation of DRR related policies and its implementation

4. Lack of technical knowledge regarding the Geo-hazards

5. Lack of uniform policy for relief and emergency response among the DRR agents including government

6. Lack of capacity building among the institutions regarding the relief,recovery and reconstruction phases.

7. Mindset of the rural communities

8. Cultural sensitivity

9. Private Sector partnership in DRR

10. Mindset of Bureaucrats, cooperation and coordination among various departments in DRR activities

11. Political will.

How to make resilience:

1. Formulation of particular laws and policies and its implementation in DRR
2. Hazard identification and anticipations in the remote areas and formulation of contingency planningaccordingly.
3. Capacity building of the institutions

4. Utilization of local resources and indigenous knowledge for making training manuals for capacity building

5. Natural resource management and reducing the risk from the reckless usage of forests, weeds and unstable slopes. Pasture management should be established in the mountainous areas through community organizations

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• World Disaster Reports, IFRC, annually

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• Famine Early warning System Net http://www.fews.net

• Humanitarian Early Warning System http://www.hewsweb.org

• World Climate research Programme http://www.wmo.ch

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