

# Managing Risk and Building Resilience in Humanitarian Action in India



Photo: AIDMI.

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## ABOUT THIS ISSUE

Disasters are known to kill, maim and cause widespread deprivation in the communities they strike. Apart from claiming lives and livelihoods, disasters also push back the progress and hitherto achieved. Especially in the context of humanitarian action, any progress achieved is as best precarious if it is not disaster proof. Therefore, managing risk and building resilience against disasters should be cross-cutting themes in all areas of humanitarian action. However, this is not the case as these themes are looked upon as disparate areas and are not well integrated with other themes of humanitarian action.

This in essence represents a wasted opportunity to provide effective, lasting and sustainable humanitarian solutions. This issue of *Southasiadisasters.net* highlights the cross cutting themes of managing risk and building resilience in humanitarian action in India. It describes major initiatives in humanitarian action that have also addressed the themes of risk and resilience. These includes disaster risk sensitive reconstruction after the Indian Ocean Tsunami, the opportunities and challenges of integration between the post-2015 framework for disaster risk reduction (HFA2) with other humanitarian frameworks along with the role of Asian Disaster Reduction and Response Network (ADRRN) in promoting resilience across all sectors of humanitarian action.

Replete with the best practices, views and insights from the major actors of humanitarian action in India and South Asia, this issue of *Southasiadisasters.net* is a must read for all interested in integrating risk and resilience with ongoing development initiatives. ■

- Kshitij Gupta, AIDMI

## MANAGING CLIMATE RISKS

# Community Based Disaster Management of WOTR

The Climate Change Adaptation (CCA) programme of Watershed Organisation Trust (WOTR) adopted a multi-pronged approach in empowering local communities to deal with climate change. Interventions at various levels in a village helped to march towards desired adaptation. One of the key components was Disaster Risk Reduction (DRR). Objective for DRR was to build capacities of the communities to prevent, mitigate and cope with disasters effectively. WOTR adopted the approach of Community Based Disaster Management (CBDM) to accomplish this. Since every individual is vulnerable and is threatened by natural and man-made disasters, each one is required to be aware and have the minimum capacity to counter such crisis. Community participation and community ownership in disaster risk reduction is a key factor in reducing vulnerabilities of people and minimizing losses.

The work done under the component aided communities to identify and address the adverse situations in advance and reduce its likely impact. It involved organizing awareness campaigns to sensitize the village; planning, reviewing and analysing of past disasters; creating a calendar of disasters seasons; mapping village resources (using the CoDRIVE-VI tool), assessing risks and vulnerabilities, identifying safer alternatives and training local individuals and bodies in basic and immediate disaster response.

Reducing the risk of disasters is closely linked to CCA as well as to sustainable development. Disasters can stem from any rapid or slow change in the environment that increases vulnerability and compromises resilience. WOTR Wasundhara guidelines address many issues of sustainable development. WOTR has consistently and continuously adjusted its projects and programs to incorporate new learnings. The effects of Climate Change and Globalisation – together and separately – are likely to induce large changes in all five capitals – Human, Social, Physical, Financial and Natural capital. Some of these changes will help, while others would compromise the viability of rural communities. Still others could bring large unpredictable changes that could only result in disaster. Mainstreaming DRR in WOTR projects is one strategy that would build resilience to any unanticipated changes. Fragility defines the relationship between damage and hazard intensity. As the fragility increases, damage for a given intensity hazard event increases. Resilience on the other hand, is the inverse of fragility.

DRR activities were successfully carried out in 33 project villages of WOTR, 25 of Maharashtra and 8 of Madhya Pradesh. Following are the major activities carried out per village under DRR component:

### 1. Awareness and Training

Discussion on DRR was initiated through *gramsabha*. DRR trainings

- Empowering local communities to deal with climate change lies at the heart of CBDRR approach of WOTR.
- The interface of DRR and CCA will change human, social, physical, financial capital.
- Apart from awareness, training and education what other strategies can be adopted by WOTR to foster CBDRR.



Hazard hotspot: Electric DP.

were organized especially for village youths. Concepts and correlation between Hazard, Vulnerability, Exposure and Capacity were thoroughly explained through these training. A village level Disaster Management committee (VDMC) was formed as subcommittee of Gramsabha. All further activities were planned through this committee.

## 2. Mapping and marking of Hazard hotspots in village

As a first step to begin with DRR, efforts were made to identify hazard hotspots within the village boundary, in a participatory way. Hotspots were mapped using GPS and a DRR map for the village was developed, to be displayed on a board at common public place. Hotspots mainly included broken walls, open wells, exposed electric DPs and wires, blind road turns, tilted water tanks, potential fire places, potential landslide locations etc.

## 3. Daily activity clock

In a meeting with villages, especially elderly people, an activity clock was developed for the village. It included daily activity of villagers - kids, women, and elderly people. It would help in reacting quickly when disaster strikes.

## 4. DRR Mock-drill in schools

Schools are extremely vulnerable areas in any village. Disaster specific mock drills were conducted in schools to prepare kids to respond to disasters. Small sessions were also conducted in explaining the significance of DRR activities.

## 5. Developing DRR workbooks per village

DRR workbook were prepared for each village in a participatory way. Such workbooks cover all necessary information of a village with reference to its disaster history, coping strategy used by the villagers in past, DRR clock, important telephone numbers, Hotspot map etc.

## 6. Sharing DRR workbooks with local government bodies

As a final step in disaster preparedness, village-wise DRR workbooks were submitted to local government bodies which deal with disasters response.

Importance of Ecosystem based adaptation was also stressed as an important link in dealing with climatic disasters.

### Ownership by Community

Implementing DRR activities in a participatory way was a real challenge. Most of these villages had a view point that even thinking of disaster is inauspicious. Rigorous trainings and awareness campaigns helped dealing with such a challenge. Self-motivated community action post DRR-trainings was kind of litmus test to success of DRR implementation. Some of the villages used Panchayat funds in repairing works at hazard hotspots while some even acted on biodiversity perspective while dealing with disaster preparedness.

WOTR is also developing a DRR Manual for facilitators. It will help NGOs learn from WOTR experiences. ■

- Dharmaraj Patil,

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(WOTR), Pune



Mock Drill on Earthquake.

# Role of ADRRN in HFA2 Implementation

The Asian Disaster Reduction and Response Network (ADRRN) is a network of 51 civil societies from 18 Asian countries covering South, South east and East Asia. ADRRN's main aim is to promote coordination, information sharing and collaboration among civil societies and other stakeholders for effective and efficient disaster risk reduction and response in the Asia-Pacific region. ADRRN is working very closely with UNISDR as part of lead of CSO task force under ISDR Asia partnership. ADRRN contributed in developing some of the key areas background papers namely on "Local level action" and "strengthening risk governance and accountability". One of the least achieved priorities of HFA is under lying causes of disasters which ADRRN tried to high light through community resilience survey and ADRRN occasional paper series "Ground Truth".

ADRRN will also be playing a very active role in tracking the progress based on the HFA2 framework and other regional commitments like outcomes of Asian Ministerial conferences. ADRRN along with other stakeholders will be working to develop tracking mechanism based on past experiences to make sure that we are making progress on critical issues of Disaster Risk Reduction in the region. It is very important that various stakeholders at the national and local level know about HFA2 outcomes and this should be integrated in their respective work as disaster risk reduction is a cross cutting issue which needs to be taken care of by various line ministries as well as various departments working on ground for various developmental activities. ADRRN will surely work with various civil societies in the region to see that integration happens at the grass root level.



One of the key strengths of ADRRN is the experiences of our members working at the grass root level on various issues of risk reduction. One of the key focuses areas of HFA2 based on the zero draft will be on the local level disaster risk reduction and ADRRN along with its members will be able to play big role in building capacities at local level through various capacity building program, awareness rising particularly among the marginalized and most vulnerable groups. ADRRN will be working with members to provide them a right platform for learning and sharing various work on disaster risk reduction issues. For this, ADRRN based on past experiences will work on various studies as well as finding new ways to effectively implement some of the DRR work.

Success of HFA2 will depend on active participation of various stakeholders as well as greater involvement of governments from

- Addressing underlying risks in the heart achieved priority of HFA.
- ADRRN is leading the efforts in Asia to address this gap.
- It seeks to integrate HFA2 with other regional commitments to foster resilience in Asia.

regional, national and local level. ADRRN will be working with various stakeholders to highlight the issues pertaining to the achievement of results of HFA2. One of the learning from HFA is that education plays a great role in communication of risk. Various ADRRN members were part of "Safe school" campaign to make schools safe from disaster risk. ADRRN will be partnering with various stakeholders for such initiatives as part of HFA2 frameworks to develop new concepts as well to include some of the everyday risks. Because of climate change some of the new risks have been hampering resilience of vulnerable communities and such risks should also be part of disaster risk reduction in future. ADRRN will work with important stakeholders from climate sector to share some of the tools and practices which can be useful for building resilience of vulnerable communities. Finally there should be active participation of various segments of communities in various disaster risk reduction works and ADRRN will work with members to effectively involve various community groups through various campaign and awareness activities in the region for achieving outcomes of HFA2 framework. ■

– **Mihir Joshi**, Coordinator, Asian Disaster Reduction and Response Network (ADRRN)

# A Toolbox for Assessing Loss and Damage

Loss and damage refers to impacts of climatic stressors that cannot be or have not been avoided through mitigation, adaptation and disaster risk management.<sup>1</sup> Between 1970 and 2012, a total of 8832 disasters, including droughts, floods, windstorms, tropical cyclones, storm surges, extreme temperatures, landslides and wildfires, have resulted in 1.94 million deaths and USD 2.4 trillion of economic losses globally.<sup>2</sup> Besides the havoc caused by sudden-onset events, there are enormous losses and damages from slow-onset processes, such as sea level rise and desertification.

While policy makers and governments formulate strategies and decisions on the basis of cost-benefit analyses for their country, not all impacts can be quantified or expressed in monetary terms. Existing disaster loss assessments do not adequately address non-economic losses and damages. As the IPCC<sup>3</sup> puts it: "Disaster loss estimates are lower bound estimates because many impacts, such as loss of human lives, cultural heritage, and ecosystem services, are difficult to value and monetize, and thus they are poorly reflected in estimates of losses." Despite the emergence of the topic in the climate negotiations in recent years, comprehensive methods for assessing loss and damage are lacking.

## The Toolbox

In 2014, UNU-EHS teamed up with LEAD-Pakistan, AIDMI (India) and IDS-Nepal to develop and test a

toolbox for assessing loss and damage at local level. The project will last two years and can be divided into three stages: 1) the development of the toolbox in Pakistan, India and Nepal; and 2) the testing of the toolbox in Pakistan, India and Nepal; and 3) fine-tuning, publication and dissemination of the final handbook, with lessons learnt from the test case studies.

Besides providing a firm theoretical basis, the handbook will include guidance on site selection, training of field staff, budget considerations, analysis of results, etc. Moreover, it will provide hands-on research tools, such as questionnaires and topic lists for focus group discussions and key informant interviews.

## The Training

From 27 to 31 October 2014, a five-day training course was given by Kees Van Der Geest (Associate Academic Officer at UNU-EHS), who drafted the handbook. The training took place at LEAD-Pakistan, and was attended by the principal investigators<sup>4</sup> for the three case studies under this project. The objectives of the workshop were to:

- Familiarize the investigators with the conceptual framework and the methods;
- Introduce and justify the study sites where the toolbox will be tested, and the climatic stressors and impacts the studies will focus on;
- Refine the methodology, based on feedback and discussions.

On the first day of the workshop, a lively discussion took place on the objectives of assessing loss and damage and the question whether or not the focus should be on informing compensation for climate change impacts or on supporting policy and action to minimize future losses and damages. The former requires an emphasis on measuring and putting dollar marks on losses and damages and the latter requires a deeper understanding of adaptation limits and constraints. Considering that compensation is quite controversial and the science of attribution is still in its infancy<sup>5</sup>, it was decided that the main policy objective of the toolbox should be to support action to minimize future loss and damage in vulnerable communities.

The conceptual framework of the handbook distinguishes two types of losses and damages: 1) impacts that could not be avoided by preventive or adaptive measures; and 2) adverse effects and costs associated with the measures taken to prevent, cope and adapt. A key element of the toolbox is that it differentiates adaptation, disaster risk reduction and coping strategies, terms that are often used interchangeably but that have different meanings. Coping strategies are short-term measures to deal with impacts of specific events. By contrast, adaptation measures are more permanent and adopted in response to longer term climatic changes and their impacts. Preventive measures or ex-ante risk reduction are measures taken to

- Accurate Loss and Damage estimates are essential to formulate a relief and mitigation strategy.
- UNU-EHS with AIDMI, Lead Pakistan and IDS Nepal has developed a toolbox for this.
- How can this toolbox factor in the climate risk aspect in emergencies and disasters?

1 Warner & van der Geest, 2013

2 WMO, 2014

3 IPCC, 2014, p. 19

4 Anam Zeb, Arif Rahman (Pakistan), Bala Ram Mayalu (Nepal) and Vishal Pathak (India)

5 James et al., 2014

minimize impacts of future events (Warner & van der Geest, 2013). There are multiple linkages between the three types of responses. For example, when an actor's preventive measures change in response to climatic changes, we speak of adaptation. And when preventive measures are inadequate, it is more likely that coping strategies will fail.

#### Next Steps

The workshop focused mainly on capacitating the principal investigators on the proposed methods for assessing loss and damage in vulnerable communities. This will help them in the next few months to conduct high quality research in the selected sites in Nepal, India and Pakistan. Based on the site selection guidelines in the handbook, LEAD Pakistan decided to study impacts from floods in Rajanpur (Punjab); AIDMI will study impacts from cyclones in Puri District (Odisha); and IDS-Nepal will focus on loss and damage from a landslide in Sindhupal chowk District.

The lessons learnt from these case studies will contribute to the final toolkit for assessing loss and damage which will be published by late 2015. ■

**- Kees van der Geest,**  
UNU-EHS and **Anam Zeb,**  
LEAD-Pakistan

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## RECOVERY

# A Journey to Resilience: 10 years after the Tsunami

On December 26, 2004, the Indian Ocean Tsunami claimed more than 2,25,000 lives and wreaked devastation on a hitherto unprecedented scale in several countries. 2014 marks ten years to that human tragedy. Having elicited the collective grief of the world community, the ten years after this tragedy saw a lot of progress in disaster mitigation practices around the world. However, there still is a lot that needs to be done to safeguard the world from such disasters. Newer challenges like climate change have necessitated new modes of thought and planning in the area of resilience building.

In these 10 years, the All India Disaster Mitigation Institute (AIDMI) has been spearheading efforts to build the resilience of the vulnerable communities of South Asia against the detrimental impacts of disasters. Towards this end, AIDMI has aimed to protect the assets of such vulnerable communities. For, it is now unanimously acknowledged among humanitarian practitioners, that the essence of effective disaster management lies in not only reducing the death toll from disasters to zero but also in minimizing loss and damage caused by the interface of disasters and climate change.

Thus, all of India's capacity building efforts related to disaster risk reduction should be closely aligned with climate change adaptation to overcome from the contemporary challenges of sustainable resilience building as faced by practitioners, researchers and decision makers.

Further research is greatly needed on the economics of climate sensitive risk reduction. Important questions on economic incentives and behaviours, decision making, the value of information, and behaviour under uncertainty need to be raised and answered. All India's future efforts for risk reduction must be climate smart.

AIDMI has been in constant touch with authorities in Tamil Nadu to discuss tsunami recovery management in a broader DRR perspective.

#### The discussion explored the following six questions:

- How to make small businesses more resilient to future disasters?
- Who is best suited to embrace the invariable complexity of recovery in India? How can recovery profit from such complexity?
- What are the simple rules of recovery strategy that any coastal district administration can use?
- How to capture any ground breaking ideas coming out of recovery management? Are we bypassing them?
- How can disaster victims become leaders of recovery? What can be done to support this them?
- Are we better situated to make smart recovery decisions? Is the recovery administration well informed to make these decisions?

AIDMI is working to find answers to these questions to better address HFA2 related implementation challenges in India. ■

**- ADMI Team**

## Way Ahead in Uttarakhand Recovery

Any day, something big and bad may happen in any part of the world. With training and preparation, Disaster Managers seem ready to respond to the situation. What comes next, however, is a topic seldom discussed. Whether before a Disaster or in its wake, long-term planning is vital but sadly overlooked. How will the community survive and thrive 10 years down the road, or 20 years? These questions have been raised after the flash flood tragedy struck in the state of Uttarakhand, India in June 2013.

The causes behind the epic tragedy of Uttarakhand Flash Flood 2013 lie in the grievous damage recently wrought on the region's ecology because of rapid tourism growth, proliferation of roads, unplanned development of hotels & shops, multi storey houses and number of hydroelectricity dams, which disrupted the water balancing. These man-made causes transformed the natural event into a social catastrophe.

As per the meteorological data, Uttarakhand faced heavy rainfall in a short span of time during 16-17 June, 2013 which lead to flash floods. Such type of meteorological condition did not happen for the first time, a number of times rainfall exceeded 400 mm in the region, including 450mm in 1995 and 900mm in 1965. Cloudbursts induced flash floods aren't uncommon. But this time the floodwaters, weighed down with tens of thousands of tones of silt, boulders and debris from dam construction, found no outlet. The routes they took in the past, including ravines and streams, were

blocked with sand and rocks. The waters inundated scores of towns and villages, submerging some buildings under several feet of mud, smothering life.

In the recent decades, the knowledge and understanding of natural hazards has grown significantly. Now, scientists can more accurately characterize the possible magnitude of hazard events and can better estimate the probability of their occurrence at specific magnitudes, especially for weather-related events. Far more is now known about the socio-economic dimensions of disasters, for instance human exposure and vulnerability (lack of resilience) to natural hazards and locations where poverty and multiple stresses influence the incidence of losses. But greater emphases needs to be put on the disaster recovery part to build back better and this can be considered as the time of new opportunities.

Recovery is considered as one of the highly important sections of the disaster management cycle. This is

- The Uttarakhand tragedy of June 2013 unleashed unprecedented devastation in the state.
- Long-term recovery is the greatest priority for the state right now.
- Apart from Health, Food Security, Education, Livelihood and Child-care, what other sector should be focused upon for long-term recovery.

the period following a disaster and the community's early response to that disaster, whereby things return to a new normal. After neighbors move from shock to action, communities organize themselves by implementing plans and structures aimed at bringing help to the affected individuals and families in a holistic, integrated process that brings needed resources to the most vulnerable. Recovery following each disaster is unique and may last weeks or years. Disasters are never welcome, but they give communities an opportunity to build back stronger. Often, damages sustained in disaster can be prevented from recurring by implementing a long-term recovery strategy grounded in risk reduction analysis and mitigation. In case of the Uttarakhand disaster, humanitarian response to the disaster was ensured immediately, while focusing on the immediate lifesaving needs of a population, such as directly providing clean water, sanitation, food and shelter, also contributes to longer-term objectives and more resilient communities, and lays the best possible ground work for longer-term development work beyond the immediate disaster situation.

Along with the rescue and relief activities, the Government of Uttarakhand in cooperation with development partners, civil society, voluntary organizations and the private sector undertook swift planning for early and long term recovery. Five key sectors – Health and Nutrition, Food Security, Livelihood, Shelter and Education and Child Protection were identified for the immediate post disaster



recovery and scheme pertaining to each were implemented. State with the help of World Bank, Asian Development Bank and NGOs has earnestly working on sectors like infrastructure, emergency services,

early warning systems, capacity building as immediate priority. A number of projects on long term recovery are in the process of implementation to build back better a "resilient Uttarakhand" with a

targeted focus on all the identified loopholes during flash flood 2013. ■

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