

Managing Risk and Reducing Vulnerability in Humanitarian Action



Photo: AIDMI.

- 2 Need for Minimum Standards
- 3 RISE is Important for Global Disaster Risk Reduction
- 4 Impact of Disasters on Agricultural Trade in Africa
- 5 Typhoon Haiyan (Yolanda), Philippines Recovery and Reconstruction: Key Challenges
- 6 Changing Role of National Authorities in South Asia and the Disaster Response Dialogue
- 7 Incident Command System (ICS) for Crowd Management
- 8 How Useful is GIS in Disaster Management in India?
- 10 Challenges of Disaster Risk Reduction in South Social Work Studies
- 11 Achievement of Hirrak Development Center
- 12 PMRDF: An Experiment to Bridge Bharat with India
- 14 Empowering Visually Impaired Women for Disaster Risk Reduction
- 15 Reducing Risk, Strengthening Response: The British Red Cross and its Partners in South Asia

The views expressed in this publication are those of the author.

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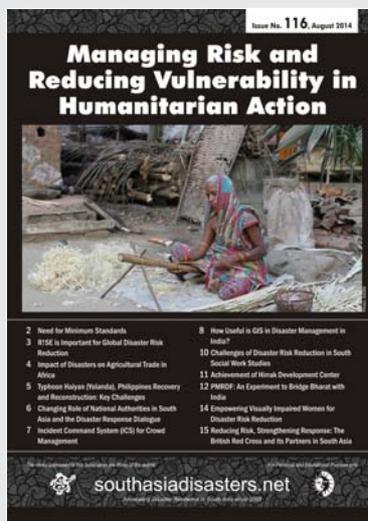


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ABOUT THIS ISSUE



This issue of *Southasiadisasters.net* is titled 'Managing Risk and Reducing Vulnerability in Humanitarian Action'. As apparent in its title, this issue deals with the various aspects of disaster management. Climate change, unplanned urbanization, institutional failure and civil strife have become characteristic features of the developing countries in this day and age. All these factors compound the exposure level of the citizens of such countries, thereby pushing a greater number of them into the embrace of vulnerability.

This issue contains articles that expound upon the various measures to manage the risk of natural hazards and reduce underlying vulnerabilities. Lucidly written and meticulously researched, this issue contains articles on diverse topics from the field of DRR, ranging from the impact of disasters on agricultural trade in Africa to the importance of GIS in disaster management; and from the key challenges to typhoon Haiyan recovery to empowering visually impaired women from DRR. ■

BENCHMARKING DRR

Need for Minimum Standards

The terms 'Disaster Risk Management' (DRM) and 'Disaster Risk Reduction' (DRR) have often been used interchangeably, but these have different connotations. While DRM covers every aspect of management of risks of disasters, including pre-disaster prevention, mitigation and preparedness as well as post-disaster response, recovery and reconstruction, DRR typically includes only the pre-disaster activities of risk reduction.

However, preparedness for post-disaster humanitarian response, early recovery and reconstruction provides tremendous opportunities for risk reduction. Better preparedness for response and recovery saves lives and reduces risks of distress and human sufferings, while risk-sensitive reconstruction or 'building back better' can actually prevent or mitigate disasters.

Recognizing the potential role of disaster response in reducing vulnerabilities and risks of disasters, the fifth priority of the Hyogo Framework of Action – the global framework of building resilience of nations and communities to disasters – has called for *strengthening disaster preparedness for effective response at all levels*. Happily countries and communities around the world have demonstrated higher levels of progress in disaster preparedness than any other aspects of risk reduction.

Humanitarian action of response and recovery has a long history and tradition of service to save lives. The valuable lessons learnt from the wealth of experiences have been put together in numerous standards and guidelines covering almost every aspect of disaster response. Yet there

are lots to be done to implement and further improve the standards according to the changing contexts, needs and aspirations of the people.

Disaster Management Act of India, passed almost a decade back, had mandated the National Disaster Management Authority to develop 'minimum standards of relief' to be provided to persons affected by disasters, which would include (a) the minimum requirements to be provided in the relief camps in relation to shelter, food, drinking water, medical cover and sanitation; (b) special provisions to be made for widows and orphans; (c) ex-gratia assistance on account of loss of life as also assistance on account of damage to houses and for restoration of loss of livelihood; and (d) such other relief as may be necessary. Such guidelines are yet to be put in place.

In the absence of any such standard guidelines, disaster response and relief in India are still largely ad hoc, and far too inadequate to meet the needs of people in distress. There is need to develop and institutionalize the statutory standards and further broaden these to include other areas of humanitarian concern such as protection of women, children, aged and the disabled. Restoration of livelihood for the poor affected by disasters is another major area of concern which needs to be addressed in a comprehensive manner involving all the stakeholders. Surely this task should engage the priority action of the new government in power at the centre. ■

– Dr. P.G.Dhar Chakrabarti, IAS (Retd)
Distinguished Fellow,
The Energy and Resources Institute
(TERI), New Delhi

R!SE is Important for Global Disaster Risk Reduction



“Economic losses from disasters are out of control and can only be reduced in partnership with the private sector”.

These words by Ban-ki Moon, Secretary-General of the United Nations, highlight the need for business and government leaders to act now. Whilst there is an emerging alignment of the international agenda on sustainable development, climate change and disaster risk reduction, much practical action is required to build long-term resilience. This observation is also one of the main lessons provided by the last Global Assessment Report (GAR13) issued by the United Nations Office for Disaster Risk Reduction in 2013.

GAR13 provides evidence that shows the growing impact of disasters on business through escalating direct losses, supply chain interruptions and wider effects on performance and reputation. These impacts ripple through economies and societies as a whole. At the same time, business depends on the capacity of the public sector to provide the resilient infrastructure and urban systems which underpin competitive and sustainable economies.

In this context, UNISDR has joined with Price water house Coopers to develop a new kind of public private partnership with the aim to increase the inclusion of disaster risk in all investments and to provide new tools and good practices to public and private actors at the global and local levels.

GAR13 laid out a roadmap for the Initiative embodying the value

proposition for investing in prevention through 8 streams of activities:

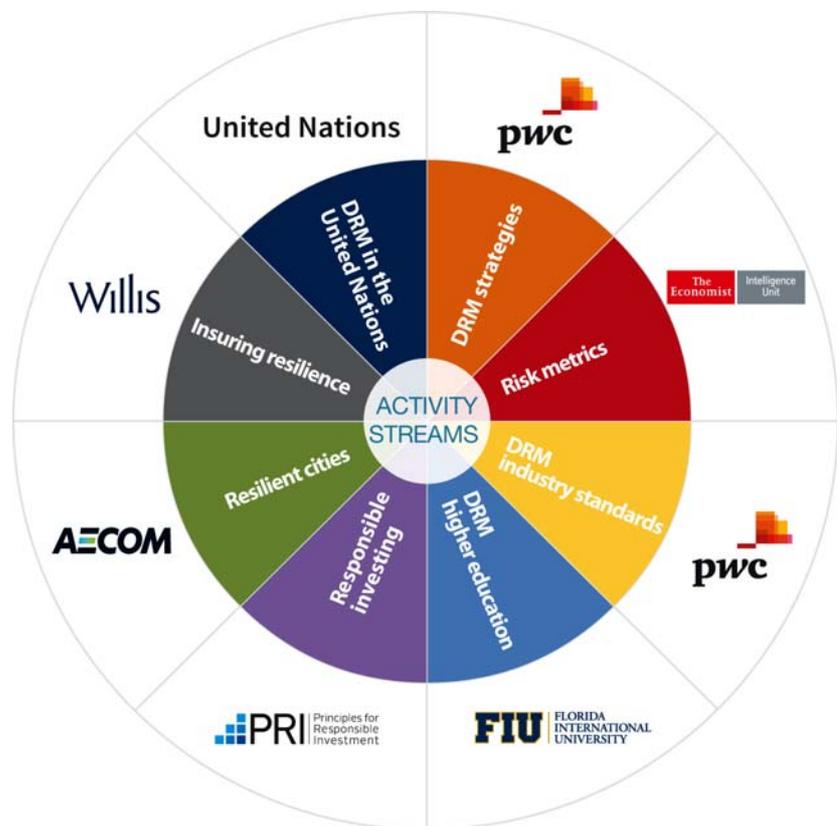
The programme was launched with the following key principles:

- Disaster Risk Management Strategies
- Risk Metrics
- Disaster Risk Management Standards
- Disaster Risk Management Higher Education
- Disaster Risk-Sensitive Investment Principles
- Resilient Cities
- Role of Insurance
- Disaster Risk Management in the United Nations

These 8 activity streams have been identified as critical areas of work to

support decision makers and investment strategies as well as prepare the future of disaster risk reduction in a pro active way, from integrating disaster risk reduction in the higher education curricula to improving the assessment of disaster risk in the insurance policies. The R!SE Initiative aspires to improve the overall investment process.

Because practical experience critical to assess the needs, and knowledge gaps as well as to build strong bridges between theory and practice, the R!SE Initiative brings together major and well known companies and organizations to lead the activity streams and develop the 6 years work plan which will be used from 2014 to 2020.



Responding to this call for commitment, PwC but also The Economist Intelligence Unit, Florida International University, UN-PRI, AECOM and Willis have already taken the lead of the activity streams, developed the concrete activities to achieve, and identified the outcomes.

The result is a USD20 millions program with more than 30 deliverables, new tools, standards and concrete ways of improvement in terms of intellectual property and metrics. The Initiative also builds on the work of UNISDR's Private Sector Advisory Group (UNISDR - PSAG) and supports existing UNISDR

programs like "Making Cities Resilient: My city is getting ready", already endorsed by 1748 cities and through one of its concrete implementation tools: the "City Disaster Resilience Scorecard".

With these targeted areas of work and results, the RISE Initiative will play a key role in the overall effort for disaster risk reduction by focusing on investments and associated themes: protection of populations, sustainability of employment, resilience of economies but also development and climate change adaptation.

Nevertheless, this ambitious Initiative will only succeed with a sustainable engagement from the public and private sectors and with direct in-kind or financial contributions made by governments, businesses and individuals who are ready to make all investments risk-sensitive and to build resilient societies.

Any further information about the RISE Initiative can be requested by email at (rise@un.org) and a program summary can be downloaded at www.theriseinitiative.org. ■

- **Sebastien Penzini**,
RISE, UNISDR, Geneva

NEW DIMENSIONS OF DRR

Impact of Disasters on Agricultural Trade in Africa

All African farmers can speak about the fact how much weather conditions have changed in recent years. They might not call this "climate change" but they would certainly tell you that for instance the period between extreme droughts has shrunk from 15 to 3 years now. They have enough of their problems anyway but low yields resulting from bad weather are one of the main hindrances of their livelihood.

The UN Food and Agriculture Organization FAO estimates that 80% of all hungry and poor people are small-scale food producers (such as farmers, pastoralists, fisherfolks, landless agricultural workers) and this is the biggest paradox of hunger and development: hungry people are those who are directly linked with food production. Unfortunately for Africa, the continent has the greatest number of hungry people in the world. For, one in four people there goes to bed on an empty stomach.

African population should also double to 2 billion people by 2050 which poses a big challenge in front of African food production.

Moreover, things might get worse because according to the predictions of the Intergovernmental Panel on Climate Change (IPCC) Sub-Saharan countries (especially the Horn of Africa) will suffer the most in the upcoming years due to climate change impacts. Production of main staples (such as wheat or maize) might even decrease by 50% which would have a huge negative implication on local food security.

We have to keep in mind that agriculture accounts for average 43% of the annual gross domestic product (GDP). Weather-related crop failures will certainly affect African economy and trade with agricultural commodities even though most African countries do not trade with each other but rather with developed

countries focusing on cash crops like coffee, cocoa and cut flowers. Unfortunately, cash crop production is being preferred to staples so cash food producers are provided with better soil or better natural resources.

It is also worth to mention that more than two thirds of African countries are classified as Net Food-Importing Developing Countries. That means that disasters resulting from climate change impacts - droughts, flooding, unpredictable weather events - in main food exporting countries may have direct consequences on staple food imports in Africa (lower yields in producing countries lead to decrease in export). Thus, the future of agriculture, agricultural trade and food security in Africa remains very uncertain. ■

- **Dagmar Milerova Praskova**,
Food Security Analyst, Glropolis
(Independent think-tank)
Czech Republic (European Country)

Typhoon Haiyan (Yolanda), Philippines Recovery and Reconstruction: Key Challenges

Background

Typhoon Haiyan (locally known as Yolanda), considered to be the most powerful typhoon in the living memory, devastated portions of Southeast Asia, in particular the eastern Visayas region (also known as Region VIII) of the Philippines on 8th November 2013. It led to death of at least 6,155 people, affected 16.1 million people, destroyed over 1.1 million houses, livelihoods and other facilities such as schools, hospitals, public buildings and roads¹. The total damage and loss was initially estimated to 12.9bn USD and may reduce the country's economic growth by 0.3 percentage points in 2013 and 2014².

The Government of Philippines supported by development partners launched a massive response and relief operation which was phased out by the end of May 2014 and the long-term recovery and reconstruction started soon with the underlying principle of 'Build back Better'³. The Recovery and reconstruction is considered to be a complex process as it links response and relief phase to long-term development. The management of the following critical challenges will determine the success of the Typhoon Haiyan recovery and reconstruction.

Governance of Recovery

Recovery and reconstruction is not 'business as usual', hence governance is key and it calls for a special institution, which coordinates the overall recovery and has autonomy and flexibility to meet the changing needs on the ground. The Philippines has highly decentralized governance mechanism such as Barangay (village),

Municipality and Cities are fully autonomous bodies. Centralized coordination with these autonomous local government units (Typhoon Haiyan involves 59 cities, 587 municipalities and 12,122 Barangays) is a mammoth challenge as Recovery involves a number of central level policy decisions to be implemented in limited time by the implementing agencies. Also, lack of a strong central coordinating governance may lead to overlaps and increased transaction cost.

Standards of Recovery and Reconstruction

The Typhoon Haiyan brought back the issue of climate change and disaster linkages at various forums while several reports and studies highlighted that the intensity of hydro-meteorological disasters is increasing and that the future is likely to witness more of such events. In the backdrop of this extreme event, benchmarking the recovery and reconstruction standards including of structures will be challenging. The trade-off between the acceptable level of risk and investment in resilience will be extremely challenging.

Beyond Physical Reconstruction

The people of Typhoon Haiyan areas not unknown to Typhoons but the intensity of this Typhoon was beyond comprehension. This Typhoon had a huge psychological impact on many victims and the psychological recovery of these victims has become a key challenge. About 90 percent of the total damage and loss has fallen on the private sector and many of the affected people are small shop owners. This implies that livelihood recovery is inextricably linked with the Haiyan recovery.

High Incidence of Poverty

The impact of this Typhoon was centered on some of the poorest provinces in the country and as per 2012 data the average household income in the severely affected provinces was 75 percent of the national average. These areas have high rates of malnutrition, child mortality and rank below the national average in immunization coverage⁴. Recovery provides an opportunity to transform this region and improve the lives of its citizens.

Reducing Exposure

The Typhoon Haiyan led to storm surge of over four meters and most of the lives were lost due to storm surge. The Government of Philippines has issued the 40-meter no build/dwelling zone policy to reduce exposure to hazards. In most of the typhoon affected region, the plain land between water bodies (ocean, bay, etc) and mountains is limited, hence implementation of 40 meters no built/dwelling zone policy will be challenging. Also, fishery has been the major source of livelihoods in the affected region and relocation of the community away from the source of livelihoods may not be easy as it calls for tradeoff between risk and livelihoods opportunity.

Hence, it is important to consider these challenges in planning and implementing the architecture of the Typhoon Haiyan recovery and reconstruction to truly realize the true spirit of 'Build Back Better'. ■

– **Sudhir Kumar** and
Connie delos Santos,
UNDP, Tacloban,
Philippines

1 National Disaster Risk Reduction and Management Council, 24th December 2013.

2 Reconstruction Assistance on Yolanda, National Economic and Development Authority, Philippines, December 2013.

3 Typhoon Haiyan (Yolanda) Early recovery, Livelihoods and Agriculture Plan, the Philippines, February 2014, the Philippines Humanitarian Team

4 Reconstruction Assistance on Yolanda, National Economic and Development Authority, Philippines, December 2013.

Changing Role of National Authorities in South Asia and the Disaster Response Dialogue

Governments have a primary responsibility vis-à-vis their own people in humanitarian crises, as recognized by UN General Assembly resolution 46/182: "Each State has the responsibility first and foremost to take care of the victims of natural disasters and other emergencies occurring on its territory". However, international humanitarian actors often assume that governments and local actors are unwilling or unable to respond to the needs of their citizens which may generate some tensions. While this may be true in some contexts, there are many situations where stronger cooperation between governments and humanitarian actors is desirable.

In the last decade, important changes have taken place in disaster risk management, which have an impact on the role of national and international humanitarian actors. For example in South Asia, a growing number of countries have significantly strengthened their national disaster management capacities. In Pakistan, the National Disaster Management Authority was established two years after the devastating earthquake in 2005, and strengthened by the National Disaster Management Act in 2010. The act created a three tiered disaster management system comprising national, provincial and district levels. At the national level the National Disaster Management Authority deals with public policy, regulation, coordination, planning and monitoring. At the provincial level and district level, Provincial and District Disaster Management Authorities are created and given

¹ See Development Initiative (2011) *Analysis of financing mechanisms and funding streams to enhance emergency preparedness.*

competencies in disaster preparedness, response, reconstruction and rehabilitation. This system of centralized policy and coordination with decentralized execution contributes to reducing disaster risk in Pakistan. In India, the National Disaster Management Authority was created by the 2005 Disaster Management Act. With this act, the Indian government shifted its strategic focus from post-disaster response to disaster risk reduction mechanisms. Similar trends can be observed in Bangladesh and other countries in the region, as well as in other regions.

The growing capacity of governments in the area of disaster risk management with the establishment of well organised and experienced National Disaster Management Authorities, has important implications for the role of humanitarian actors.¹ The current international humanitarian system remains largely focused on service delivery, with limited efforts towards supporting national capacities. International humanitarian actors are slow in adapting to these changes. In addition, they are often criticised for by-passing national actors and for not consulting with national and local authorities when delivering humanitarian assistance. In disaster-

prone countries where government authorities have made some efforts to reinforce their own capacities and structures, international humanitarian actors should be prepared to adapt their approaches, with stronger cooperation with national authorities while respecting humanitarian principles.

The Disaster Response Dialogue, convened by the International Federation of Red Cross and Red Crescent Societies (IFRC), the International Council of Voluntary Agencies (ICVA) and the UN Office for the Coordination of Humanitarian Affairs (OCHA) and the Government of Switzerland is a platform where the above issues are discussed, with a view to improving cooperation and trust between governments and humanitarian actors involved in international disaster response. Following a first meeting in 2011, the Disaster Response Dialogue is organising a conference in September 2014 in Manila, with a view to agreeing on concrete actions for improving cooperation between governments and humanitarian organisations. To find out more on the Dialogue, please visit: <http://www.drinitiative.org> ■

- In Hye Sung, Research and Communication Advanced Intern, Disaster Response Dialogue, IFRC

World Bank and Disaster Risk Reduction

What is the best role World Bank can play in disaster risk reduction in India? A reply to this question was found in an internal meeting of AIDMI on March 21, 2014 in Ahmedabad. Four key areas came up. One, in protecting women's work in at risk areas; two, in protecting students and parents; three, in insuring MGNREGA participants; and four in sustaining knowledge initiatives that reduce risk. This discussion was held after the visit of Dr. Hilhorst to explore day-to-day politics of disaster risk and climate adaptation. ■

- Mihir R. Bhatt

Incident Command System (ICS) for Crowd Management

Incident Command System (ICS) is a management framework that originated in the USA in 1970's and has since been adapted in various countries across the world including India- where it is known as Incident Response System (IRS). As a framework, it provides scope for application in diverse emergency situation or even planned event such as popular festivals, various mass gathering etc. This feature of ICS where it can be applicable in diverse contexts, adds to its overall appeal as the prevailing approaches often are predominantly hazard or event-specific, limiting thereby its further development due to insufficient application. Mass gathering involves crowd management and inherently carries the risk of stampede if not managed systematically.

Mass gathering particularly when it is anticipated or expected such as religious festivals, sporting events etc. provides opportunity to apply ICS for a better and more effective management. The key feature of such application lies in bringing coordination among different agencies which are involved such as police, fire department, administration, health, NGOs, local volunteers etc. While the overall responsibility remains with the team that is known in ICS terminology as the 'Command Staff', the management on the ground is to be done by the 'Operation Section' that is supported by 'Planning' and 'Logistics Section' and if needed by the 'Finance and Administration section'.

A typical ICS team for crowd management would thus involve an

'incident commander' overall in charge with her support staff such as 'Liasion', 'Safety' and 'Information Officer', and other trained personnel from various agencies to work together for the accomplishment of overall incident objectives. In this framework, the operation section of ICS in a crowd related incident, can work through the concept of dividing the entire site into smaller 'divisions' or by assigning specific tasks to 'groups'. A temple premise for example can be divided into many divisions, according to the principle of 'span of control' so that each division is managed in an integrated framework. A 'group' in such scenario can be, Bomb Disposal Squad, Public Address System, VIP Visit Facilitation Team etc.

To describe overall ICS application, in brief, the broad methodology emphasizes strategising and planning on the basis specific time period called 'operational period'; identifying clear and specific objectives for each such operational period; followed by planning meeting on how to meet those objectives. Such planning to be realistic and effective is to be based on 'resource' position wherein 'resource' can mean both personnel and material. For example, resource in case of crowd management can be a range of items from ropes to signage's, pre fabricated structures and other barricade equipments, drinking water and food outlets, fans and other cooling devices, toilets, lighting system, surveillance and public announcement system, medical first aid, doctors, paramedics, ambulances, divers, volunteers etc. Inventory of these resources is

essential for their proper utilization and for planning purposes. These resources are then assigned to specific 'division' and 'groups' to achieve pre-determined objectives over a particular operational period. The performance of both the operational plan and employed tactics are continually monitored and in case of gaps, they are revised soon enough to ensure that any unanticipated development is quickly factored in within the overall planning process.

For a crowd involving few lakhs people, for example, the ICS approach would entail, preparation beforehand, provision of basic facilities for the ICS team called 'responders' and a clear 'strategy' and planning so that everybody in the IC management team is aware of their individual role and overall division or groups tasks. Information flow is a key factor and ICS encourages sharing of information as much as possible among different members and also with public during a crowd management liasioning becomes significant for example, traffic control, resource mobilization etc.

Knowledge of local people about crowd and their environment is an important attribute that needs to be incorporated and similarly various volunteers and civil society organizations who play important role can be made partners in the overall ICS framework. In summary, the ICS as a tool has immense potential to aid in crowd management and needs to be further promoted for wider application. ■

- Biswanath Dash,

Jamsetji Tata Centre for Disaster Management, India

How Useful is GIS in Disaster Management in India?

India is one of the most vulnerable developing countries to suffer very often from various Natural Disasters, viz. earthquakes, floods, cyclones, tsunamis, landslides, forest fires, droughts; etc. Natural disasters are as old as human history but the dramatic increase and the damage caused by them in the recent past have become a cause of national and international concern. Over the past decade, the number of natural and manmade disasters has risen inexorably. The super cyclone of Orissa (1999), the Gujarat earthquake (2001) and the Tsunami (2004) affected millions across the country, due to lack of technology and scientific approach, it was difficult to predict natural disasters.

There are techniques available, like remote sensing and GIS, which help to identify areas that are disaster prone, zoning them according to risk magnitudes, inventory populations and assets at risk, and simulating damage scenarios as they provide instant access to information required for management decision. The strength of GIS lies in the ability to represent the real world situation closely with layers of information (maps) that can be combined in a predetermined manner to identify the impacts of a natural hazard through the introduction of hazard dimension. GIS aids in quickly establishing full a situational awareness by linking people, process and a information together using geography.

GIS is being used in many governmental and private organizations and many

advanced GIS applications have been developed for regular disaster management decision making purpose. In addition to that with the availability of high-resolution satellite images and the mapping/surveying base from the topographical and thematic maps (forest fire map, flood hazards maps, earthquake vulnerability zonation, landslide hazard zonation etc).

In a typical disaster management cycle (Figure-1), disaster preparedness constitute the pre-disaster planning phase i.e. before disaster occurs and response, recovery and mitigation as the post-disaster planning phase i.e. disaster prevention phase. In the disaster prevention phase, GIS is used to manage the large volume of data needed for the hazard and risk assessment. In the disaster preparedness phase, it is a tool for the planning of evacuation routes, for the design of centers for emergency operations, and for the integration of

satellite data with other relevant data in the design of disaster warning systems. In the disaster relief phase, GIS is extremely useful in combination with Global Positioning System in search and rescue operations in areas that have been devastated and where it is difficult to find one's bearings. In the disaster rehabilitation phase, GIS is used to organize the damage information and the post-disaster census information, and in the evaluation of sites for reconstruction. Hence, GIS is a useful tool in disaster management if it is used effectively and efficiently.

In India a number of scientific innovative approaches have been used for disaster management. The Disaster Management Support (DMS) is GIS based integrated programme of ISRO, that provides timely support and services from aero-space systems, both imaging and communications, towards efficient management of disasters in the country. The DMS

programme addresses disasters such as floods, cyclones, droughts, forest fires, landslides and Earthquakes. These include creation of digital database for facilitating hazard zonation, GIS based damage assessment, etc., monitoring of major natural disasters using satellite and aerial data; development of appropriate techniques and tools for decision support, establishing satellite based reliable communication network, deployment of emergency communication equipments and R and D towards early warning of disasters.



Figure 1. Disaster Management Cycle.

(Source: NDMA Report)

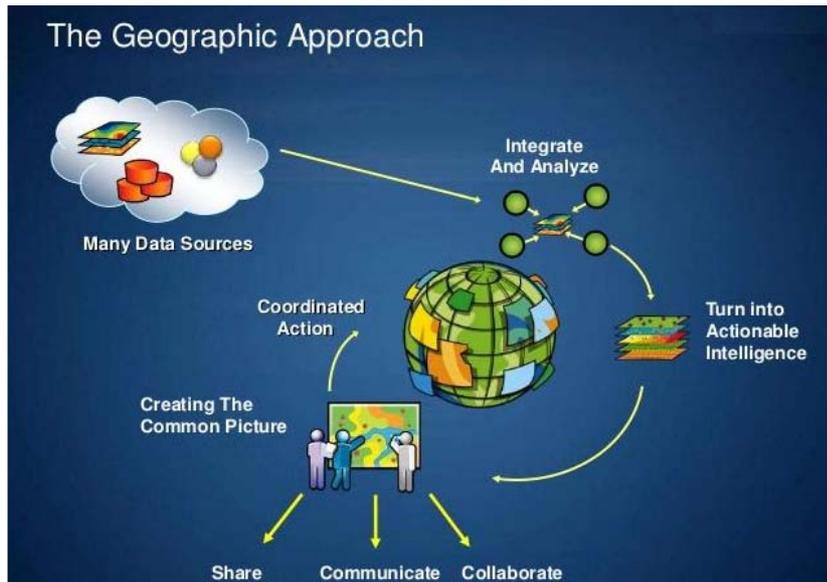


Figure 2. GIS Application Development. (Source: ESRI, user guidelines)

Notable GIS based initiatives include the Natural Resources Information System under National Natural Resources Management System (NNRMS) of Planning Commission; National Spatial Data Infrastructure (NSDI) of Department of Science and Technology (DST); Bhuvan Image Portal of Department of Space (DOS); Delhi State Spatial Data Infrastructure (DSSDI) of Delhi State; National Urban Information System (NUIS) of Ministry of Urban Development (MUD). There are many different disaster management organizations that are using GIS applications for various purposes. They are enlisted as follows, National Disaster Management Authority (NDMA), State Disaster Management Authorities (SDMA), District Disaster Management Authorities (DDMA), National Institute of Disaster Management (NIDM), National Disaster Response Force new center "National Centre for Disaster Management (NCDM) has been established by the Ministry of Agriculture, Government of India. NCDM is setup in Indian Institute of Public Administration (IIPA).

NCDM is also the nodal agency for coordinating relief and rehabilitation

work during natural calamities. Similarly, the Disaster Management Institute (DMI), Bhopal set up after the gas tragedy conducts awareness programs for NGOs and the public at large. A National Information Center of Earthquake Engineering (NICEE) has been set up at the Indian Institute of Technology Kanpur. The Center is sponsored by HUDCO, Telecom Commission, Railway Board, Ministry of Agriculture, Department of Atomic Energy and AICTE. NICEE-India will meet the needs of the country in terms of "information" on Earthquake Engineering. The Disaster Management Institute established by the Madhya Pradesh government in the backdrop of the Bhopal Gas Tragedy, offers training, research and GIS consultancy services on subjects related to prevention, mitigation and management of disasters. Disaster Mitigation Institute, Ahmedabad, Gujarat.

Now a day's GIS based applications like Web GIS and Mobile GIS plays a very important role in efficient mitigation of disasters. In addition to that communication satellite provides disaster warning and relief mobilization, Earth observation satellite provides required database

for pre disaster preparedness programmes and post-disaster preparedness programmes.

Karnataka State Natural Disaster Monitoring Centre (KSNDMC) is an autonomous body affiliated to the Department of Science and Technology (S and T), the Government of Karnataka. KSNDMC provides regular weather and natural hazards-related updates to the farmer, forest resources monitoring, agriculture and horticulture sector, fishermen community, transport sector, electricity sector and state and district level disaster management authorities in Karnataka.

The centre provides a Web enabled Geo-spatial early warning and decision support system for disaster management to synergise the 'Early Warning and Preparedness' activities related to management of natural hazards in Karnataka. Disaster Management can be very efficiently and cost effectively handled by using innovation in the technology. Highly sophisticated and effective Disaster Management systems can be developing accordingly which are basically GIS based. This can help us to reduce the casualties and damages caused by disasters.

The proper spatial data structure of information system for disaster management should be present to tackle the disaster and to manage it. The GIS database can be used to create elaborate and effective Disaster Management Information System (DMIS). An integrated approach using scientific research and technological advances should be adopted to mitigate and to manage natural hazards. Moreover there should be a national policy for natural disaster management. ■

- M. Rajamanickam and
G. Victor Rajamanickam,
Center for Disaster Management,
Prist University, Tanjavur, India

Challenges of Disaster Risk Reduction in South Social Work Studies

The concept and practice of reducing disaster risks through systematic efforts to analyze and manage the causal factors of disasters, includes reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events. [UN/ISDR - UN Office for DRR [15 January 2009]. Vulnerability most often includes elements of exposure [people, places and infrastructure at risk from a hazard], susceptibility [the degree to which the people, places or infrastructure are harmed], coping capacity [the skills, resources and opportunities of people and places to survive, absorb the impacts and manage the adverse outcomes] and adaptation capacity [the ability of people to implement necessary measures to reduce risks] [Cutter and Corendea, 2013; Beck et al., 2012].

Social work studies in DRR usually highlight communities' administration systems, existing governance patterns, the application of policy and existing strategies, community infrastructure, knowledge, skills, adaptability of learning based on values and beliefs, social networking, peoples' relationship, leadership pattern, in disaster prone areas, to establish operative system so that when hazards strike, managerial systems can effectively operate to minimize disastrous situations.

1 Disaster Management in Southeast Asia: Issues and Challenges, By Tan Teck Boon and Allen Yu-Hung, Lai | May 15, 2012

2 Natural Disasters Keep People Poor By R. Jai Krishna Wall Street South Asia SGT Oct 21, 2013

Southeast Asia is prone to frequent natural disasters such as earthquakes and tsunamis.¹ Further, 'The Geography of Poverty, Disasters and Climate Extremes in 2030, reports on several weather-related calamities that have hit South and Southeast Asia. Population of Southeast Asia includes roughly 31 million people – 13.2 million in the Philippines; 4.9 million in Vietnam; 4.8 million in Thailand; 3.4 million in Indonesia; and 1.5 million in Cambodia. In South Asia, the numbers are even higher: 126.5 million people in India; 57.5 million in Pakistan and 20.9 million in Bangladesh. Without concerted action, the report contends, as many as 325 million people in just 49 countries will remain in extreme poverty.²

Climate Change is a great challenge as it has multifaceted impacts on communities especially on their livelihoods, agriculture, and health. This necessitates the inclusion of gender, children, people with disability, the elderly, lesbians, gays,

transgenders in the disaster management and climate change adaptation policies. The adverse impacts of climate change will lead to an increase in the frequency and severity of key hydrological and meteorological events in the South/South-East Asia region. This demands for disaster preparedness prevention and adaptation to climate change.

Social work studies will have to focus on evidence for mitigating disasters in the aforesaid areas, keeping in mind the policies and strategies, leading towards mainstreaming of DRR at the local administration level. Use of technological usually fastens the services to be provided in the hazard prone areas. However, the penetration of technology in these areas is usually low. Evidence based studies in this area will help the policy makers to include the use of technology in all phases of DRR. ■

- Ms. Sadhana Adhikary, FSPO, and Dr. Bigi Thomas, Senior Faculty, Department of Social Work, Sardar Patel University, Anand, Gujarat

Trending Data on Disasters

Statistics and data are of critical importance for making informed decisions. In the humanitarian sector, relevant data can form the basis of some important policies and interventions. Furthermore, data could also be used to either vindicate an existing measure or criticize it to suggest remedial measures. In this light, UN OCHA has announced the launch of *World Humanitarian Data and Trends 2013*, an annual publication that presents global and country-level data and trends analysis on humanitarian crises and assistance.

An indispensable resource for policy-makers, researchers and humanitarian workers, this report not only provides important statistics about the humanitarian sector but provides an overview of the sector's evolving landscape for making it more effective in a rapidly changing world. This report is a part of OCHA's efforts to improve the analysis of humanitarian data worldwide. Furthermore, such regional trending of data on disasters will be even more useful for local actions. ■

- Kshitij Gupta

Achievement of Hirrak Development Center

The Hirrak development center works with fishing communities of the river Indus, small farmers and women working as agriculture labourers at the platform of their organization named 'Sindhoo Bachao Tarla' (save Indus river struggle) 'Halli sanjh' and 'Teraimet Sanjh' respectively at Tehsil Kot Addu Distt. Muzafar Garh, Punjab- Pakistan. This area is flood prone because of human intervention through Taunsa barrage comes in the Tehsil Kot Addu. The breakages of the Abbas Dyke in 2010 upstream Taunsa Barrage was disastrous for the entire district. In October 2013 Hirrak provided indigenous seed of wheat 'Ratur' to the women and small farmers for developing eco-system in agriculture and for developing organic crop of wheat for climate resilient sustainable agriculture.

The resulting wheat crop was very good and farmers spending remained very low. Now they will get wheat straw and wheat at the end of April 2014 from the same crop of wheat. 200 Kg of indigenous seed of wheat was distributed to 62 small farmers



Photo: Hirrak Development Centre

including 27 women farmers. Farmers are very happy due to developing climate resilient organic wheat crop, the fertility of the land has been maintained and the use of insecticides and chemical fertilizers become zero and wheat crop from the seed is eco-friendly because it can be used 2-3 times as grass for animals and then grow again for giving wheat straw for animals and wheat as food for human being and animals

manure is used as fertilizers. The demand of this seed has increased after seeing its results by other small farmers and big land holders so when asked about marketing of organic wheat the farmers told they would use by themselves and also share with other farmers who were asking for seed for the next crop. Below the data up to March 2014 taken from farmers is represented. ■ – Zafar Lund, Hirrak Development Centre

No.	Name of Farmer	Basti	Land cultivated	Seed used	Fertilizer Insecticide	Data about organic wheat			Date 10/3/2014		Type of Seed	Income from Wheat Crop	Income from Wheat Straw	Total Income	Total Spending
						Income used as Grass (in Rs)	Spending (in Rs)	Expected Spending	Use of Crop	Center of Meeting					
1	Irshad Ahmad	Khangha	2 Kanal	10 Kg	No	12000	800	Rs 100	Self	Khangha	Ratur+591				
2	Aisha Mai	Kalati	12 Kanal	90 Kg	no	no	6000	Rs 2400	all members	Kalati	Mix				
3	Amna Mai	Babar wala	12 Kanal	60 Kg	no	no	7000	no	all members Babar ali	Babar ale	Mix				
4	Rabnawaz	Khangha	6 Kanal	40 Kg	no	8000	2000	Rs 800	Self	Khangha	Mix				
5	Gulam Abbas	Khangha	3 Kanal	25 Kg	no	18000	1900	no	Self	Khangha	Mix				
6	Mohd Nawaz	Khangha	4 Kanal	30 Kg	no	8000	3100	Rs 700	Self	Khangha	Mix				
7	Saeed Ahmad	Lombar ala	12 Kanal	80 Kg	no	no	2400	Rs 800	Self	Lombar ala	Mix				
8	Riaz Ahmad	Khangha	3 kanal	25 Kg	no	13000	1400	Rs 300	Self	Khangha	Mix				
9	Rabnawaz S/o Khuda B	Khangha	3 kanal	25 Kg	no	10000	1500	Rs 500	Self	Khangha	Mix				
10	Mumtaz ahmad	Shingri	4 Kanal	25 Kg	no	16000	3000	no	Self	Shingri	Mix				
11	Mohd Najaf	Khangha	4 Kanal	30 kg	no	8000	1100	no	Self	Khangha	Mix				
12	Saeed s/o Sadiq	Lombar ala	2 Acre	80 Kg	no	15000	8000	1500	Self	Lombar ala	Mix				

PMRDF: An Experiment to Bridge Bharat with India

"To face the growing challenge of Maoism, a threefold approach is required: political approach, developmental approach and maintenance of peace and order. PMRDFs will help in creating an environment in which development and politics takes place peacefully."

Mr Jairam Ramesh in his inaugural PMRDF speech at TISS Hyderabad, 2012

PMRDF which stands for the Prime Minister Rural Development Fellows Scheme is an initiative of the Government of India with Tata Institute of Social Sciences (TISS) as the academic partner. PMRDF was envisioned keeping in mind the involvement of youth in tackling poverty at the grass root level. As per Mr. Ramesh "We need to expand the pool of professional human resources to confront the challenge of poverty head-on. PMRDF is an experiment to address this challenge."

The first batch of PMRDF started in the year 2012 and had 156 fellows. This year, admissions were open for the second batch and after rigorous screening, 160 candidates have been selected. Training of first cohort (80 fellows) is currently underway.

Genesis

Despite India being on the growth trajectory for more than a decade and half, major part of Central and Eastern India lags far behind in development. Other characteristics such as high poverty ratio (exceeding 50% of the population), large areas under forest cover, high proportion of tribal/dalit population etc. are also common attributes to these areas.

Gradually, it was realized that the development deficit and rights of the people in these region cannot be addressed without a special drive for transformation of local administration into an empathetic development administration. In order to accelerate the reform process

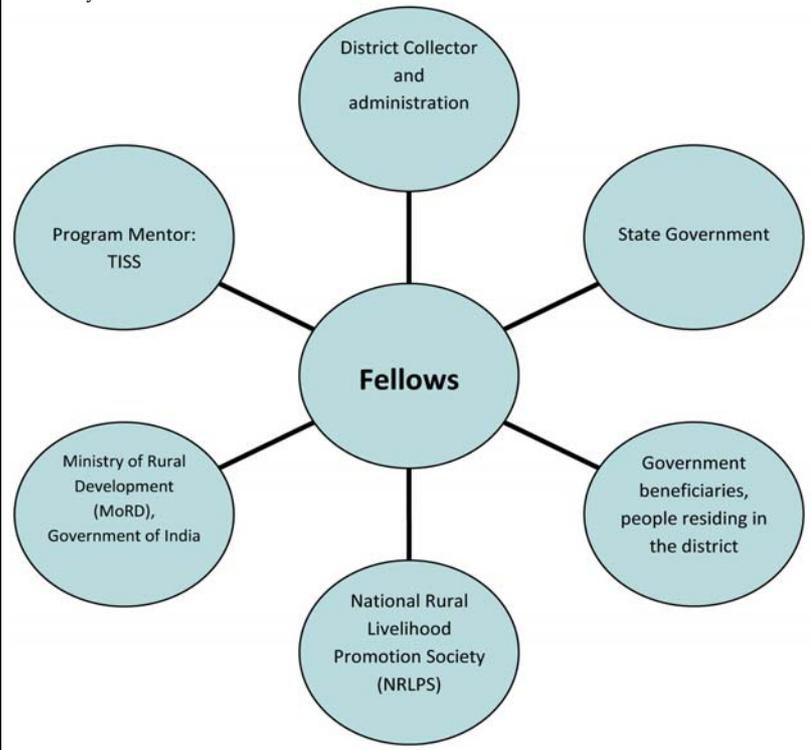
and infuse optimism among key stakeholders, the strategy of placing high quality additional human resources (fellows) was adopted. The fellows will leverage support to the reform process and provide appropriate inputs in decision making of the district leadership.

Roles and Responsibilities

- To undertake historical, geo-physical, agro-ecological, social and economic analysis of the district.
- Work with institutions of the poor to build their capacity and help them access their rights and entitlements.
- Facilitate capacity building in SHGs, and in institutions of local democracy, like panchayats.
- Conduct socio-economic analysis of the local areas at Block level and contribute in ascertaining the felt needs of the people.
- Help district administration in local area planning.
- Assist in better implementation of poverty alleviation programmes, particularly

Stakeholders

The key stakeholders involved are as follows:



MGNREGA, NRLM, National Rural Drinking Water Programme, NBA, IWMP, NSAP, IAP, ICDS, NRHM, SSA/RMSA etc.

- Undertake action research to discover more appropriate ways of programme delivery by the district administration.
- Design and implement innovative projects.
- Provide feedback on rural development initiatives.

The duration of the fellowship is for a period of two years and after that the fellow will be attached with any of the State Rural Livelihood Mission (SRLM) for a minimum period of one year.

Why I wanted to become a Fellow

After graduating in Rural Management from Xavier Institute of Management, Bhubaneswar, PMRDF was the best option for me to pursue my career as a community facilitator. A fellow will act as a 'development agent' which will help in bridging program delivery mechanism and developmental and governance deficits. Personally for me, this is an opportunity of not only interacting directly with the people but also closely observing the administrative machinery of the district.

This fellowship will be a mix of field-office work in which TISS (Tata Institute of Social Sciences) is the partnering institute. The multi-dimensional work scope covering project monitoring, implementation, and research aspect is the most unique proposition for me. To enhance research and analytical skills, TISS will be providing a M.Sc. / M.A. degree in 'Development Practices' after two years.

PMRDF as a DRR Strategy

My internship with School of Good Governance and Policy Analysis, Government of Madhya Pradesh for the preparation of District Disaster



Children receiving Primary Education (SSA), Gunjigaon Village, Kandhamal.

Management Plan (DDMP) for Burhanpur, Madhya Pradesh will come in handy to undertake a disaster mapping exercise in the district allocated to me. This will be a multiphase exercise with first phase being a general overview of the district and the institutional arrangements available in coping with disaster (both manmade and natural disasters). The second phase will cover Hazard, Vulnerability, Risk and Capacity (HVRC) Analysis followed by District Action Plans comprising of Risk Mitigation,

Preparedness, Response and Recovery and Reconstruction.

Effective coordination with District Collector and Line Departments with inputs from various stakeholders including CSOs, CBOs, NGOs and people in general are a must for coping with any disaster. ■

– Arpit Asthana

References:

1. pmrdfs.tiss.edu
2. PMRDF guidelines (http://www.rural.nic.in/sites/programmes_PMRDFS.asp)

Integrating Climate Compatible Development and Disaster Risk Management

A total of 38 officials including government officers from various line departments (such as P.W.D, Water Resources, Irrigation, A.S.E.B, Education, Health, ICDS etc.) and representatives from nongovernmental organizations joined the workshop organised in Morigaon, Assam by ASDMA. The group actively participated in the exercises and discussions on current and future possible impact of climate change; efforts on adaptation and mitigation in Assam; and importance of integration Climate Compatible Development (CCD) in Disaster Risk Management (DRM). Different methods including group work, videos and sector presentation were used to ensure participation and discuss the issues in the local context of Assam.

The participants demanded direct technical assistance, research, and advocacy inputs into integrating climate compatible development with disaster risk management at district level in Assam. AIDMI facilitated the Climate Smart Disaster Risk Management (CSDRM) process. ■

– Vishal Pathak

Empowering for Disaster Risk Reduction

“Reach to People, Talk to People and Prepare People” – Builds Capacity to reduce Risks from Disasters and Climate Change by Advocating and Practicing. People Centered, People Led, and People Owned Resilience – Investing in Life Saving Education. Empowering Visually Impaired Women and Girls to Protect Lives in Disasters and Guiding against Sexual Violence and Health and Hygiene Problem. – By Saritsa Foundation (Saritsa Charity Trust)

India has a population of about 10 million visually impaired women and girls. They are highly vulnerable in disasters and disruptions caused by the impacts of climate change. They suffer from a lack of societal recognition and face discrimination towards recognizing the need to mainstream them in the process of capacity building to minimize loss of lives, sexual violence against them and extreme conditions of health and hygiene problem they face.

It is an unfortunate reality in India where families, society and people in governance themselves have little awareness and preparedness at individual and family level to cope with disasters, how they could protect women and girls who are visually impaired in such emergencies?

There is a need to have a positive change to make visually impaired women and girls inclusive part of plans and policies for empowering them to cope with disasters. Saritsa Foundation has a unique distinction in India for empowering visually impaired women and girls. This pioneering approach in its mission to provide equal opportunities to visually impaired women and girls to build their capacity with needed sensitivity for past 14 years has helped about 2500 women and girls to develop their skills for prevention, mitigation and preparedness for many kinds of disasters.

Disasters do not discriminate, human beings do. To make a small beginning to take care of above mentioned

concerns, Saritsa Foundation has chartered an innovative practice to provide an opportunity to the visually impaired, especially women and girls since it's birth. Saritsa Foundation has a distinction to put the Disaster Risks Reduction practice and preparedness on the map of India for the disabled. Saritsa Foundation has prepared and built capacity amongst 9950 disabled including 2500 women and girls by organizing workshops and preparedness with well defined modules, with practical trainings, mock drills and maximization of local resources in many disaster prone states of India. To sustain such a capacity building initiative Saritsa Foundation has prepared Braille books/Audio books in Regional languages.

The visually impaired participants are provided opportunity to learn to protect themselves and be self reliant to cope with disasters.

- The Awareness, Education and Training are conducted with



Mainstreaming visually impaired women and girls in the process of disaster risk reduction has to be prioritized at the levels of family, community, national and state governments.

interactive participatory methodology.

- The participants are encouraged to analyze risk and vulnerability to them under various scenarios of their houses, their working places and their movement and their areas.
- They are encouraged to raise awareness among themselves and their families and prepared to respond accordingly.
- Make use of local resources and local experience and expertise.
- Participants are provided with practical training through mock drills by simulating live scenarios of disasters.
- Develop buddy system (Jodi system) to respond to disasters.
- Practice to cope with different emergencies as trained by practical training and mock drills.
- To practice multiple communication modes like, mobile, telephone, word of mouth warning, warning by local authorities on Radio, TV and announcement. Learn to adhere to these warnings.
- Network with their family members, societal forums and people in local governance.
- Be representatives in formulation of plans for evacuation, relief and rehabilitation.
- Raise their awareness to take care against sexual violence as well as needs for health and hygiene.
- Make provision for Braille books/Audio books in regional languages for sustainability of the effort. ■

– Colonel Nagar M Verma,

Director General, Saritsa Foundation, India

Reducing Risk, Strengthening Response: The British Red Cross and its Partners in South Asia

Many parts of South Asia are experiencing rapid change. Red Cross and Red Crescent Societies in the region, and the communities they assist, are faced with increasing risk driven by rapid urbanisation, climate change, civil strife and conflict. Yet, it is not only these challenges to which the British Red Cross and our partners in Afghanistan, Bangladesh and Nepal must adapt. The region is also confronted by a range of new opportunities relating to the potential of enhanced scientific understanding of risk; private sector development and uptake of emerging technology; and increasing institutional organisation and capacity within national governments to manage the risk and impact of disasters.

In rural areas, the efforts of Red Cross and Red Crescent Societies are increasingly directed at strengthening the resilience of at risk communities. In southern Bangladesh, for example, we are working with the Bangladesh Red Crescent Society and our partners in the German and Swedish Red Cross Societies to help communities manage the risk and impact of a range of shocks and stresses, especially cyclones and floods. Here, we are taking a community-based, volunteer-led approach which brings together livelihoods, water, sanitation and hygiene and disaster risk reduction support within an integrated risk management approach. In seeking to measure our contribution to the resilience of the communities we are working with, we will assess our impact on six characteristics of community resilience: knowledge and health; organisation; connectedness; access to



Photo: Samuel Carpenter/British Red Cross Society.

Barguna, Bangladesh: Those living inside the embankment are not only most exposed to the impacts of storm surges but are generally also the most vulnerable members of the community.

infrastructure and services; economic opportunities and management of natural assets.¹

Avoiding an overly technocratic approach, the programme is mainstreaming action on cross-cutting issues that are of particular pertinence in the area, including climate change, governance, conflict, gender and environmental resource management. Here, it is important to recognise that neither we nor our local partners are operating in a vacuum. Therefore there is a strong emphasis on the auxiliary role of the Bangladesh Red Crescent Society to the Government of Bangladesh in disaster risk management (DRM), and on coordinating closely with government and a range of other stakeholders at the local, district and national levels.

In the region's rapidly expanding towns and cities, we are seeking to strengthen the ability of Red Cross

and Red Crescent Societies to manage urban risk and to be prepared and ready for urban disaster response. For example, in Kathmandu, with funding from the UK Department for International Development, we are working with our colleagues in the Nepal Red Cross Society to deliver a major earthquake preparedness programme.

If an earthquake hit mid-Nepal tomorrow, it is predicted that more than 100,000 people would be killed, 300,000 injured and 1.8 million displaced. In response to this risk, an ambitious multi-stakeholder effort to prepare for such an earthquake is underway. The Nepal Risk Reduction Consortium, within which we are working, brings together the Government of Nepal, aid agencies, donors and international financial institutions to support national efforts in DRM, providing a common vision to rally around.

¹ IFRC (2012) *Understanding Community Resilience and the Programme Factors that Strengthen Them* (Geneva, IFRC).Cross).

From this novel undertaking, we have developed a set of key lessons on urban preparedness in partnership with Groupe URD, emphasising the importance of: understanding urban space and mobility (and their implications for assessment, preparedness and response); understanding the urban population; identifying and mapping critical infrastructure and services; institutional analysis in complex urban systems; multi-scenario planning; using new technologies; leadership; building readiness for coordination; and getting the communication right.²

Across the region, we are seeking not only to strengthen capacity to deliver high-impact programmes, but to foster joint learning, evidence-building and the development of innovative approaches. For example, we are currently organising a major international workshop in Kathmandu, with National Societies from Afghanistan, Bangladesh, China, Nepal, Mongolia and the

Philippines, on urban response and resilience.

Taking a city-to-city approach, the workshop will explore practical approaches and tools across a series of key themes in humanitarian action and DRM in urban areas, including disaster risk assessment; principled engagement and inter-operability with multiple stakeholders (government, scientific partners, private sector, military, diaspora etc.); emerging technology; volunteer management; communicating with crisis-affected communities; health and first aid; cash transfer programming; logistics; and water, sanitation and hygiene. Critically, this discussion is intended to lead to the identification of further opportunities for capacity-building support, technical assistance and future pilot programmes in urban areas across the wider Asia region.

Arguably, the greatest shift in DRM currently underway in South Asia is the continuing growth and

development of national and local capacity to manage the risk and respond to the impacts of disasters. The need for international assistance and protection in humanitarian crises will remain, particularly in light of the increasing frequency and intensity of water and weather-related disasters in the region. Yet, in responding to this changing landscape, the role of international actors such as the British Red Cross must move towards a more facilitative role. This involves building the capacity of our partners in DRM and response; providing technical assistance and policy support to enable the delivery of evidence-based and innovative programmes; and, importantly, being open to brokering linkages with other actors that at times may be better placed to meet the specific needs of at risk and crisis-affected communities. ■

– **Samuel Carpenter**,
Humanitarian Policy Adviser,
International Division, British Red Cross

2 Grünewald, F. and Carpenter, S. (2014) *Urban Preparedness: Lessons from the Kathmandu Valley* (London, British Red Cross).

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Development Programme, New York

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ALL INDIA DISASTER MITIGATION INSTITUTE

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