

Enabling Communities to Manage Risks

Community Based Disaster Preparedness



Photo: AIDMI.

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ABOUT THIS ISSUE

The impacts of disasters can be broadly categorized as direct and as indirect. Direct impacts refer to quantifiable losses such as the number of people killed and the damage to buildings, infrastructure and natural resources. Indirect impacts, in contrast, include declines in output or revenue, and impact on wellbeing of people, and generally arise from disruptions to the flow of goods and services as a result of a disaster. The contextual and localized nature of indirect impacts make it difficult to control them. One possible way of controlling them is through Community Based Disaster Preparedness (CBDP).

This issue of Southasiadisasters.net focuses on the theme of Capacity Building for Community Based Disaster Preparedness. It primarily focuses on how CBDP can empower communities to manage their risks through 'locally owned' and 'locally appropriate' approaches. The key lessons from ASDMA's recently finished capacity building project on CBDP have also been highlighted in this issue. The rationale behind promoting CBDP is that communities are the first responders of a disaster, therefore they should be given the necessary training to mitigate and manage their risks.

Moreover, given the dynamic nature of risk, CBDP makes for a more relevant, inclusive, bottom-up and effective approach to disaster risk reduction. This issue is also a compendium of the emerging areas like climate risks and how they impact communities at the local level. Capacity building for CBDP can also be viewed as the democratization DRR by enabling communities to build their own resilience using approaches best suited to them. ■

- Kshitij Gupta, AIDMI

INTRODUCTION

Mainstreaming Communities in DRR

the holistic approach to capacity development in Assam

The National Disaster Management Act, 2005 shifted the priorities and approaches of the State of India towards disaster management putting emphasis on holistic and localized approaches for disaster risk reduction. Local communities were seen as both first recipients as well as the first responders to any disaster and as such the cycle of disaster risk management must focus on last mile communities. The Assam State Disaster Management Authority (ASDMA) laid stress upon empowering communities for disaster risk reduction since its inception.

The various guiding documents and plans of the Government of Assam prepared by the ASDMA, make strong references for enhancing communities role in disaster risk management. The Assam State Disaster Management Policy, 2010 envisages upon instrumental role to be played by local authorities (PRIs both rural and urban). It stresses the need for training of officials and representatives from local authorities (Panchayats, Municipalities and Urban Local Bodies), storage and maintenance of resources to be of use in disaster management and ensuring risk informed development practices at local level.¹

The Assam State Disaster Management Plan includes aims to

ensure that all components of disaster management are addressed to facilitate planning, preparedness, operational, coordination and community participation. Thus, in the aim itself the role and importance of community has been emphasized.² The recently revised Assam State Disaster Management Manual, 2015 further intensifies the importance of community level institutions and expects Gram Panchayats and local authorities to prepare a Disaster Management plans. Such a plan should take into account all local conditions, identify specific vulnerable areas, initiate necessary preparedness and mitigation measures, draw up capacity building plans, work out shelter sites, stockpile emergency provision of food, fodder, medicine, drinking water plan, etc.³

Building upon the above, the ASDMA has developed multi-pronged capacity development strategy through which communities are being empowered for achieving disaster resilience. The Sendai Framework for Disaster Risk Reduction which is successor to HFA recognizes the progress achieved world-wide towards reducing disaster risks of communities and ASDMA's initiatives were evidence towards the same. ASDMA has kept on community based approaches in center of its DRR programming. ASDMA has worked across all four

"The priorities of government of Assam to ensure a 'Safer Assam'. Urging teachers to focus on 'social education' with the objective of building responsible and informed citizens' who are concerned and aware about their safety issues and are taking steps towards reduction of disaster risks in the society as a whole."

- Mr. Pallab Lochan Das, Minister of State (Independent), Revenue and Disaster Management, Government of Assam.



Photo: AIDMI.

First Community Based Disaster Preparedness (CBDP) training at Baksa, July 18-19, 2016.

priorities of the SFDRR towards community empowerment for disaster resilience which are briefly mentioned below:

Priority 1 – Understanding Disaster Risk

ASDMA has envisaged Community based disaster risk assessment as basis for making district disaster management plans. Different community level institutes have also been assessed and audited for the risks they face. E.g. ASDMA conducted status survey of schools and hospitals of Guwahati city to assess their vulnerability and to make corrective recommendations.

Priority II – Strengthening Disaster Risk Governance to Manage Disaster Risk

ASDMA has emphasized upon institutionalizing disaster risk reduction at community level through creation and capacity development of Village Land Management and Conservation Committees besides capacity building of local PRIs members of disaster risk reduction. ASDMA has been emphasizing upon sensitization and capacity building of public representatives on DRR.

Priority III – Investing in Disaster Risk Reduction for Resilience

The state has been one of states in India which has an allotted state budget for disaster risk reduction. Investments have been made through non-structural measures in hospitals and schools at community level. ASDMA in order to enhance structural resilience has revised the buildings codes of Guwahati city. A host of measures has been initiated to encourage sectoral/departmental investment for disaster risk reduction in respective sectors through departmental DM planning. ASDMA has put sufficient emphasis on capacity building of stakeholders particularly the health sector at local level for comprehensive health safety and disaster management.

Priority IV – Enhancing Disaster Preparedness for Effective Response and to "Build Back Better" in Recovery, Rehabilitation and Reconstruction

This priority has been considerably emphasized over ASDMA's flagship initiatives. The Flood Early Warning System (FLEWS) which is one unique technological advances befitting the last mile communities has been appreciated all around. ASDMA has taken up series of

training and capacity building, awareness generation activities to enhance community preparedness on disaster risk reduction. The training of frontline workers and first responders on CBDP across the 27 districts of Assam is one such example. ASDMA is reaching to household level (through Apartment sensitization programs on earthquake preparedness in Guwahati city) as well as community level (Panchayat level pilot projects on flood resilient model villages and pilot project on sustainable livelihood through DRR mainstreaming) for enhancing inter-sector disaster preparedness across levels and scales in communities to be able recover faster and build back better in case of a disaster is followed. Communities are accepted as thrust and core. ASDMA is also emphasizing on documenting and strengthening local traditional coping practices of communities to various disasters.

It is expected that through a multi-pronged and dynamic strategic approach, ASDMA will be able enhance local resilience against disasters and can contribute towards sustainable development of the state of Assam. ■

1 Assam State Disaster Management Policy, 2010 available at <http://asdma.gov.in/pdf/publication/Assam%20DM%20Policy.pdf>

2 Assam State Disaster Management Plan available at <http://asdma.gov.in/pdf/asdmp.pdf>

3 ASDMA (2015), Assam State Disaster Management Manual, 2015 available at http://asdma.gov.in/download/assam_disaster_management_manual_2015.pdf

Community Based Disaster Preparedness

The north-eastern state of Assam is of special strategic and cultural importance to India. Not only does it bind India to the north-east India, it is also blessed with many natural resources and can be considered a biological hotspot teeming with rare animal and plant species. However, Assam is exposed to a variety of climate and disaster risks. These include earthquakes, landslides, floods, and strong winds. Floods and the resulting everlasting river erosion have proved to be particularly detrimental to Assam's economy and citizens. To build up the resilience of Assam against such aforesaid risks, the Assam State Disaster Management Authority (ASDMA) routinely takes up disaster risk reduction and climate change adaptation initiatives. And All India Disaster Mitigation Institute (AIDMI) has found that in these initiatives the citizens of Assam play leading role when given a chance.

In the event of a disaster, it is the members of the affected local community who are the first responders, primary beneficiaries and principal actors. Disasters and emergencies are known to overwhelm the response capacities of communities leading to large-scale loss of life, property and livelihoods. It is therefore imperative to build the capacity of the local community to effectively respond to disasters and emergencies. One way of doing this is by enhancing the preparedness level of the community through capacity building initiatives.

Recognizing the need for building the capacity of communities to effectively respond to disasters and emergencies, ASDMA launched its capacity building initiative called 'Community Based Disaster Preparedness' in July 2016. The goal of this initiative was to empower communities at the local level with

the knowledge, skills and expertise to manage the risks they are exposed to. This goal was to be achieved by organizing capacity building sessions in all the districts of the state with the grassroots level workers from various government departments such as social welfare, health, or agriculture along with volunteers and members of community based organizations. The AIDMI was the technical partner in this initiative and conducted these trainings sessions at ASDMA's behest.

This partnership has been special. It generated results on the ground, influenced the two institutions, and created enabling environment for DRR in Assam.

As the first phase of these trainings draws to a close, I am happy to report that this initiative has been successful in achieving its stated objectives and goal. Hitherto, a total of 1055 participants from 27 districts of Assam have been covered under the ambit of this initiative. The participants have become informed respondent. So many of them committed advocates of disaster risk reduction. And some of them have become local leaders in reducing risks. But these numbers, as impressive as they are do not cover the wisdom, ingenuity and creativity with which the local communities in Assam have managed and mitigated their risks. AIDMI has learned more from the participants, not only what to do and how but also new ways of thinking about both, risk and Assam. Perhaps the most important lesson from this initiative was the effectiveness of risk reduction measures if they are carried out in an inclusive, participatory and democratic manner.



Photo: AIDMI.

Participants explaining the findings of group exercise, depicting the hazards, vulnerabilities and capacities of in and around areas of the conference hall building.

Community based Disaster Preparedness (CBDP) refers to all those activities and measures undertaken by a community using a locally owned and locally appropriate approach to reduce and manage its disaster risks. In essence, CBDP implies a community based approach to risk reduction done by using existing resources in a contextualized and localized manner. In simple words, AIDMI team started from where the communities were, building upto where they want to be. Given the participatory nature of CBDP, the pedagogy followed by AIDMI in imparting these trainings emphasized introspection, deliberation and dialogue.

These trainings focused on providing technical skills such as conducting hazard, vulnerability, capacity (HVCA) assessment; drawing

seasonal hazard maps; capacity-vulnerability matrix and compiling community resource inventories at the block level. These technical skills helped the participants in identifying the underlying causes of their vulnerability to disaster risks and then proceed to make elaborate preparedness plans. Similarly, the best practices on CBDP from previous projects and programmes was also shared with the participants.

Although the technical knowledge imparted during these trainings will help these participants to carry out disaster risk reduction (DRR) activities in a systematic and coordinated manner, perhaps the greatest achievement of these trainings was that it encouraged the participants to speak up on their perception of risk, vulnerability and preparedness. And, more

importantly, on what they think they can do to reduce risk if given a chance and resources. This was truly enriching, as people from different parts of Assam experienced risks differently and would often suggest innovative approaches to manage them. This made the entire discourse surrounding preparedness much more relevant and comprehensive instead of just being a vacuous exercise full of oft-repeated clichés.

I once again commend and congratulate ASDMA on organizing this initiative and successfully empowering citizens of Assam to plan, prepare and manage their risks. This is AIDMI's small contribution to operationalise National Disaster Management Authority of Government of India in Assam with citizen of Assam. ■

- Mihir R. Bhatt, AIDMI

CSR AND DRR

Corporate Social Responsibility as a Response to Disaster Risk Management

India's geo-climate conditions as well as its high degree of socio-economic vulnerability, makes it one of the most disaster-prone countries in the world. In its consideration of DRR, UNISDR defines "resilience as...the ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner. This itself express crucial role of CSR in managing disaster risk, with focus on poor and vulnerable communities.

The increase in socioeconomic vulnerability is often as a result of reduced resilience due to risk and related vulnerabilities, including local (micro) disaster events. This situation may cause the direct and/or indirect loss of livelihood and ultimately trigger higher economic inequality

and socioeconomic vulnerabilities, particularly related to natural resources such as water, food, and livelihoods. CSR intervention with respect to DRM is offering huge opportunities for companies as it still in the least understood initiatives - limited to relief, response, and not long term recovery and linking climate change adaptation. However, the concept and practice of CSR involvement in social development is not new in India. The social work and CSR field greatly overlap as its evolved and focus on people living in poverty.

However, corporate contribution in building disaster resilience has remained minimal. Currently, CSR is based on policies and activities that do not directly address DRR. Most companies implement their CSR projects through their own CSR

project management initiatives, confining benefit to people living in the locality of their operations. In India NGOs and civil society in general to get actively involved in DRR and resilience (not limited to initial disaster relief and response), that encourage and influence increased involvement of CSR in DRR and resilience.

As said, CSR is neither a new concept nor from action point of view in India. The rich experience of TATA - CSR since 1892 - is an important case for all level of companies to engage in community development, even for community resilience. TATA companies work - towards empowering people by helping them develop the skills they need to succeed in a global economy - consolidate into its CSR programme. Its emphasising on equps



Photo: www.tata.com.

The group's CSR activities.

communities with information, technology and the capacity to achieve improved health, education and livelihood outcomes. The following 10 core principles of CSR programme of TATA¹ reflecting very useful case for all levels of CSR actions. These points can be linked with the disaster resilience.

1. **Beyond Compliance:** while all CSR interventions shall fully comply with the relevant laws of the land in which they operate, they will strive to meet core needs, even if it is beyond what is mandated.
2. **Impactful:** Interventions will focus on impact on communities and to this end, all companies will work collaboratively and synergistically on a set of agreed Tata Group Focus Initiatives.
3. **Linked to Business:** All companies may seek business benefits and leverage their core competencies while undertaking CSR activities. However, community benefits will have to be paramount and clearly defined.
4. **Relevant to National and Local Contexts:** The CSR initiatives must be closely aligned with and relevant to the local and national

contexts in which the company is located.

5. **Sustainable Development Principles:** All CSR interventions will follow sustainable development principles - they will factor social, human rights and environmental impacts in their design and execution.
6. **Participative and Bottom-up:** Communities must be central to the interventions and they must be actively involved in identifying the issues to be addressed and in the management and monitoring of the interventions.
7. **Focus on the Disadvantaged:** Special care must be taken to ensure that the needs of the most disadvantaged in the community - in terms of gender, ethnicity, disability and occupation - are addressed.
8. **Strategic and Built to Last:** By design, all CSR initiatives shall ensure that communities can sustain them on their own, beyond the involvement of the Tata Group. Hence, the initiatives must be part of a long term CSR strategy.
9. **Partnerships:** All CSR interventions will be done in

partnership with institutions that are close to the ground - community organisations, NGOs companies (Within and outside the Tata group) and government: Local, state and central.

10. **Opportunities For Volunteering:** The CSR initiatives will be designed to provide a range of volunteering opportunities for Tata employees.

To shape CSR contribution, more important is how can companies at any financial level understand the importance of DRR and resilience and engage locally. In current scenario, CSR, so far, has been based on a policies and activities that do not directly address community resilience.

Lastly, it is essential to develop appropriate guidelines for corporates to build, and shape their CSR interventions aligned with DRR and resilience. Needless to say that the ultimate goal of such development is moving towards poverty reduction, targeting poor and vulnerable communities and local contextualized with the sustainable development goals²; the Sendai Framework³; climate change action plan⁴, and the principles of the UN global compact⁵. ■

- **Dr. Ramesh Vaghani**, Head, and **Mrs. Kruti Mehta**, Faculty, Department of Social Work, Saurashtra University

1 <http://www.tata.com/sustainability/articlesinside/corporate-social-responsibility>.

2 <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>

3 <http://www.unisdr.org/we/coordinate/sendai-framework>.

4 http://www.moef.nic.in/sites/default/files/Pg01-52_2.pdf.

5 <https://www.unglobalcompact.org/what-is-gc/mission/principles>.

Sustainable Urban Development through Integrating Disaster and Climate Resilience in Assam

The urban growth in Assam has been rapid over the years. In the last population census of 2011, Assam had the largest urban population of 4.3 million amongst the North-eastern States. Guwahati has about 0.9 million urban population, while the other large cities of the state are Nagaon (population 116,355), Dibrugarh (population 138,661) and Silchar (population 172,709). The state's level of urbanization grew at 14% in 2011, which shows an increase of 1.2% over the Census 2001 where the level was 12.9%¹. Wide inequalities have been observed in urbanization in terms of share of urban population in the districts of Assam. The important aspect of urban growth is the dominance of the capital city, the state capital city Guwahati had experienced faster urban growth primarily due to migration from infrastructure deficient areas². Like any other part of Indian states, urbanization is fast increasing and posing a number of challenges in Assam. One of the key challenges that exponentially increased is the exposure to existing hazards and creation of new ones. The vulnerabilities grew rapidly with unplanned expansion, depletion and injudicious exploitation of natural resources, construction in vulnerable areas etc. The need for integration of DRR CCA in development is especially urgent in urban areas to reduce vulnerability and hazard exposure in order to increase resilience to the potential adverse impacts of climate extremes. Thus, it requires design and implementation of capacity inputs with measuring the

impact of short to long time scale. DRR and CCA require well collaborative and coordinated capacity building actions in urban areas of the state.

The state is facing challenges like other states of India regarding urbanization. These urban areas are also potential contributors to innovation and technological inputs for DRR and CCA in the state. Training and capacity building inputs are required across the state among the municipal corporations, municipal boards and town committees for DRR CCA measures with basic orientation to incorporate with the planning.

Similarly, the department in close partnership with ULBs is implementing various sand important services such as, integrated urban transport, sanitation, solid waste management, urban infrastructure, urban poverty, urban housing, urban planning, financial sustainability of ULBs and general urban governance. All these services and involved manpower are in need of capacity building inputs for DRR CCA. All these services have great potential to build their capacity and contribute. The urban flooding is one of the biggest challenge due to uncontrolled and vulnerable development that increasing the risk of the urban areas.

The department has its own community involvement process with community and institutions. This process should be used to communicate for awareness and

sensitization at local level. This include, training, dialogue with citizens, campaigns, celebrations of key days that have space for DRR CCA agenda.

The department with DRR CCA expert should carry out integration exercise and design of capacity building actions that cover all the key services of the department. The result will include the modification in the process, ways of risk communications and measures (risk reduction and adaptation). However, it is suggested that the involvement of the department should strong and comprehensive in this exercise. It should not be done dominantly by the expert only. Each of the states and departments have their developmental processes and contexts that requires extensive engagement of their own experienced officials having basic and necessary understanding on the subject.

With cities experimenting and learning on dynamic components of risk reduction and adaptation, capacity building inputs can be generated from different case studies and reviews explaining various learning from similar past experiences from within and out-side the state.

The officials should be provided training with practical exercise on construction of multi-hazard resilient housing with a cost effective approach and adaptation measures against climatic extremes and slow onset events keeping future projections in the centre. This should

1 Data derived from department of Town and Country Planning available at <http://tcpassam.gov.in/>

2 Manta et al. Urbanization and growth of Small Towns In Assam, India, <https://www.unil.ch/files/live/sites/igu-urban/files/shared/Manta.pdf>

be done on ongoing basis and should cover newly induced officials and staff.

Basic trainings which cover risk assessment, early warning system, the concept of DRR and CCA, existing developmental frameworks and tools for sustainable development, should be covered for manpower who are directly involved in the implementation of services.

The department requires good understanding to conduct and analyze cost effectiveness of different risk reduction and climate change adaptation measures.

The state and urban bodies are having recent experience through

several DRR CCA related projects that implemented in partnership of government and/or humanitarian and development agencies. For example, Guwahati - Climate Resilience Strategy under Asian Cities Climate Change Resilience Network (ACCCRN)³; These pilots and process build the department's capacity with national and global developments. The department should conduct exercises to capture the learning and identify the areas for mainstreaming into the department. The usage of processes and outputs in other key cities of the state is another area of capacity building. Such projects should be continued in Guwahati and/or in the state due to its location, requirement and importance. The department

with the SDMA and the department of environment together should have a consultation process in the institutionalizing process of the experience and learning in the urban development. The negotiation with donor agencies also can be done on withdrawal strategy during the design phase of the project.

More and more people will be living in cities. Thus, local capacity building inputs to DRR and CC adaptation and mitigation are important. The cities of Assam are increasingly showing leadership, and committing to take actions. However, limited planning and implementation capacities can be one of the key obstacles for urban development in Assam. ■ - **Kishore Dutta**, ASDMA

³ Climate Proofing Guwahati, Assam - City resilience strategy and Mainstreaming Plan, http://www.teriin.org/eventdocs/files/TERI_Guwahati_CityResilienceStrategy.pdf

LEARNING WORKSHOP

Integrating Disaster Risk Reduction and Climate Change Adaptation



Learning workshop on Integrating Disaster Risk Reduction and Climate Change Adaptation was held in Guwahati. Over 30 Community Based Disaster Preparedness (CBDP) trainees participants from key local institutions to join the workshop to share the experience. February 23, 2017, Guwahati. The event was organised by District Disaster Management Authorities with support from Assam State Disaster Management Authority and facilitated by All India Disaster Mitigation Institute. ■

ISET: Initiatives in Community Based Disaster Risk Management in India



In 1997, a group of hydrologists from India, Nepal, and the USA formed a collaboration that resulted in the founding of the Institute for Social and Environmental Transition (ISET) and launched a long-standing initiative to build climate change resilience. ISET's work in India spans two decades and covers the following areas: integrating disaster and climate risk management into public planning and policy; adaptation and resilience to climate change; strategic approaches to water resource management; and urban resilience. ISET directly addresses the risks created by social and demographic changes, poverty and climate change.

Over the years ISET has lead international programs on themes such as water management, adaptive strategies and livelihood resilience, economic costs and benefits of disaster risk reduction, and urban

resilience. In all these endeavours, ISET has consistently integrated global knowledge with on ground implementation.

ISET has also developed a system for engaging with a diverse set of stakeholders called the 'Shared Learning Dialogues (SLDs)'. SLDs are founded on the principle of meaningful public participation, and bring together stakeholders with diverse interests, perspectives, information, knowledge, and power. This often means assembling scientists, social leaders, and underrepresented community members such as women or minority groups, along with government officials and encouraging a healthy dialogue among to tackle societal problems. Such an inclusive approach creates deeper understanding and often results in solutions not previously considered.

Specific examples of our community based approach:

Recently ISET conducted SLDs to investigate flood resilient housing in Gorakhpur, a municipality in eastern Uttar Pradesh. Flooding is a recurring problem in Gorakhpur, and climate change - combined with rapid urbanization - is likely to increase the severity of this problem. As more people move to Gorakhpur and erect homes, water-bodies are encroached upon, further exacerbating flood vulnerability. The majority of vulnerable houses are in low-income areas of the municipality. ISET then collaborated with partners like the National Center for Atmospheric Research (NCAR) in Boulder, Colorado, and the Gorakhpur Environmental Action Group (GEAG) to create climate projections for this geographic area and to engage the local community.

SLDs were conducted within communities to learn about the challenges they were facing, and to inform researchers about adaptive measures already used to reduce flood damage to homes (for example, many households raised the plinth of their dwellings). Researchers asked SLDs participants what adaptive measures were effective in preventing economic loss and housing damage. Researchers also collected suggestions on specific housing design features that participants perceived to be climate-change resilient. Based on these community SLDs, ISET worked with SEEDS India, an NGO involved in urban planning and DRR, to organize a housing design competition. The winning design from this competition was widely shared.

Furthermore, the study team held consultations with local masons and architects to ascertain the construction practices and designs

used in Gorakhpur. ISET also held SLDs with medical practitioners in Gorakhpur in order to gauge thresholds in temperature, humidity, and excessive rainfall, and to assess how these elements threatened health and well-being in this municipality. ISET has conducted similar climate-change resilient housing projects in Vietnam and Pakistan, and innovative findings have been shared internationally.

ISET is also engaged in several other resilience-building projects including the integration of climate change adaptation and disaster risk reduction into district-level policies in other hazardous areas (for example, the coastal plains of Odisha and mountainous state of Uttarakhand.) To learn more about our projects we invite you to read the following ISET publications:

1. Unpacking Mainstreaming DRR-CCA in the Sub-National Level Development Planning, [http://i-s-e-t.org/resources/policy-tech-](http://i-s-e-t.org/resources/policy-tech-reports/unpacking-mainstreaming-drr-cca-in-the-sub-national-level-development-planning.html)

[reports/unpacking-mainstreaming-drr-cca-in-the-sub-national-level-development-planning.html](http://i-s-e-t.org/resources/policy-tech-reports/unpacking-mainstreaming-drr-cca-in-the-sub-national-level-development-planning.html)

2. Climate Smart Disaster Management Plans: A Tool for Implementing State Action Plans on Climate Change, <http://i-s-e-t.org/resources/policy-tech-reports/climate-smart-district-disaster-management-plan-as-effective-tool-for-implementing-state-action-plan-on-climate-change.html>
3. Handbook for District Collectors on Climate-Resilient DRR, <http://i-s-e-t.org/resources/training/handbook-for-district-collectors-on-climate-resilient-disaster-risk-reduction.html>
4. Community Based Evaluation of Resilient Housing Options: Gorakhpur, India, <http://i-s-e-t.org/resources/working-papers/community-based-evaluation.html>. ■

- **Abrina Williams**, Social Media Correspondent, ISET-International, USA

DISASTER AS OPPORTUNITY

Building Back Better – Case of 2001 Gujarat Earthquake

The 2001 Gujarat Earthquake brought about an unprecedented level of death, destruction and deprivation to the state of Gujarat. Bhuj, the epicenter of the quake was entirely razed to the ground as were most of the other parts of the Kutch district. Despite the massive scale of the damage caused by the earthquake, the recovery of the Kutch region post this earthquake has been phenomenal to say the least. The development of critical infrastructure like roads, highways, bridges complimented by the

growth of industry and tourism, together with the expansion of transportation services have made the region more prosperous and economically robust than it ever was.

On the flipside, the region's stupendous post-disaster recovery has also given rise to a higher level of economic inequity. The post earthquake development boom attracted a lot of skilled and unskilled migrants to the region which has also caused a little insecurity among the natives. The cost of land has also increased

substantially which has led to a change in the pattern of land ownership.

The earthquake recovery has provided useful lessons in town planning albeit with certain challenges. The following challenges were faced by many planners in the recovery process.

In terms of use and operation, the town planning act was totally new for Kutch, even for involved institutions and people (disaster victims). Prior to 2001 earthquake,

the understanding was limited to layout approval, land measurement and calculation. It was indeed very challenging to deal with lack of awareness on town planning with different stakeholders. Second, the land records were either not updated or were entirely missing prior to the earthquake. This situation created lots of hurdles in the process of reconstruction, particularly in managing lots of cases, in a specific timeframe. Third, handling a wide range of stakeholders with lots of different understanding and perceptions was challenging during the reconstruction phase. This delayed the achievement of some town planning outcomes.

The integration of recovery planning to all the sectors (such as health, education, economic, finance, housing, transportation, etc.) is a prerequisite for effectiveness. In reality, facilitating such an integration is no easy task. It necessitates proper guidance and cooperation from government authorities as well as from technical experts. Fortunately, the Kutch reconstruction process received ample support from all such stakeholders.

Several good cases can be reported like the establishment of a city hospital in the city of Bhuj by the government in partnership with private contractors and technical experts. The hospital now operates as a well-known medical college.

Similarly, awareness generation drives around safe construction practices were also undertaken in planning and implementation of the recovery phase. The priority areas and sectors were identified by higher authorities were transportation, health, education, housing. The orientation process addressed both public and private institutions. In result, the earthquake

recovery brought good physical results in housing, transportation, port development and others even better connectivity and speed of trains.

The priorities were clear from the beginning at every level of recovery operation among the various actors (government and non-government). It is imperative that the lessons and good practices from the recovery in Kutch can be replicated and scaled up for long term recovery all over the world.

One of the primary reasons for the success of Kutch recovery was the quality of leadership emerging from government authorities and humanitarian institutions. I believe, the higher government authorities were also very astute in the appointment of good decision makers to key positions in the district during the recovery phase. The recovery planning and implementation was very open whenever institutions participated in the process according to their level and commitment. The orientation and direct monitoring by key officials was fruitful at the end. Involvement of NGOs was pivotal in the recovery operations. The decision makers in different institutions were well oriented about the recovery plan and took decisions to help the disaster victims. For instance, bank officials were instructed by the district collector to support account holders by asking for minimal documentation for the purpose of processing of a loan borrowed for the reconstruction of a damaged house or dwelling.

Effective facilitation amongst external agencies was another manifestation of a robust earthquake recovery. The officials at the district authority involved most of the institutions based on their commitment. Thus, each and every

institution contributed in recovery from local to state and national levels including state actors and humanitarian agencies. In the case of earthquake recovery, the contribution of outside groups was great. Effective facilitation was critical in the successful involvement of such external groups.

The following are five simple suggestions to people in other disaster situations managing physical recovery based on the lessons drawn from long term earthquake recovery in the Kutch region.

- Awareness generation with constant communication at the local level: Public meetings are very important. Interactions with local communities/victims. It may be time consuming initially, but later it has fruitful results.
- Training to local masons with practical orientation and monitoring support for construction efforts.
- Involvement of local institutions (social, economic, humanitarian and also technical institutions, even if not local) can solve many local issues. These institutions have a better understanding of people's behavior in relation to local cases (socioeconomic environment).
- Recovery implementation must involve young professionals. It brings speed with quality which is the most important aspect in recovery implementation.
- Multiple stakeholders. It may be challenging in the initial stages due to a higher investment of time, energy and money but can also lead to many positive and fruitful results in the end. ■

- Chirag Bhatt,

Bhuj Area Development Authority
(BHADA), Gujarat

Integrating Resilience to Health Sector

According to the WHO's definition, 'a climate resilient health system is one that is capable to anticipate, respond to, cope with, recover from and adapt to climate related shocks and stress, so as to bring sustained improvements in population health, despite an unstable climate'. The following are possible strategies and actions in health sector for DRR CCA capacity building.

- Understanding resilience levels of existing infrastructure as per the climate change and disaster risk for both rural and urban water supply and sanitation systems.
- Increase the coverage with speed and quality.
- Understand local issues and promoting adaptation and risk reduction in both infrastructure and services.
- Build capacity of manpower to improve planning and design of programmes for the health sector and its integration with DRR CCA.
- Building capacity to prepare and execute contingency plans of health sector and linking benefit analysis of adaptation options with the focus of public health management and WASH.
- Improved understanding of systematic research studies for cost and benefit analysis of adaptation and risk reduction

Climate Change and Human Health

The WHO operational framework provides practical guidance on how the health sector and its operational basis, health systems, can systematically and effectively address the challenges increasingly presented by climate variability and change. Its objective is to guide health systems and public health programming to increase their capacity to protect health in an unstable and changing climate.

options with the focus of public health management and WASH.

- Increase community understanding, capacity and

involvement in local level planning and community based risk reduction and adaptation for public health. ■



Editorial Advisors:

Denis Nkala

Regional Coordinator, South-South Cooperation and Country Support (Asia-Pacific), United Nations Development Programme, New York

Ian Davis

Visiting Professor in Disaster Risk Management in Copenhagen, Lund, Kyoto and Oxford Brookes Universities

Dr. John Twigg

Senior Research Associate, Department of Civil, Environmental and Geomatic Engineering, University College London, London

Madhavi Malalgoda Ariyabandu

Sub-Regional Coordinator, Central Asia & South Caucasus, United Nations Office for Disaster Risk Reduction (UNISDR), Kazakhstan

Mihir R. Bhatt

All India Disaster Mitigation Institute, India

Dr. Satchit Balsari, MD, MPH

The University Hospital of Columbia and Cornell, New York, USA

T. Nanda Kumar

Chairman, Institute of Rural Management Anand (IRMA), Anand, Gujarat, India



ALL INDIA DISASTER MITIGATION INSTITUTE

411 Sakar Five, Behind Old Natraj Cinema, Near Mithakhali Railway Crossing, Ashram Road, Ahmedabad-380 009 India. Tele/Fax: +91-79-2658 2962

E-mail: bestteam@aidmi.org, Website: <http://www.aidmi.org>, www.southasiadisasters.net