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Successful Community-Based Adaptation in India

Photo: AIDMI

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About this issue

India is known to be one of the most disaster prone countries in the world. The country's exposure to various hazards is exacerbated by its social, economic, natural, structural and ecological vulnerabilities. Climate change adds another layer of complexity to the already enhanced vulnerability profile of the country. For, it has lead to an increase in the severity and frequency of disasters in recent decades. This necessitates adaptation to climate change in India.

This issue of *Southasiadisasters.net* focuses on the theme of Successful Community Based Adaptation in India. It tries to highlight how low-cost, democratic and need based adaptation strategies have been successful in India. The primacy of local level adaptation strategies are stressed as the basis of effective community based adaptation. This issue depicts the best practices in community based adaptation that range from WOTR's efforts to upscale adaptation in India to GIZ's experience in integrating climate change adaptation in sectoral policy formulation and from the instances of successful community based adaptations in Odisha to the role of GIS in facilitating effective community based adaptation.
Since climate change has the greatest impact on the lives of poor and marginalised communities, it is only proper that adaptation to this threat should be democratic, low cost and need driven. India through its experience of combating this threat in the last decade shows a promising path for others to emulate. Read on to know more. ■

– Kshitij Gupta, AIDMI

LOCAL LEVEL DRR

Up Scaling Local Adaptations in India: What Works!

Climate change is emerging as a recurring silent disaster on the global stage. With each passing day it is becoming more and more precarious not just to humankind but all the living species on this planet.

India now is a country which houses at 17 percent of the world population thriving on four percent of water resources. Apart from this it is ailed by a and a plethora of socio-ecological problems, often with the root cause of lack of resources and knowledge. This is further exacerbated by variations in climate and lack of capacity to respond adequately and mitigate the consequences. A report by IFPRI (www.ifpri.org) indicates that South Asia will be hard hit by climate change and irrigated yields of almost all crops will decline significantly resulting in declining production. About 57 percent of Indian population solely depends on agriculture and allied activities (Census, 2011), hence climate variations leading to drought, flood, heat wave, frost events are disasters that significantly cripple their economics and natural resources.

India has a diverse topography and climate therefore one set of methods/ practices cannot be applied to the entire country to prevent and diminish the perils of climate change on biosphere and its components. About 69 percent of the land area falls under dry land (4th national Report to UNCCD). However, maintaining ecosystems' integrity and preserving their inherent characteristics help to make ecosystem more resilient to climate change. In India, as elsewhere, the effects of climate change will vary significantly and hence no one- size-fits- all approach could be built to mitigate the risks associated with it.

WOTR follows an approach which builds on knowledge embedded in the communities but stay hidden among the uncommon. There is a need to expose that knowledge, those measures which are specific for the considered community and their natural systems.

There is a box of adaptation which has been formed by on-ground experiences, success and failure of WOTR with the people, communities

Furniture made of Lantana- an invasive species.

and ecosystems, especially drylands. This includes conservation of resources, use of indigenous crop varieties *(rice like jirwel, ambemohor, varangal, kalbhat, tamkudai, dhawal, kolapi, tambada, raibhog, khadkya, zini; and wheat like Bodka and Bakshi; finger millet (nachani), french millet (varai), niger seeds (khurasani), samai (sava), jowar, (sorghum), maize, and horse gram (hulge)* etc.), crop intensification and diversification, organic manure, mulching, water budgeting of surface and groundwater resources as some of the methods knitted with watershed development to scale up the production, prevent and adapt to climate disaster.

Safeguarding of native biodiversity plays a very important role in adapting to shocks and stress, for example in the villages where WOTR work, people grow indigenous varieties of cereals and rice which are resistant to climatic anomalies majorly drought. Another example is the use of invasive species like *Lantana* for fuel and preparing bio-char, making furniture out of it as an adaptive measure for controlling its invasion; people also maintain records of their floral and faunal biodiversity along with their uses like wild edible species, natural/ biological pest control methods, medicinal properties of plants and many more.

Water resource conservation has been the maxim of WOTR through augmenting water resources via watershed development and managing water within the watershed through careful and planned water budgeting specially in the drought prone region of Maharashtra. With watershed development people gained access to water but due to unplanned and imprudent use, water resources soon started to diminish. WOTR, then took water budgeting approach to address the problems pertaining to water scarcity and developed a "How-To" Methodology, a tool on Water Budgeting and an interactive IT-enabled "*Water Budgeting Game*" that simulates scenarios resulting from different water uses and cropping patterns in given rainfall. Villagers now make their crop plans prior to sowing for *rabi* season taking care to secure sufficient water for livestock and domestic purposes in summer. They also began adopting efficient irrigation methods (drips, sprinklers, and other micro–irrigation systems) to conserve water and enhance production.

Villager applying Amrutpani to their farm–Organic Manure.

Given the multiplicity of possible solutions, they have to be chosen and custom-made to fit the geographic, socio–economic characteristics and needs of the local community. Up-scaling such set of adaptation practices befitted with local knowledge into adaptation solutions has helped communities to extract maximum benefit in WOTR villages. ■

– **Neha Gupta,** Watershed Organisation Trust (WOTR), Pune

- India houses 17% of the world's population with 4% of its water resources.
- Climate change has made almost 57% population of India dependent on agriculture, extremely vulnerable.
- WOTR has been helping communities in India to evolve successful community based adaptation strategies to combat the adverse effects of climate change.

From Pebbles in a Small Pond, to Ripples of Change: Scaling up Adaptation in Rural India

Community based adaptation pilot on Integrated Mangrove Fishery Farming System implemented in Tamil Nadu by the Indo–German project CCA RAI.

How can successful experiences in addressing the challenges of rural India be scaled up? This is a critical question that practitioners have been grappling with in the development context for many decades. It has become even more important in the context of adaptation, as India's rural communities are threatened with rapid and extreme climate change.

The Indo–German development cooperation project Climate Change Adaptation in Rural Areas of India (CCA-RAI), implemented from 2009-2014, aimed to Integrate Climate Change Adaptation in sector policy formulation and decision–making at the state level, and provide hands–on experience with climate smart forms of land use.

As the project drew to a close, we also sought to scale up the successes of the project. To this end, we analysed successful experiences of scaling up in the development and adaptation context in India and abroad; identified existing opportunities and challenges; and identified "drivers" and "spaces" that can be leveraged during project design, to promote scaling up.

Learning from Successes

A close examination of several case studies on adaptation implemented by GIZ in India and on successful scaling up, for instance, watershed development, revealed several common factors that contributed to their success in scaling up.

These factors included strong community ownership; sufficient investments in building or providing capacity to communities; partnerships between government and non-government actors; policy and institutional support; and accountability and transparency measures that clearly demonstrated the success of the innovation or approach.

These findings were perhaps not surprising. Community ownership and capacity are essential ingredients for projects to be implemented well, and for them to last beyond the lifetime of external funding. Partnerships between government and non-government actors help to "mainstream" successful experiences into government sponsored schemes and projects, and into national policy. Accountability and transparency measures are important to demonstrate effectiveness, and for continued success in implementation.

Key Challenges	Opportunities
• Uncertainty of climate impacts • Limited data availability for planning • Empowerment of rural poor and local government bodies • Lack of awareness and capacities for planning and implementation • Integrating adaptation efforts in rural development sectors between different government and non-government stakeholders • Aligning bottom-up and top-down priorities • Availability of locally appropriate technologies and solution • Sources of funding for adaptation, and governance and institutional challenges to promote ease of access and ownership at the community level.	• Provisions of the Twelfth Five Year Plan: "it is important for India to minimise the vulnerability of various sectors, and make its economy, society and environment adapt to climate change, even as it takes strong actions to enhance sustainability of its development path." • Political will demonstrated by the newly reconstituted Prime Minister's Council on Climate Change and the name change of Ministry of Environment Forests & Climate Change, • Provisions of the NAPCC and SAPCCs • Existing funding and institutional capacity available for implementing government rural development programmes e.g., MGNREGA and the National Rural Livelihood Mission.

Opportunities and Challenges

The opportunities for scaling up adaptation experiences in India include the clear commitment to adaptation demonstrated in the National Action Plan on Climate Change (NAPCC), and in the State Action Plans on Climate Change (SAPCCs). Moreover, the 12th five–year plan of India (2013–2017) emphasises the need to address adaptation.

While funding for adaptation continues to present a challenge, existing funds and institutional capacity available for implementing government rural development programmes such as the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGA) and the National Rural Livelihood Mission (NRLM) present an opportunity for mainstreaming adaption and leveraging funds from the national budget for adaptation.

Other challenges include the uncertainty of climate impacts; the lack of information and data for planning; lack of capacity; and aligning of bottom–up and top-down priorities *(see Table)*.

Leveraging Drivers and Spaces

What factors should be taken into account while designing a project or pilot in India, to improve its chances of being scaled up? What "drivers" (forces that can push the scaling up process forward) and "spaces" (opportunities that can be created, or potential obstacles that need to be removed to open up the spaces for interventions to grow) can future adaptation projects or pilots deploy?

We found that key drivers that should be taken into account include: consideration of demand, cost-effectiveness and replicability of the innovation or approach being piloted; consideration of capacity needs; identification of potential funding sources beyond the project phase, and for the scaling up process; building strategic synergies and partnerships that can play a role in the scaling up process; careful attention to monitoring and evaluation based on clear baselines and meaningful targets; and consideration of long-term economic, social and environmental impacts. Factors such as identifying local leaders and champions and identifying external catalysts can also act as drivers.

Successful scaling up will also need advocacy for appropriate policy, institutional and fiscal spaces. While some spaces already exist in India, as listed among the opportunities above, others, such as a greater voice and role for communities and Panchayat Raj Institutions, still need to be created.

Conclusion

India, like the rest of the world, is in a "learning by doing" phase for climate change adaptation. Paying careful attention to the potential of future scaling up while designing projects and activities at this stage can help change what would otherwise be "pebbles in a small pond", into "ripples of change". ■

– Anju Sharma, Oxford Climate Policy;
Somya Bhatt, GIZ; *and*
Anna Kalisch, GIZ

Disclaimer: The views expressed are the ones of the authors and do not necessarily represent the ones of the organisations they work for.

Use of GIS in Community Based Adaptation

Through the last few decades, considerable geospatial data have been developed by various governmental and non-governmental entities. GIS technology offers capabilities with which resource managers preserve implement to create and change resource plans and also integrate surroundings when environmental conditions change. The Community based GIS application is nothing but **"Gathering and mapping spatial information to help communities learn, build consensus and make decisions about their communities and associated resources"**.

Now a days, poor and vulnerable people are particularly affected by climate change impacts, i.e. floods, droughts and other extreme weather events. The managers can determine responses to planning outcomes before such policies may be implemented. In additionally using the community-based GIS tools for gathering, analyzing and disseminating spatial data on local resources.

Some of the advantages of using GIS for community based Adaptation

- GIS is by far the quickest and most efficient method of creating maps and similar graphics that provide a picture of not only the geographic, but of the social, demographic, environmental, political, and other aspects of an area as well.
- It can give you an idea about precisely where to concentrate your efforts. If you're concerned with Malaria disease prevention.GIS can help to identify areas where the population is at the highest risk and where outreach, clinics or other preventive measures would do the most good.
- It knows how to help you determine how seriously an issue affects an area or the community as a whole. The layering of several factors on a map can give you an idea. i.e. The nature of disease spread and distribution of a condition
- It is able to assist you better understand the area or community in which you're working. A GIS map gives voluminous information one click like buildings, population density the age, income of the population.
- It knows how to provide the community's assets and weaknesses. By understanding of maps. It can make clear just how many positive aspects there are to the community and how much already exists that can be mobilized to address problems.
- Possibly most important, GIS maps can help authorize guiding principle. GIS maps can facilitate policy makers to recognize issues more obviously.

The various kinds of GIS are: 1. Public Participation GIS, 2. Participatory GIS, 3. Community Resource mapping

1. Public participation geographic information systems (PPGIS)

PPGIS is usual to take the academic practices of GIS and mapping to the local level in order to help preparedness to the community. The idea behind PPGIS is empowerment and inclusion of marginalized populations who have little voice in the public area through education and participation.

2. Participatory GIS (PGIS)

The PGIS applications is helpful in facilitating public participation in the decision making process. The applications can prepare stakeholders for collaboration because if the technology is applied effectively, it can facilitate the interaction between local community groups and public officials who manage the resources. PGIS applications includes audio, video, sketch maps, 3D-Models, imagery, GPS and GIS to characterize peoples' spatial information through demonstration and participatory mapping.

3. Community Resource Mapping

It is a typically a methodology used to link community resources with an agreed upon vision, organizational goals and expected outcomes. The community resource mapping process can help a community It convey information about an agency's policies, procedures, funding streams and new opportunities for community planning.

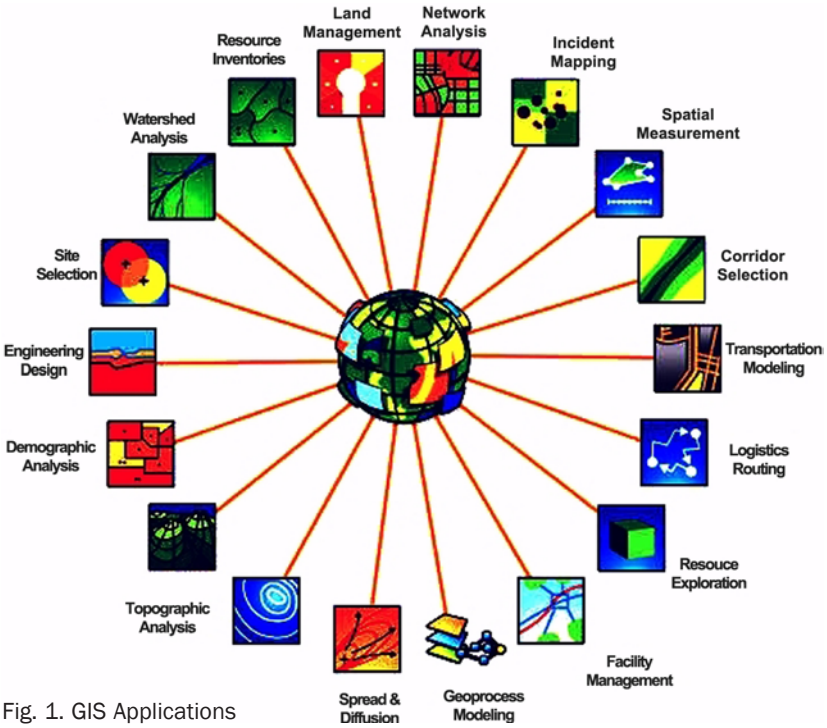

Fig. 1. GIS Applications

- Geographic Information Systems (GIS) have tremendous potential for community based adaptation for climate change.
- The various types of GIS include public participation GIS, Participatory GIS and Community resource planning.
- GIS mapping tools can also help in cyclone warning, climate change analysis and the control of spread of diseases.

4. Applications

There are various GIS based applications for community adaptation. **(Fig.1.)**

4.1. Cyclone warning

GIS based disaster management system will use data from INSAT and IRS, based cyclone warning system, temporal-satellite data with temporal time of few hours, It afford recovery, assessment, readiness, response through satellite communication from the remote site

4.2. Web GIS for community Adaptation

A single-window web base d information used for Disaster Management Support System. End-user can access real time geo-information without burdening. The technologies including **Internet, wireless-communications, mobile-position, portable-Internet-enabled-devices and GIS. (Fig.2)**. Web GIS for community adaptation) Now a day's majority of the data required for the community based disaster management. (GIS) provide real time crisis management like forest fire, flooding, landslide.

4.3. Climate change analysis and Community adaption

GIS can play an important role in policy decision-making. The community knowledge and voice on climate change impacts and adaptation by exploring community web GIS. It is a medium for disseminating climate change messages and sharing farming communities' experiences of adapting to climate change. User can access to temporal climate scenarios, socioeconomic condition.

4.4. Health

GIS is a powerful community disease mapping tool used for health services analyses and environmental health and justice analyses, exposure modeling, risk assessments, disease diffusion and clustering studies, epidemiological inquiries, health disparities research and investigations of public health issues

4.5. Vulnerability

The Information broadcast is crucial aspect in community adaptation. The modern web-GIS platforms quickly to create a structure of communication mechanisms among relief users, volunteers, affected members, NGO's. They can be used to identify the most vulnerable people, places and sectors so that resources are allocated accordingly

5. Conclusion

The modern GIS technology helps in exploit community effective community based adaptation. The web based GIS tools and their active roles in the disaster management, especially during prevention, preparedness and response stage help in leveraging the potential of GIS for CBA. ■

– **Dr. M.Rajamanickam** *and*
Dr. G.Victor Rajamanickam
Center for Disaster Management,
PRIST University, Tamil Nadu

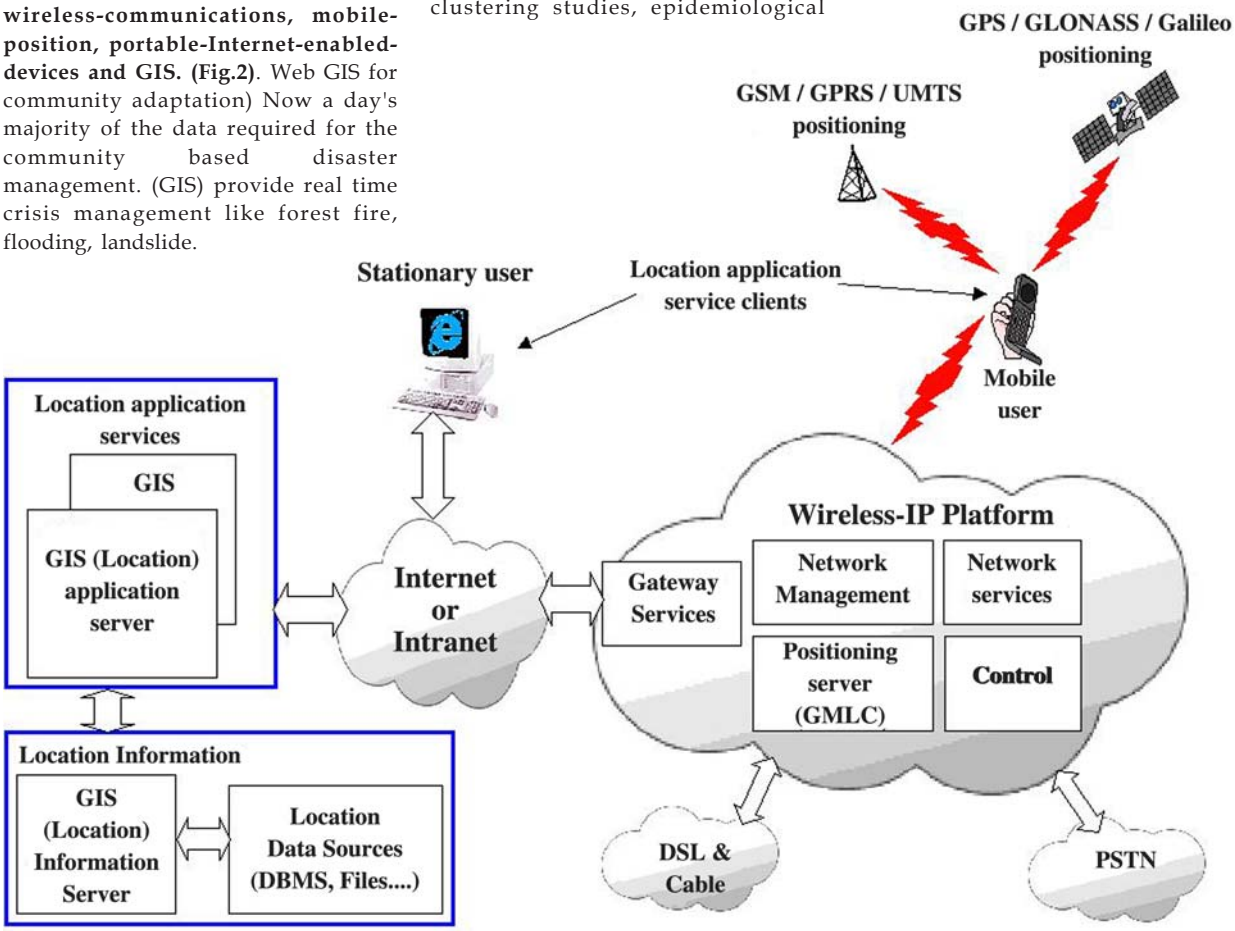

Fig. 2. Web GIS for Community Adaptation

Community Adaptation to Flood: Kalana, Odisha

This case study exhibits how a community in Odisha, India faced with recurring flood hazard, adapted on its own through a range of measures; from construction practices to structural protection, from agricultural practices to capacity building. It exemplifies local innovation and sustainability and demonstrates ways in which community based adaptation measures can be institutionalized.

The panchayat of Kalna located in Jajpur District, Odisha is spread over 600 ha and comprises six villages. More than fifteen hundred households from this panchayat live on a flood plain perched between an embankment and river Bramhani. Every year, villagers experience floods during monsoon period inundating their habitation and agricultural fields.

Each of the house in this community is constructed on a very high elevated base of 10-15 ft high from the ground. The base itself is made of earth dug from a site near to the house and in this process the digging site converts into a pond. As many as ten such ponds can be found and villagers explain that they are the first to get filled when flood water inundate, thus becoming a kind of buffer in providing lead time and also in its long term use for fish farming. While construction of many houses in recent times have converted to concrete, significant number of traditional thatched houses remain in which the walls are made of bamboo and earth. The reason as one explains, earthen wall can collapse under flood water whereas bamboo will allow water to penetrate and thus prevent a complete collapse of the structure. Provisions are made in the roof for storage of various items.

Photo Credit: Dusasan

House on elevated base.

Critical Issues

- Successful community based adaptation can be achieved if the means of adaptation are embedded in community life.
- The community at Kalana Panchayat of Odisha has exhibited successful community based adaptation practices against recurring floods.
- Adaptation was predicated upon construction practices, structural protection, agricultural practices and capacity building.

Farming and small business are two of the predominant occupation of the community members. Agricultural practice however has changed over the year from mostly paddy growing to winter vegetables keeping in view the annual flood and its rich deposit. Paddy is still widely grown on the other side of the embankment. Gradual river erosion and consequent sand casting has made some of the land on river side unproductive for conventional agriculture, and this has prompted locals to grow peanuts to the extent possible. This in turn has led community members to start related business enterprises.

During flood, villagers move together to adjoining embankment with their essential items where they put up in temporary tents. Community kitchens are initiated by local club and, boats are operated during this period mainly to access houses under water. To minimize flood duration, community was mobilized following an embankment breach in 2001 and banks of the river were strengthened with stone packing.

Disaster risk assessment is often derived from a limited scientific disciplinary perspective in which disaster risk such as that from flood, cyclone, earthquake etc. are constructed from its loss potential, relegating to the background other important consideration such as livelihood, housing, community network etc. This example shows on one hand a much broader and on the other how adaptation measures are embedded within community life and livelihood. ■

– Biswanath Dash,
Jamsetji Tata Centre for Disaster Management, Mumbai

Community Mobilisation and Disaster Recovery: A Case Study from South Odisha

Trocaire is an Irish International Development and humanitarian NGO with 40 years' experience working in Asia, Latin America and Africa. Trocaire uses a Rights Based Approach to empower local communities to free themselves from poverty and live with dignity in times of peace as well as disaster.

Trocaire has been working in Odisha since the devastating super cyclone of 1999. In 2003, we began long-term development projects in five desperately poor districts of South Odisha. Over the last eight years we have deepened our intervention there, mobilising marginalised communities, strengthening Community Based Organisations (CBOs) and empowering them to develop people – centric, decentralized planning.

Cyclone *Phailin* hit Odisha on 12th October 2013, affecting an estimated 11,980,587 people in 17 districts, killing 21, damaging 376,000 houses and causing widespread damage to other livelihood resources. The disaster response of the Odishan State Government was exceptional – an example to be followed within India and internationally. Naturally, in the aftermath of the cyclone the focus of Government and the international donor community was on Odisha's heavily impacted and cyclone–prone coastal belt.

Photo Credit: Trocaire

Youth in Dangarigaon Village, Gajapati District fitting a tin roof on the reconstructed house of Kalemanga Malik, an elderly widow.

Trocaire's Response to Cyclone *Phailin*

However, significant damage was also inflicted on the remote districts of Kandamal and Gajapati. Vulnerable tribal and *dalit* communities in these areas, with which Trocaire has worked for years faced serious crop and shelter damage. Trocaire, with the help of our partners: SACAL, IWD and Jana Vikas brought relief to these remote and underserved communities within 36 hours, providing emergency dry food to 2,735 households and temporary shelter materials to 2,000 households, preventing destitution.

Shelter Beneficiary Targeting

The focus then turned to shelter rehabilitation. Vulnerability was a guiding principle and Trocaire prioritised groups such as female headed households, child headed households and persons with disability. The intervention pursued a community led targeting process, with the following steps:

1. Selection criteria thoroughly discussed with CBO and communities
2. Beneficiaries selected by CBOs and villagers based on agreed criteria
3. Documentation of the process in the form of CBO resolutions
4. NGO staff members physically verify beneficiary households before final selection
5. Assessment of individual beneficiary selected in the targeting process conducted and cost estimation made for each individual case

- Trocaire has been working in Odisha since the super cyclone of 1999.
- Trocaire's response after cyclone *Phailin* was based on targeting shelter, beneficiaries, shelter construction, etc.
- Trocaire will now help in the development of systematic approach to community based disaster risk reduction.

6. Random checking of beneficiaries by Trocaire's humanitarian consultants.

This community led targeting process was facilitated by partner organizations and the CBOs they had promoted. Pre-organized communities allowed for effective community participation and buy-in to the targeting criteria and process and effective targeting of the most vulnerable households. While creating individual assets within communities often surfaces conflicts, the number of complaints and conflicts reported by the projects complaint handling mechanism was low.

Shelter Construction

Trocaire's response aimed at providing shelter repair to 450 of the most vulnerable affected households. However, in many cases, beneficiaries preferred to go beyond shelter repair to shelter re-construction, and communities were willing to mobilize additional resources to achieve this. Money and material resources were mobilized mainly from village SHGs, CBO members and relatives. Mobilization of skilled, semi-skilled and unskilled labor came from CBO members, villagers and local masons, promoting the local value of Srama Dan (labour donation). The model and modality of shelter repair was designed in consultation with the partners and communities. Depending on community preferences and locally available materials, different DRR elements were incorporated such as stone foundation with cement, tin roof with steel parapet, raised plinth with plinth protection, brick walls, concrete floors, plastering of outside walls and so on. The quality of the community led shelter repair and re-construction was ensured by the oversight of skilled masons and project staff as well as random checking by Trocaire staff.

Learning

Our assessment shows that the quality of targeting, community participation and community contribution in this project were positively correlated with the strength of the CBOs that had been promoted. Organised communities led by CBOs identified and prioritized the most vulnerable community members, fairly distributed resources that were allocated and mobilised additional resources to satisfy needs not met. The CBOs were instrumental in making this an effective and efficient disaster relief and rehabilitation response. We found that, where the CBOs were strong, the crisis actually strengthened them further, it showcased their leadership and improved their relationship with the community. Trocaire's experience in its *Phailin* response demonstrates clearly the importance and potential of community mobilisation and solidarity in response to and recovery from disaster.

What next:

- Link this relief and rehabilitation intervention back into our development work with these communities
- Monitor and analyse the effectiveness of the different construction techniques used and share that learning with other organisations
- Develop a systematic approach to Community Based Disaster Risk Reduction. ■

– **Dipankar Datta** *and* **Mark Furlong,** Trocaire India

RESILIENCE AWARD 2014 UNDP INDIA

Chhattisgarh Traditional Healer Association

In a region characterized by hunger and malnutrition, poor water and hygiene, and high communicable disease rates, the Chhattisgarh Traditional Healer Association is taking an inventive approach reducing infant mortality, improving maternal health, and facilitating local access to medical care. The association empowers "village botanists" to serve as agents of positive community-level change by showing them how to use traditional medicinal plants to meet modern medical needs. Work also focuses on getting formal scientific certification to traditional medicines that are proving effective in treating fever, colds, arthritis, malaria, gastro-intestinal diseases, and a range of public health concerns. Health services are provided to more than 50,000 families across 500 villages in 12 districts, and the average medical costs in communities served has been reduced by 70 percent. More than one million trees and half a million medicinal seedlings have been planted in 100 villages, restoring rare and threatened flora and fauna and improving local health and livelihoods in the process. ■

(Source: http://www.equatorinitiative.org)

NEW INITIATIVES

Community-based Adaptation in a Changing Climate

Photo credit Mr. Krishna Raj Adhikari/Journalist, Nepalgunj, Nepal

August 2014 floods inundated this village in Neulapur VDC, Bardia district of western Nepal.

With so many perennial development issues and problems, climate change has added another layer of complexity. Nepal's climate and weather pattern are changing due to the influence of global climate change and due to local processes. Nepal's economy, natural resources and people's life are adversely exposed. For example, senior economists and GON staff are sceptical about Nepal achieving the projected 6% growth in GDP in fiscal year 2071/2072 — the reason: the Monsoon was late, early rainfall was erratic, torrential rain in August caused floods and landslides across the country, and finally the 3 day downpour in October due to cyclone *Hud-Hud* which damaged crops.

At local level, exposure and vulnerabilities — economic, social, cultural, structural, political, etc. — existed since a long time, but climate change is aggravating and exacerbating these. The intensity and frequency of small, "day to day" localized events are increasing. Households and communities' capacity to absorb the impact and recover from disaster losses is decreasing. Climate change is also impacting fragile ecosystems, such as that of Chure hills, high–mountains, wetlands, etc., degradation of which is further enhancing climate change impact. Unfortunately this trend is worsening. In the long term, scientific community believes there is a danger of decreased agricultural productivity thus causing food insecurity, increased disease vectors due to resilient viruses, increased water and energy stress across all sectors, etc., to name a few.

The impact of climate change is well known in sectors related to water resources — agriculture production and food security, irrigation, etc. However, the impacts of climate change to other sectors have also been felt. Take one example — this year because of the deadly avalanche in Everest on April, almost all the expeditions to summit Everest were cancelled, which meant tourism companies and Nepali economy losing millions of dollars.

It is a fact that climate change is a global problem and concerted effort by all countries is needed to address this problem in its entirety. But it is wrong to think that this problem can only be addressed at global and national levels. While this is certainly true that solution to climate change will be guided by factors such as global frameworks, national policies and plans and the quality of governance for climate change, the effect of climate change is felt eventually at the local household

- Climate change has further exposed Nepal's economy, national resources and people's lives to the harmful impacts of disasters.
- An effective way to combat this threat is through community based disaster risk management (CBDRM).
- But climate change has necessitated a rethinking of an adequate CBDRM strategy for Nepal.

level. Therefore, the efforts towards climate change adaptation ultimately should target the families, the households, the communities. Communities can use and transform the natural and built environment, their surroundings, and increase their capacity and resilience to influence how hazard, exposure, and vulnerability interact with each other. In countries like Nepal where good governance has not trickled down to the settlements, people don't have any choice other than to act now to positively influence the environmental processes and find ways to adapt to changing climate.

Climate Change Adaptation (CCA) and Communities

Climate change is challenging the existing and traditional approaches in risk reduction including the practice of Community Based Disaster Risk Management (CBDRM). So far, CBDRM efforts in Nepal which started in early 1990s has tried to address mainly preparedness and response for hydro-meteorological hazards, as a result of which mortality per hazard event is decreasing. However, in the face of increasing number of hazard events in the evolving context of climate change, CBDRM initiatives should now move beyond disaster preparedness and response to address the vulnerability of livelihoods, the decline of ecosystems, the lack of social protection, unsafe housing, the improvement of governance and other underlying risk factors. While saving lives is of paramount importance, many communities in Nepal are tangled up in a vicious cycle of preparedness, response, and relief. The focus should not be on tackling the symptoms of the problems, but on tackling causes.

There are many challenges however. Experiences from past projects show that there are very clear limits to what communities can achieve on their own. While communities could do much to improve their own preparedness and response capacities or to undertake localized physical hazard mitigation measures, they simply do not have resources and or influence decision making processes in a way that can address underlying risk factors, such as access to safe land, access to information and new technologies, or undertake the large scale public works necessary to reduce risk. Therefore it's not enough that communities are engaged and participatory; successful reduction of risk depends upon factors such as involvement of and support from local actors, local and central governments agencies. Support from NGOs also has always been, and will remain, very important.

A rethinking of CBDRM strategy and approaches is a highly relevant issue in the new climate change regime. New demands to disaster risk management associated with changing patterns of disaster risks and its impact to local area and communities must be analysed. It is imperative that CBDRM should incorporate CCA in its process. Disaster risk management community and climate change community to talk to each other, and collectively talk to economists, sociologist and political scientists — this will ensure the much needed "change of mind-set" of those who are affected, who govern, who lead, who plan and who dispense. ■

– Avani Dixit,
Programme Analyst, UNDP Nepal

Disclaimer: The paper is a personal reflection based on observation and opinion and does not reflect views of the organisation the author is affiliated with.

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Editorial Advisors:

Anshuman Saikia
Regional Programme Support Coordinator
ARO, IUCN (International Union for Conservation of Nature), Thailand

Denis Nkala
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Ian Davis
Visiting Professor in Disaster Risk Management in Copenhagen, Lund, Kyoto and Oxford Brookes Universities

Madhavi Malalgoda Ariyabandu
International Strategy for Risk Reduction (ISDR) – South Asia, Sri Lanka

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, National Dairy Development Board (NDDB), Anand, Gujarat, India

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411 Sakar Five, Near Natraj Cinema, 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