



# GOOD PRACTICES IN COMMUNITY BASED DISASTER RISK MANAGEMENT



GOI-UNDP Disaster Risk Management Programme  
(2002-2009)



From  
the People of Japan



## **The Key Principles of Disaster Management**

'Disaster Management' covers a broad range of interventions undertaken before, during and after a disaster to prevent or minimize loss of life and property, minimize human suffering and hasten recovery. The management of a disaster can be viewed as a series of phases which includes Response and Relief Phase, Recovery Phase (Rehabilitation and Reconstruction), Prevention Phase, Mitigation Phase and Preparedness Phase

### **The difference between Emergency Management, Disaster Management, Disaster Risk Management and Disaster Risk Reduction.**

**Emergency or Crisis Management** refers to the organization and management of resources and responsibilities for dealing with all aspects of emergencies, in particularly preparedness, response and rehabilitation.

For example, it involves plans, structures and arrangements established to coordinate the response of government, voluntary and private agencies during an emergency.

**Disaster Management (DM)** as a general term covers the range of activities designed to maintain control over disasters/emergency situations and to provide a framework for helping people to avoid, reduce the effects of, or recover from impact of a disaster. These activities may be related to preparedness, mitigation, emergency response and relief and recovery (reconstruction and rehabilitation) and may be conducted before, during or after a disaster.

**Disaster Risk Management (DRM)** is the systematic management of administrative decisions, organization, operational skills and abilities to implement policies, strategies and coping capacities of the society or individuals to lessen the impacts of natural and related environmental and technological hazards. (Reducing Disaster Risk, UNDP 2004)

**Disaster Risk Reduction (DRR)** is the systematic development and application of policies, strategies and practices to minimize vulnerabilities, hazards and the unfolding of disaster impacts throughout a society, in the broad context of sustainable development.

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## FOREWORD

*“Kosi has been wrecking havoc over our land for the last 200 years. This year, it was preparedness that helped us face the wrath of Kosi head-on!”*

*- Rabi Ranjan Pandey, a community member from Saharsa (Bihar)*


When the Government of India and the United Nations Development Programme, India launched the Disaster Risk Management Programme in 2002, little did they anticipate then that it would become one of the largest such initiatives in the world.

After six years of trials and errors, the programme has succeeded in galvanizing policy-makers, service-providers, civil-society representatives, non-governmental organizations and, most importantly, the most-affected community members themselves. Today, an estimated 300 million people in disaster-prone regions are proactively involved in achieving the objectives of the initiative and are truly living-up to the spirit of the Programme.

The seeds of the programme were sown for achieving sustainable reduction in disaster risk in the most hazard-prone districts in the country. The endeavour was to strengthen the response, preparedness, management and mitigation capacities of communities, local governments and district administrations in 176 multi-hazard prone districts in 17 states of India, i.e., Arunachal Pradesh, Assam, Bihar, Delhi, Gujarat, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal.

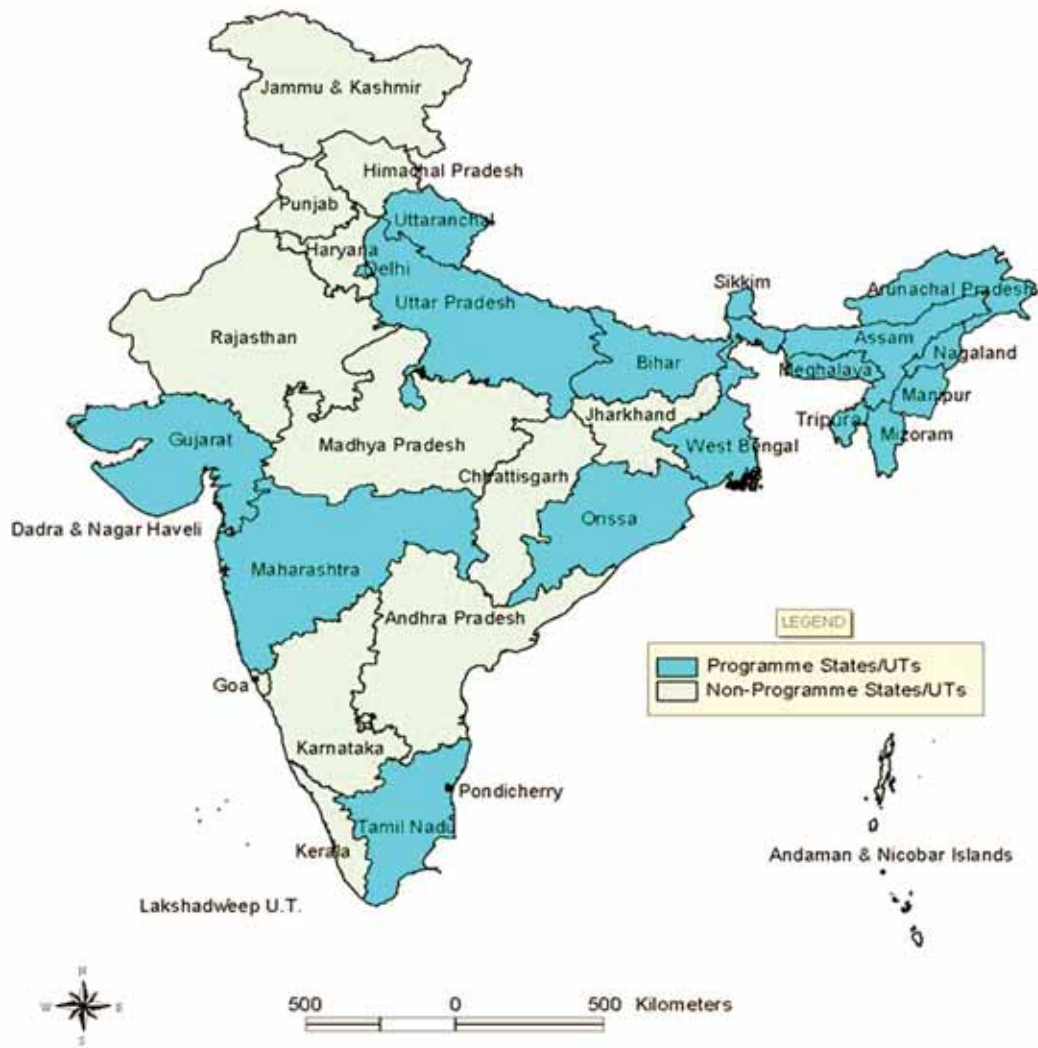
Through the efforts of the community members, the respective state government officials, the United Nations Volunteers, civil society representatives, and many others, a strong foundation has been laid. The programme is progressively changing the perceptions of the people towards emergencies and has come a long way in empowering the people on the ground to be more proactive and not rely solely on external support when disaster strikes.

Awareness raising programs, training of communities and volunteers, capacity-building of people and regular mock drills, are some interventions that are ongoing. This publication is an attempt to document the various initiatives. Most importantly, we have tried to present the many community-led innovations that have made this programme both sustainable and replicable.



Deirdre Boyd  
Country Director

### Disaster Risk Management Programme States of India



Disclaimer: All efforts have been made to make this image accurate However UNDP do not own any responsibility for the correctness or authenticity of the same.

## Abbreviations

ASHA	– Accredited Social Health Activist	NYKS	– Nehru Yuva Kendra Sangathan
AWW	– Anganwadi Worker	ODTF	– Orissa Development Technical forum
BIS	– Bureau of India Standards	PHC	– Primary Health Centre
BMPTC	– Building Materials Promotion and Technology Council	PHDCCI	– PHD Chamber of Commerce and Industry
BPL	– Below Poverty Line	PRI	– Panchayati Raj Institution
CBO	– Community Based Organization	PSO	– Project Support Officer
CDMP	– City Disaster Management Plan	RCC	– Reinforced Concrete Cement
CRPF	– Central Reserve Police Force	RTO	– Regional Traffic Office
DC	– District Collector	S&R	– Search and Rescue
DDMO	– District Disaster Management Officer	SC	– Scheduled Caste
DDMP	– District Disaster Management Plan	SDMP	– School Disaster Management Plan
DM	– Disaster Management	SDRN	– State Disaster Resource Network
DMT	– Disaster Management Team	SER	– Socio-Economic Review
DRM	– Disaster Risk Management	SHG	– Self Help Group
EOC	– Emergency Operation Centre	SMC	– Surat Municipal Corporation
EPBX	– Electronic Private Branch Exchange	SMS	– Short Message Service
GIS	– Geographic Information System	SOP	– Standard Operating Procedures
Gol	– Government of India	Sq.Km	– Square Kilometre
OSDMA	– Orissa State Disaster Management Authority	SSA	– Sarva Shiksha Abhiyan
GSDP	– Gross State Domestic Product	ST	– Scheduled Tribe
IAY	– Indira Awas Yojana	TDO	– Taluka Development Officer
ICDS	– Integrated Child Development Services	ToT	– Training of Trainers
ICS	– Incident Command System	UEVRP	– Urban Earthquake Vulnerability Reduction Project
IDRN	– India Disaster Resource Network	ULB	– Urban Local Body
IEC	– Information Education and Communication	UNDP	– United Nations Development Programme
INR	– Indian Rupee	UNV	– United Nations Volunteer
IT	– Information Technology	UP	– Uttar Pradesh
LCG	– Local Crisis Group	USAID	– United States Agency for International Development
MSRTC	– Maharashtra State Road Transport Corporation	VDMC	– Village Disaster Management Committee
NCC	– National Cadet Corps	VDMP	– Village Disaster Management Plan
NGO	– Non-Governmental Organization	VDMT	– Village Disaster Management Team
NSS	– National Service Scheme		



## Genesis of the Programme

The GOI-UNDP Disaster Risk Management (DRM) Programme envisages accelerating capacity development for disaster reduction at the national level and in some of the most-vulnerable regions in the country through community-based and gender sensitive approaches. It is designed to assist some of the most multi-hazard prone states such as Arunachal Pradesh, Assam, Bihar, Delhi, Gujarat, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Sikkim, Tamil Nadu, Tripura, Uttaranchal, Uttar Pradesh, and West Bengal. The thematic focus being on awareness generation and education, training and capacity building for mitigation and better preparedness in terms of disaster risk management at community, district and state levels, and strengthening of state and district emergency operations centers for accurate and timely dissemination of warning. UNDP has strived to provide specialized support to Ministry of Home Affairs (MHA) to set up the institutional and administrative system for comprehensive disaster risk management.

To achieve the programme results, resources required for the DRM Programme in 176 most hazard prone districts of 17 States was US \$41 million over a period of six years (2002-2008). This programme forms the nucleus of a much larger Programme of the Government of India to achieve the overall goal – **“Sustainable Reduction in Disaster Risk in the most hazard-prone districts in all the States of India.”**

The Programme was initiated in 2002 with US\$2 million from Government of India –UNDP Country Cooperation Framework to accelerate capacity building in disaster reduction and recovery activities at the national level and in 28 districts of Bihar, Gujarat and Orissa through community-based preparedness approaches. The Programme was further expanded (phase II) to cover 148 additional most multi-hazard prone districts spread across 14 selected states.

## Implementation Modalities

The national nodal agency, Ministry of Home Affairs was provided with human resource support for the development of national Disaster Risk Management framework, administrative, Institutional, legal, techno-legal, communication, and policy mechanisms for disaster risk management.

The State Nodal agency of the selected Programme states was provided with the appropriate human resource in the form of National United Nations Volunteers (NUNVs) for establishment of comprehensive community-based Disaster Risk Management framework at various administrative levels.

In addition, State Project Officers were assigned to the State Nodal Agency of the programme states to provide technical support and overall coordination for the programme implementation in the state. Technical expertise was provided at the state level to assist in the establishment and operationalization of the Emergency Operations Centres, facilitate in the capacity building and training of mason/construction workers, engineers in disaster resistant and cost effective housing technologies and in establishment of techno-legal regime.

Village/ward based multi-hazard preparedness and response plans were prepared by the local institutions and linkages with the existing developmental programme was established to address the existing vulnerabilities in the region. Local self-governments at all levels were directly involved in these exercises for sustainability of the programme in long term.

Disaster Management Specialists and experienced project management professionals having expertise in disaster risk management at the community levels in post-disaster situations, worked with state and district governments, civil society partners and communities. For execution and to ensure sustainability of the programme objectives, State Nodal Agencies took support of the existing state training institutions/state resource units for updation of the multi-hazard disaster risk management plans at different levels as well as for training and capacity building of various stakeholders.

The Disaster Management Committees at district, block and gram panchayat level are responsible for implementation of the programme at the district and sub-district levels. The District Collector/Magistrates and Block Development Officers guided the committees in preparation of the plan which helped strengthening the existing system and mainstreaming the Disaster Risk Management Programme. CBO's and NGO's also played a vital role in mobilizing the community and PRI's, for development of disaster preparedness and mitigation plan at all levels and for organizing training for DMTs and mock drills along with existing government system.

Institutions namely National Institute of Disaster Management (NIDM), Delhi, National Industrial Security Academy (NISA), State Administrative Training Institutes/State Institute for Rural Development (SIRD) and other identified National/State Resource groups, including self-help groups and state taskforce on various aspects of disaster risk management. Panchayati Raj Institutions, Urban Local Bodies, associations, corporate bodies and national level voluntary organizations such as NYKS, NCC and NSS as well as ex-defense personnel played a vital role in the implementation of the Programme and ensuring sustainability of the Programme outputs at all levels. Research centers and recovery along with traditional coping mechanisms were used by the communities for development of appropriate strategies as well as for preparation of training and operational manuals for different aspects of disaster management.

UNDP provided management support to the project implementation including recruitment of project personnel and procurement of equipment in consultation with the state government. The following activities were carried in partnership with state nodal agencies and civil society response groups.

## Why a Best Practice Document?

The Disaster Risk Programme aims at contributing towards the social, economic and developmental goals of the National Government and enabling State Governments to minimize loss of development gains from natural disasters and reduce vulnerability. It demonstrates a sustainable model for mainstreaming of disaster risk management at all levels with focus on district and community level activities.

The vital output of this Programme is multi-hazard risk management and sustainable recovery plans at community, gram panchayat and district levels in some of the most multi-hazard prone states and districts and strengthening institutions responsible for sustainability and replication of these efforts.

The DRM Programme has a large and diversified geographical coverage, involving states with different administrative structures, people with varied cultural practices. Local administration has its own functional peculiarities and implementation mechanisms. Hence, no single DRM implementation model can be replicated for the whole country.

The institutionalization process of the DRM Programme has generated many new concepts, initiatives and innovative practices benefiting the community in adopting new approaches to DRM. This document is basically an effort in the direction of collating the successful experiences from the programme states. It highlights the case studies of how stakeholders generated awareness, developed capacities, encouraged volunteers, and integrated the DRM Programme with other government initiatives. This endeavour offers a model for other states and communities to follow. However, every story can be an inspiration for some community on how to deal with a hazard effectively and to prevent it from becoming a disaster. They are all useful milestones on the roadmap towards a safer, more prosperous India. Various initiatives undertaken under the DRM Programme are being considered as innovative practices not only within India but are also being replicated in other countries of the region like Bhutan, Maldives etc.

To conclude, this document is the amalgamation of six years of lessons learned, translated into an operational advice for development agencies, foundations, International NGOs and other people working in the field of disaster risk management.

# Chapter-I

# Awareness Generation

*Sharing the word, spreading the knowledge!*

*A little Knowledge that acts is worth infinitely more than much knowledge that is idle.  
- Khalil Gibran (Philosopher)*





निर्मल जल होय निर्मल पवन हो,  
निर्मल धरती निर्मल जनशुपन,

रोको रोको आइत  
सापथेतीसि रोको.

आइत सामे पूर्व  
तैयारी

आज होय रणियामरण  
अंधाय शमीयारण

हणमिणने करीशुं पूर्वतैयारी  
निर्ले आइत आणे

## Introduction

Creating awareness is most challenging, when dealing with a multi-lingual, multi-cultural population with varying levels of literacy. However in doing so it is crucial for strengthening the capacity by improving infrastructure and providing trainings to people, and finally marshalling resources of every kind to cope with natural or human-induced hazards and to prevent them from turning into disasters.

In the pursuit of this objective, a steering committee was constituted at the national level by the Ministry of Home Affairs, GOI, with representation of experts from a diverse stream of communication including advertising and media. Under the GOI-UNDP DRM Programme, the states have evolved specific awareness campaign strategies involving multiple media. Some of the initiatives have been fairly intensive. Foremost amongst these, have been the observation of Disaster Preparedness month in Delhi and Chetna initiative in Bihar.

## SOME SUCCESSFUL INITIATIVES

### Awareness Strategies

Holistic disaster management necessitates multi-stakeholder approach involving all segments of society. Apart from the print and electronic media, **places with high public visibility such as hospitals, schools, airports, railway stations, bus terminals, post offices, commercial complexes and municipality offices are being used to spread the desired messages** among the common masses on the need to adopt and integrate disaster risk reduction measures to secure their lives, livelihoods and property as sine qua non for comprehensive disaster risk reduction. **Slides in cinema halls are being shown regularly for mass awareness and for taking up various steps against earthquake risks.**

### Information, Education and Communication

In order to assist the State Governments in capacity building and awareness generation activities and to learn from past experiences including sharing of best practices, the Ministry of Home Affairs has compiled/prepared a set of resource materials developed by various organizations/institutions to be replicated and disseminated by State Governments based on their vulnerabilities after translating it into the local languages. The



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voluminous material which runs into about 10000 pages has been divided into 4 broad sections in 7 volumes. These sections cover planning to cope with disasters; education and training; construction toolkit; and information, education and communication toolkit including multi-media resources on disaster mitigation and preparedness.

The Planning section contains material for analyzing a community's risk, development of Preparedness, Mitigation and disaster management plans, coordinating available resources and implementing measures for risk reduction. Model bye-laws, DM Policy, Act and model health sector plan have also been included.

Education and Training includes material for capacity building and upgradation of skills of policy makers, administrators, trainers, engineers etc. in planning for and mitigating against natural disasters. Basic and detailed training modules in disaster preparedness have been incorporated along with training methodologies for trainers, for community preparedness and manuals for training at district, block, panchayat and village levels.

For creating a disaster-resistant building environment, the Construction Toolkit addresses the issue of seismic resistant construction and retrofitting of existing buildings. BIS Codes, manuals and guidelines for RCC, Masonry and other construction methodologies as also for repair and retrofitting of masonry and low-rise buildings have been included. The IEC material seeks to generate awareness to induce mitigation and preparedness measures for risk reduction. Material and strategies used by various States and international organizations, including tips on different hazards, have been incorporated along with multi-media CDs on disasters.

The material has been disseminated to all the State Governments/UT Administrations with the request to have the relevant material, based on the vulnerability of each district, culled out, translated into local languages and disseminate widely down to the village level.

*Some of the successful Initiatives were with the involvement of Folk Troupes, Volunteers, Fairs, Socio-Religious Platforms and Emergency Operating centers.*

### Folk Troupes

Reaching out to the rural population and in a way they can best comprehend is the main challenge



of communication. The very purpose of communication is to simplify the information and make people understand. The challenge comes when you are dealing with the rural population with a very high level of illiteracy. In the rural areas of Uttar Pradesh (UP), such as Gorakhpur, Siddhant Nagar, Bahraich, Gazipur, Deoria, Rampur, Gonda, Balrampur and Saharanpur, the literacy level is only 42% as against the national average of 65%.

The Disaster Management Authority of UP decided to turn to local media to inform, educate and entertain people. Various training programme of local troupes was organized and puppet shows, magic shows, and street plays (locally called as nukkad natak), were performed by these local troupes in different places. These troupes through the medium of traditional folk forms and in the local dialect made people aware of various issues related to disaster management. In addition, the cadence of ancient folk songs was used to convey new, crucial messages of safety when dealing with disasters. These songs were composed in local languages such as Hindi, Bhojpuri, Bundelkhandi and Awadhi.

Supported by the District Administration, the folk troupes fan out through the rural and semi-urban areas of the state, creating awareness about



disaster preparedness and mitigation. ***The songs and skits of these troupes have also been compiled into a manual for wider dissemination. Indeed, translation of the manual into other languages, would aid in spreading awareness about disaster management techniques in rural and semi-urban areas throughout the country.***



### Agriculture Fair, Maharashtra

An "Agriculture Fair", with a demonstration of earthquake construction structures is organized every year in Satara district in Maharashtra and is visited by several lakhs of people including both rural as well as urban population. In rural areas earthquake resistant features are hardly used in houses, due to lack of awareness and expertise. *In order to create awareness amongst the masses, a demonstration unit depicting earthquake resistant features and a stall is set up in the Agriculture fair. Through the stalls and the demonstration unit, visitors are not only exposed to the earthquake resistant features, but are also explained that usage of this technology is cost effective too.*

### National Service Scheme Volunteers

***The NSS volunteers are active in Maharashtra as they carryout Information Education Communication (IEC) activities on various social themes.*** A street play on disaster awareness covering both natural (flood, earthquake, cyclone) as well as human-induced (road accidents and fire) disasters and also capturing information about five methods of handling the injured persons, has been prepared in Ratnagiri district, Maharashtra by involving NSS volunteers and by using local musical instruments. The play also gives information about the district disaster helpline number 1077 and dos and don'ts related to various disasters. This play has been enacted at 22 places, including bus stops, government offices and various other public places.

### Public Transport System

One of the key initiatives for preparedness is creating mass awareness regarding disasters.



**In order to create mass awareness, auto-rickshaws are being used in Maharashtra as carriers for disaster awareness messages.**

Regional Traffic Office (RTO) in Maharashtra has the updated records of different types of vehicles. Therefore it was decided to select auto-rickshaws which are the most popular way of commuting by local people.

*Maharashtra State Road Transport Corporation (MSRTC), volunteers and other civilians prepared the slogans for the Auto-rickshaws regarding earthquakes, like "Bhukampratirodhak Ghar-Surakshit Ghar."*

**Various stakeholders which include District Publicity Officer, Local Urban Bodies, representatives of educational institutions, Lions Club, Rotary Club and other civil groups have collaborated in this initiative. This unique initiative has gained a lot of success in awareness generation about DRM**

During this awareness Programme, various stakeholders involved are District Publicity Officer, local urban bodies, representatives of educational institutions, lions club, Rotary club and other civil group. This method has gained a lot of success in awareness generation about DRM.

### Disaster Preparedness Month

A burgeoning city like Delhi underscores the need for enhanced levels of disaster mitigation and preparedness in view of its high vulnerability profile, with a complex interplay of factors. *As part of the awareness generation activities, the city has embarked upon the observance of the Disaster Preparedness Month. The month long activities were designed to convert the challenge of making Delhi a safer city by actively involving every stakeholder in disaster mitigation and preparedness.*





The Administration of North East District, Government of Delhi observed October 2005 as the 'Disaster Preparedness Month' with an array of activities and Programs organized throughout the district involving different line departments, specialist organizations, other partners and stakeholders. The ambitious programme focused on generating awareness among the people about the need to adopt and integrate disaster risk reduction measures to safeguard lives, livelihoods, infrastructure and property to withstand the impact of natural disasters and to initiate disaster preparedness activities in their personal as well as socio-economic life.

The Programme was undertaken by the Government of National Capital Territory of Delhi, District North East in collaboration with various NGOs, Corporate Agencies, Hospitals, Schools and Religious groups in association with the Police, Delhi Fire Service, Civil Defence, Resident Welfare Associations (RWAs), schools, market associations, NGOs etc. Each Line Department in the District was



*It is heartening to know that such extensive measures are being taken to promote disaster related awareness and preparedness amongst the student and teaching community. I am glad that the momentum has picked up with remarkable initiatives at school level.*

expected to develop their own strategy for implementation in consultation with the District Administration. It was flexible for them to chalk out programs. Some other departments like MCD, DFS, Delhi Police, Department of Health, Department of Education, Department of Transport, Guru Tegh Bahadur Hospital (GTBH), Delhi Civil Defence, PWD, Irrigation and Flood Control, etc had certain specific roles in this initiative.

As part of the month-long activities, competitions such as painting, debate, essay etc were organized in all the schools, banners were displayed in each nook and corner of the district; posters, pamphlets etc were displayed at public places and public carriers etc, mock drills were conducted at schools and other institutions. Advertisements through cable channels, hand bills, magic shows and street plays on disaster management staged at public places or public meetings, focused awareness meetings with Resident Welfare Associations, civic organizations etc, placing leaflets in banks, post offices, railway stations etc, awareness messages shown through cinema halls, firefighting demonstrations with the help of Delhi Fire Service and Civil Defence in schools, communities etc, door-to-door distribution of posters and leaflets with the help of CD volunteers, collaboration with the Durga Puja Pandals as platform for awareness creation, distribution of awards/prizes to the district Headquarter and preparation of Disaster Management Plan for each Government Departments, Autonomous Bodies, Hospitals, Schools etc.

One of the direct impacts of the disaster awareness month was that the District Health department allocated 2% of their annual budget for the disaster preparedness activities. Also, the CDMO (Chief District Medical Officer) organized more than 10 awareness/sensitization Programs and trainings for the staff posted at the rural clinics. The campaign ahead by distributing the IEC materials from the district EOC to the general public through his clinics. A disaster preparedness plan is also made which is updated every six months. While officially inaugurating the Disaster Preparedness Month, the then Divisional Commissioner Sh. G.K Marwah

## Chetna Initiative, Bihar

Chetna, ushering in a safer tomorrow Bihar can be called as the cradle of Indian civilization. The state's capital Patna has variously been called, Patliputra and Pushpura, the city of flowers. But this magnificent heritage is under threat. The state of Bihar is prone to multi-hazards. 73% of the geographical area of the state is prone to floods. The Seismic Map of India indicates that half a dozen districts in North Bihar lie in seismic zones IV and V, including the capital city, Patna.

Thus, without creating awareness among people about disasters and how best to prepare strategies to prevent them or to mitigate the damage they may cause, the state could face untold damage to life, livelihood, and property, if a calamity struck. Accordingly, on the theme of disaster management, a fair called Chetna-2006 was organized in Patna, to create awareness about the adverse effects of various disasters and to encourage community's involvement in preparedness and mitigation strategies. It also provided a forum that brought together stakeholders from public and private sectors, educational institutions, police and paramilitary forces, from NGOs, to International agencies. It also involved Urban Local Bodies, Builders, Architects, and Engineers to exchange ideas and share their experiences on DRM Programme implementation.

Chetna-2006 not only created awareness but also enabled networking between various line departments (ATI, SSB, Fire, CISF, CRPF, Railways, Colleges, School students and teachers, Public sectors, Insurance WDC, Transport Department, Cultural and Nukkad Natak groups) who all worked as partners in putting up the exhibition.

There were lively discussions, seminars and workshops; demonstration stalls on construction techniques, as also on trauma counseling with respect to Disaster Management. The role of the insurance sector was also discussed, and the way it could protect the interests of the most vulnerable sections of society was shared. Disaster mitigation training was also demonstrated and a special session on flood management was organized. Mock Drills were conducted with help of agencies such as the Fire Services, Central Reserve Police Force (CRPF), Central Industrial Security Force (CISF), Sashastra Seema Bal (SSB), and NCC/Red Cross. In order to further add interest, there was a demonstration-cum-sale of products by women based SHGs. School children participated in various competitions such as poster painting, creative writing, and quiz. The technical support for these activities was extended by relevant Government Departments and UNICEF.

The Chetna initiative could be regarded as a paradigm shift in the way a state handles disasters. It marks the shift from relief and rehabilitation to preparedness and mitigation activities that are related to the four main Programme objectives. Awareness generation has been integrated into all activities. This should ensure minimal loss of life and property. As the Chief Minister of the Bihar stated during his address at the Chetna initiative "Before any disaster befalls on our state, we should prepare ourselves to overcome nature's fury and help others."



*In the present scenario the awareness in the students about disaster management is a must because no one knows when a disaster is going to strike. The only way to bail them out of such disaster is to take safety measures and precautions. Even if such an unfortunate event occurs they should be made capable enough to deal with such events in a proper and coordinated manner to save the lives of people.*

**Sh. V.K.Nayyaar**, Principal (Govt. Boys, Sr. Sec. School, Jahangirpuri

said;"Disaster Preparedness Month celebration is novel to the country and if we find that it is successful, we will promote other districts also to do the same".

### Schools Safety Initiatives

Under the Disaster Risk Management Programme a separate component addressing the School Awareness and a Safety Programme (SASP) has been developed to generate awareness amongst the students and teachers on how to respond to disasters by developing school level disaster management plans and through conduction of mock drills.

Recent disasters in India have reported the vulnerabilities of children. After the massive earthquake in Gujarat, 8212 school rooms collapsed, Kumbakonam fire tragedy killed 93 children, over 100 school children were stranded after school hours in Mumbai's flash flood, more than 200 students & teachers in one school building alone lost their lives in Jammu & Kashmir earthquake and 600 school children were left marooned in their school by floodwaters in Bihar. In India across towns with over 1033863 primary, middle and high secondary schools, many of them function in unsafe buildings and at sites exposed to different hazards and congested environment. Further adding to their risks is their limitations to safe structural and non-structural measures within a school building.

For children to be safer in schools there are several aspects that requires people's attention and actions. This was challenging for Government of India and UNDP to decide for building the capabilities of educational authorities and schools in school disaster preparedness and safety measures. This was a beginning of the School Safety Programme. The Programme was initiated as part of the main GoI-UNDP Disaster Risk Management Programme. The message of the Programme is "school safety through education

and building safer schools". The Programme brings together children, teachers and school managers through participatory activities that concerns children's safety during disasters. Children learn on natural hazards safety tips from class room text books simple lessons and learning activities. Teachers together with children prepare their own school emergency evacuation plan and have mock drills to exercise the plans. The school managers, with professional guidance from trained engineers and architects plan to design their school buildings with simple hazard safe features.

Under UEVR Programme, Rajkot Municipal Corporation has developed a series of IEC materials (in Gujarati language) for the community ,including, booklets on "ten golden rules to protect yourself and your community for earthquake preparedness and response plan & Earthquake pre/post and during preparedness points to be remembered."

As the Programme continues to address the way forward amongst schools across 38 project cities and 17 Programme states prone to different hazards, have successes to share.

**The Programme has reached out to 4105 schools with 130,000 enrolled school children.** With the Government of India, advisory support disaster management has been integrated within the education curriculum for middle schools and higher secondary schools under the Central Board of Secondary Education. Schools in Delhi are preparing their school disaster management plans and every month practice their planned hazard preparedness activities through drills. Extensive disaster management trainings have involved teachers, school managers and education department officials from Central Board of Secondary Education and State Board for Secondary and Higher Education. In Uttar Pradesh, the State government decided to design and construct 80,000 primary and upper primary classrooms located in seismic zone VI, III with earthquake proofed design features. To construct newer schools and modifying existing school buildings, engineers and architects from government departments are trained to use earthquake proof designs and codes. For constructing schools, a model school design guideline has been prepared for various seismic zones in India.

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*"During the floods, we were a team of 5-7 very dedicated and committed individuals. And thanks to UNDP and the UNV volunteers, we were able to give our full support to the districts and the authorities there. The field officers [UNV volunteers] were also an asset in this crisis. The biggest success was the speed at which we were able to put out information that poured in from the flood-affected areas. This was quickly put online also. This credit goes entirely to the volunteers."*

In the course of the School Safety Programme, Government of India and UNDP have made a beginning in sensitizing children and school managers in key areas of disaster preparedness and safety actions. This task of creating a safe learning environment for India is important. Countries over world are promoting a culture of prevention beginning at schools. On the International Day for Disaster Reduction, 10th October 2007, UNDP, Government of India, UN Secretariat of International Strategy for Disaster Reduction and partners support the campaign on "Disaster Risk Reduction Begins at School", which was launched for two years (2006-2007). In the year 2008 again, 17 Programme States in India joined hands with people to build a stronger partnership among educational institutions, school managers and most importantly the children of India's future. From this day onwards with observance day activities in the States, schools shall continue to participate in educating children and school managers for actions in disaster risk reduction and a safe tomorrow.

### Information Communication Technology (ICT) for Disaster Management

India Disaster Resource Network (IDRN) as a portal was launched in September 2003, initiated by the Ministry of Home Affairs, Government of India in collaboration with UNDP India. Technical support was extended to systematically formulate the resource inventory through an organized information system designed to collate and assimilate information from sources provided by district and state level authorities.

The portal has access to relevant 92,500 information data records covering 574 districts (out of total 604 districts) of 35 States/Union Territory in India. The on-line inventory of data in-built in the portal, clearly lists out in a sequential manner the details of specific equipments, types, functions, including human expertise in search and rescue operations along with the contact details of expertise and suppliers for prompt mobilization. Designed as a web enabled information system the network provides updated inventory of related items every quarter that is entered at two levels,

firstly at district level and secondly at the state level. Updating information and providing of relevant data inventories has been carried out by the District Collector's office. The portal has been hosted at the central server of National Information Centre, Government of India, to provide adequate institutional authorization and security support to the Ministry of Home Affairs. The portal has an on-line dual access interface system for users at the State Disaster Management/Relief & Rehabilitation Department officials (Relief Commissioners), for district administrators (District Collectors) and other state and district nodal officers, corporate members of Confederation of Indian Industry (CII) and rest of the community who can browse through the portal. The user can obtain catalogue information as well as query based list of resources available at the district level. After this

During the first test match between India and England held at Nagpur from 1st to 5th March 2006, a pocket guide on disaster preparedness was distributed to the spectators. This booklet had basic information related to different disasters. Indian cricketer, Yuvraj Singh appreciated initiatives of the disaster risk management Programme and gave autograph on a few pocket guides. Hundreds of such booklets were distributed.

successful inventory of voluminous data on emergency related equipments and resources available at various sources in the country, the IDRN model has been replicated by the Government's of Maldives and Sri Lanka, recently in 2006 to strengthen their capacity on disaster resource inventory. Based on the IDRN framework used in India, support was extended to both the countries, to initiate the disaster resource network that has been contextualized in reference to their geographic and administrative structure.

India Disaster Knowledge Network (IDKN) is an initiative to establish networks and partnerships among research organizations, government agencies, policy makers, disaster managers and specialists from allied fields of engineering, architecture, planning, earth sciences, hydrology, agriculture environment, management and social sciences to exchange information through technology and in working together to reduce risk. **Thirty Seven Ministries/ Departments/ Academic and research Institutions/ Organizations have agreed to collaborate with this initiative as partners and also assigned nodal officers from their organizations. There are further plans to link up portals and websites of all partner organizations so that the users could access to DRM related information of all organizations.**

### **Knowledge Network, Delhi**

India Disaster Resource Network (IDRN), a web based portal for developing online inventory of specialized human resources and equipments was developed. This would facilitate in efficient and effective Disaster Response by reducing the time of mobilizing resources during emergencies at all levels.

To mainstream Disaster Management in the Corporate Institutions and strengthen networks, Indian Industries and PHDCCI. Partnerships were also established with other Stakeholders such as Indian Institute of Architects, Institution of Engineers, Institute of Town Planners (India), Builder Association of India, Indian Medical Association, HAM Radio Society etc .

### **Replicable Good Practices**

Awareness generation is pertinent for creating capacity by improving infrastructure and training people, and finally marshalling resources of every kind, to cope with natural or human-induced hazards, and to prevent them from turning into disasters.

For the purpose of generating awareness on the theme of disaster risk management amongst a wide cross section of population, there could be various modes like the involvement of the local folk troupes, fairs and exhibition, print and electronic media etc. Not only these, but socio-religious institutions could also play a vital role in generating awareness amongst the communities.

Awareness messages could also be inserted with other documents issued by the different government departments and agencies such as fees receipts issued by educational institutions under the "School safety "project of DRMP with the education department, Toll-Tax receipts issued against the Road tax of National Highway Authority in the State could be used for spreading road driving tips.

Indeed, when it comes to generating awareness about disaster risk management which can so profoundly affect human life and livelihood, societies can and must use every means available to spread the safety messages. The methods mentioned here are extremely simple and cost effective therefore they can be implemented throughout the country with regional modifications.



DISTRICT DISASTER  
MANAGEMENT COMMITTEE  
EAST GARO HILLS  
WILLIAMNAGAR

ବିପଦସମ୍ମୁଖୀନ ଚିତ୍ରଣ ଉପଲକ୍ଷେ  
ବିଶ୍ୱାସୀ ପ୍ରତିଯୋଗିତା

# Chapter-II



# Capacity Building

*Empowering the communities, making them independent!*

A combination of all the strengths and resources available within a community, society or organization that can reduce the level of risk, or the effects of a disaster. Capacity may include physical, institutional, social or economic means as well as skilled personal or collective attributes such as leadership and management. Capacity may also be described as capability. (Source: UN/ISDR Terminology)



To prevent human misery and economic hardship, the Government of India and UNDP have taken measures that will help create a safer environment. Under the initiative of the Ministry of Urban Development, a Vulnerability Atlas of the country was prepared (1994-1997) in which earthquake, hazard, and cyclone maps for every state and Union Territory of India were prepared. With clearly demarcated boundaries, these maps indicate areas of districts prone to various intensities of hazards at a glance. This enabled efforts to be concentrated in 176 multi-hazard prone districts in 17 states of the country i.e. Arunachal Pradesh, Assam, Bihar, Delhi, Gujarat Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Sikkim, Tamil Nadu, Tripura, Uttaranchal, Uttar Pradesh and West Bengal.

The Government of India - UNDP launched a proactive initiative that aims to see that disaster preparedness and mitigation measures are undertaken at all levels, (central, state, local) by individuals and institutions from every walk of life, and to counter every type of hazard that individuals and regions are vulnerable to. *The emphasis of this programme has been on activities related to sensitization, training and capacity building. The programme includes in its ambit, government officials, volunteers, and civil society. It also focuses on the creation of district management departments at the state level, as also the formation and training of disaster management committees and teams at all levels.*

In addition, Disaster Management Authorities at National and State levels, mobilized local communities to deal with situations that ranged from organizing search and rescue teams, to giving first aid training in Chamoli District, Uttaranchal to undertaking flood preparatory measures which ranged from repairing embankments, to storing suitable foodstuffs. It is heartening that response plans have been formulated in conjunction with representatives Village/Ward, and Gram Panchayat levels, with the representation of women in all these bodies. So in addition to strengthening the Disaster Management teams at all levels, women have been given special training in areas such as first aid, shelter management, water, sanitation, rescue and evacuation.

## SOME SUCCESSFUL INITIATIVES

### Mason Training Programme

*"Earthquakes don't kill people, unsafe houses do."*

The first step to improve the construction, quality and safety level of buildings is to prepare trained manpower required for earthquake resistant construction technology. Various initiatives under the GoI-UNDP DRM Programme to train masons were taken. They were trained in techniques that would enable them to build earthquake resistant buildings. Since the actual construction of buildings is done by masons, making them aware of the need for safety, and the methods that would

make this possible, can be the best safeguard of all against the loss of life and property that occur when a building is damaged or destroyed by an earthquake. Till date 10,000 masons have been trained in Uttar Pradesh alone. This can be seen to have ushered in a new consciousness regarding the importance of building earthquake safe buildings.

### Mason's Training, Bihar

In Bihar, eight (8) districts fall under earthquake zone V and are covered by the Orissa Development Technocrats Forum which is involved in training trainers to train masons to build earthquake-safe

*"Thanks to the first aid training I underwent through the DRM project, I was able to tend to those injured in the floods. A lot of people have returned to their villages now. And whenever they pass by this town they make sure to visit me. We have a cup of tea and talk for a while. That gratitude makes me feel good."*

**Kiran Devi**, Community Volunteer, Dawaniachowk, Supaul (Bihar)

houses. After receiving training for 6 days, masons build a Technology Demonstration Unit in each of the 201 blocks which will then be used as a control room cum information centre. The training for these master trainers is provided by resource persons from ODTF team. Masons and artisans are now part of self help groups and masons' cooperatives in each block. Control Rooms have also been set up in Blocks which will help in the dissemination of safe building techniques.



*The Masons Training Programme has been one successful initiative under the GOI-UNDP DRM Programme along with training Programs on fire fighting, search and rescue in schools.*

### **Building Capacity to Cope with Disaster Risk Management**

After the two major disasters such as the Orissa Cyclone in 1999 and Gujarat Earthquake in 2001, the approach towards disaster management in India has changed from relief and response-centric to a balanced approach including prevention, mitigation, preparedness and rehabilitation. Also, efforts are being made to incorporate disaster risk reduction in development planning for which the Government has prepared a National Disaster Management Framework. It covers various aspects of disaster management such as: **Institutional mechanism; Mitigation/prevention measures; Legal/ policy framework; Preparedness and response; Early warning systems; Human Resource Development; Capacity Building;**

The capacity building activities undertaken as a part of the GoI-UNDP Disaster Risk Management project is an integral part of the national roadmap for reducing vulnerabilities to disasters.

The GOI-UNDP initiative undertook a series of steps to build the community's capacity to deal with hazards and to prevent them from turning into disasters. A National Core Group on Earthquake Risk Mitigation was set up by the Ministry of Home Affairs (MHA) to review and validate the plans for earthquake mitigation and advise MHA on policy and planning related issues for earthquake risk reduction. Students of Engineering and Architecture were made aware of the need for buildings that were better equipped to deal with earthquakes, floods, landslides, and other natural phenomena that were likely to cause damage if buildings were constructed in areas that made them vulnerable to natural hazards, or in ways that did not incorporate safety features. Selected engineers from prominent government engineering departments (Public Works



Department, Military Engineering Service, the urban Development Authorities) were trained to build seismic resistant constructions, and to become aware of codal provisions, safety and evaluation techniques, and to advise on retrofitting existing buildings so that they conform to the new safety requirements.

## CASE STUDY-I

### Preparedness pays...

In Tamil Nadu, the GOI-UNDP Programme is being implemented in 13 districts: (64 blocks, 2463 gram panchayats, 3397 villages, and in 17 Urban Local Bodies). Village disaster management teams were constituted to undertake search and rescue, and to administer first aid. In order to get more clarity on the roles and responsibilities of the teams, mock drills were also conducted.

The creation of regional Early Warning Systems, and Risk and Vulnerability Assessments can be very cost effective to focus on local level and support communities to take simple disaster preparedness measures. Forging basic communication chains can help spread warnings effectively and save lives.

*In Samiyarpettai, a quiet village by the sea in Tamil Nadu, the GOI-UNDP's efforts to make the villagers aware of the risks posed by natural phenomena such as cyclones were first seen as no more than a diversion. When the Anna school of Management first reached out to the villagers and attempted to involve them in learning survival strategies to deal with incidents such as cyclones, the women were conspicuous by their absence.*

*For two years later, when the Tsunami struck, the villagers of Samiyarpettai knew exactly what to do to face the calamity. They were aware of how to reach safer, higher ground, to make use of empty barrels as rafts, and were trained in first aid techniques that saved lives, and minimized injuries. The death toll in Samiyarpettai was 22, much lower than in neighboring areas. And the villagers themselves acknowledged, "Many more of us would have been killed if we had not been trained."*

Another initiative that has the potential to make a big difference to the outcome when accidents and other natural hazard or human-induced disasters occur is *the awareness and training level of the police and doctors*. The Police are often the first to arrive at the scene of an accident whether it is a traffic accident, or the scene of a crime, or any other natural or man-made disaster. However, they are often not trained to deal with the victims. Doctors believe that it should be mandatory for police personnel to be trained in first aid so that they can provide speedy relief to the victims till the time a doctor arrives or they are taken to a hospital. Doctors from the state government were called upon to train police personnel and this exercise was sponsored by Medisphere Marketing Private Limited. In June 2006, doctors trained police personnel in 12 districts of Uttar Pradesh. **While this initiative was seen to be successful in terms of resource mobilization, forging partnerships between different departments involved with DRM activities, a greater emphasis on the quality of the Programme, and less on meeting targets would, it was believed, lead to better outcomes.**

## CASE STUDY-II

### Preparedness minimizing the loss: Flood 2008, Sambalpur

Due to low pressure in the Bay of Bengal that was subsequently intensified to a deep depression there was very heavy rain in the upper and lower catchments of Mahanadi System in September, 2008 that resulted in flood. Due to local rain in the district and water discharge from the Hirakud dam, the low lying areas and the back water forced the urban areas in flood like situation. Poor drainage system in the district caused water logging in many wards of the municipality and flash flood mainly in two blocks i.e. Dhakauda and Maneswar basically affected the people.

### Effectiveness of DRM Programme:

GOI-UNDP DRM Programme helped the district in many ways such as:

DRM approach enhanced the level of preparedness at the administrative level as well as community level. District Natural Calamity Committee (DNCC) meeting held in the month of March 2008 (Heat wave) and May 2008 (Pre Flood) to take stock of the situation prior to the emergency season. All the concerned line departments were instructed to take necessary preparedness & precautionary measures to tackle the situation.

The EOC is operational and equipped with Telephone, Internet, VHF facilities, Fax, Rescue

equipments, powerboats, Search lights, Generator and most important is District Disaster Management Plan (DDMP). During emergency this center acts as a nodal point for receiving messages and transmits to different quarters. Deputy Collector (Emergency) along with the District Project Officer, DRM monitored the whole situation from the EOC and acted as the information hub of the District.

All the grass root level officers were alerted and instructed to keep close watch on the situation and report from time to time to the EOC for better monitoring.

The trained Volunteers of Disaster Management Team (VDMTs) were kept in readiness to handle the emergency situations. Three DMT members from Dhanakauda and Maneswar block who rescued 4 people in a boat mishap (Haradjor Nalla) were awarded by the Hon'ble Chief Minister of Orissa on October 29, 2008 to promote volunteerism on the eve of Orissa Disaster Preparedness Day.

Formation of DMTs and DMCs - Different Teams and Committees at all level are being formed for the purpose of monitoring and taking decision related to disaster preparedness, management & disaster recovery. At District, block, GP and village level such committees are formed. These committees include decision makers, opinion leaders, traditional leaders, SHG members, village youths, teachers, line department, officials etc.

The approach of Community based disaster preparedness is the best form of disaster preparedness as this advocate for a bottom up approach for disaster management. It is an acknowledged fact that whatever be the preparedness at top level it takes some time to reach to the community in the normal condition. In case of severe disaster scenario, this time span definitely increases because of various obstacles. Hence, the wise approach is to train the community for self-reliance, self-help, and self-protection. It is realized from the past experience that community needs support in specialized training in Search and Rescue, First Aid and Psychological counseling in the post disaster situation.

Everyone is aware about the fact that awareness has made a lot of difference in our lives. In the DRM Programme, everyone has been sensitized and made aware right from community level to the administration level, which has helped considerably to reduce the losses by taking up prompt preparedness measures well before time. PRIs have taken a lead role in communicating to the community and acted as the viable communication channel for dissemination of warning with the help of warning group.

NGOs with support of trained volunteers helped the District administration to provide free kitchen to the affected people of urban areas. DMT training at Urban Areas were organized in which 250 volunteers were trained. As the blocks of the district were not much affected by the flood this year, but the level of preparedness at all level shows a positive sign towards the effectiveness of the Disaster Risk Management Programme and acceptance of the same by the community and the administration.

### CASE STUDY-III

#### **The spirit of Volunteerism saved many lives in Maharashtra**

**District Level Volunteers Search and Rescue operation in Dhule district of Maharashtra is an exemplary example of full preparedness and well-coordinated team work of the unparalleled rescue operation in Dhule.** The DM plan preparation process was identified for 92 of the 676 villages in the district spread in four talukas prone to floods every year. As there were heavy rains and floods in several parts of Maharashtra and the neighbouring states of Gujarat around the same time in the month of August 2006, in Dhule district, only one rubber inflatable boat and two medium capacity boats were available, that too for a short time, as against the immediate need of at least four boats. Yet the DRM District Project Officer and young members of the search and rescue team in the late evening hours of 8th August 2006 transported to safe places, 1300 people from 5 Villages and provide relief in 3 villages located on the bank of river Tapi using just one Boat.

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*Uttrakhand* Being a hill state with snake like roads and many religious places disasters like road accidents and landslides due to construction activities are quite common. The state is taking up special Programs to train Police, Revenue, Home Guard personnel and volunteers on search and rescue techniques. More than 720 State Government personnel trained in Search and Rescue through 20 day Programs while more than 56,021 volunteers have been imparted with basic Search and Rescue skills through 02-03 day programs using the state as well as DRM funds through various specialized training institutes like Himalayan Adventure Institute and Himalayan Mountaineering Institute etc.

- **Abha Mishra** (Programme Associate, Delhi, UP and Uttaranchal)

Recalling the rescue operation, at that moment the only available boat was engulfed by the spate of flood water currents, leaving no other option for the rescue members to step out of the boat and wade through the flowing waters clasping hands together moving inch by inch to safety. Two members of the team were able to reach onto the other side of the bank. The floating boat was retrieved by them and helped residents from the waterlogged villages. The operation continued till the next morning.

The rescue operation, recalled one of the village youth, Ishwar Shriram Koli, "We got up in the morning to see our village completely surrounded by flood water, and we were scared when the water levels started rising ferociously, it was something we had never seen before. His father, a village sarpanch and former police officer praised and

thanked the search & rescue team members for being trained to use the Rubber Inflatable Boat as part of ongoing DRM training on search and rescue operation and for ferrying the nearby village residents to safety.

Shailaja Joshi, the tehsildar of Sinkhede also apart of Village Disaster Management team, showed courage and sense of duty after being trained to use the Rubber Inflatable Boat. He rescued the trapped people by going from village to village from early morning to late night consecutively for four days during till the flood waters could recede in August 2006. The flood search & rescue team including the DPO was awarded certificate of honour by Honorable Guardian Minister of the District, Shri Ravindraseth Patil on 15th August 2006 at the collectorate, Dhule District, Maharashtra.

#### CASE STUDY-IV

##### **Empowering the Stakeholders through Capacity Building, Ahmednagar, Maharashtra**

"Capacity building of different stakeholders, especially Disaster Management Volunteers is perhaps the most important activity in any community based disaster management Programme" mentioned Mr. Suresh Keshavrao Dike, ex-Sarpanch of Jainpur village, Ahmednagar district during an interaction on the capacity building paid dividend. He added that the **trainings helped him to build his own and his peer groups capacity which was so critical in effective and efficient disaster management.**

Ahmednagar, one of the DRM Programme districts, is the biggest district of Maharashtra in terms of geographical area --covering 5.6 percent of the total area of the State. It has 1586 villages and 1310 Gram Panchayats spread within 14 talukas. These talukas have been grouped into four sub-divisions for administrative purposes. Ahmednagar is a drought-prone district and the average rainfall is about 498 mm. However, the year 2006 was different as this district witnessed unprecedented floods.

One of the villages that were devastated by the floods of 2006 is Jainpur. Jainpur village is located in Newasa taluka of Shrirampur sub-division. Mr. Dike, an ex-PRI member, remembers the situation of August 2006 when release of 2.81 lakh cusses of water in Godavari river from Nandurmadhameshwar dam in Nashik district coupled with the heavy rainfall in Ahmednagar, wrought havoc across the district. His village, Jainpur, was heavily flooded due to release of water from Nandurmadhameshwar and backwater of Jaikwadi dam. The villagers still remember the exemplary role played by Mr. Dike during response operation. As soon as water started entering the low lying areas, he immediately informed the tehsil office as well as the district Control Room on 1077 and kept on updating the situation of his village. Leading from the front, he with the help of village talahti, police patil, other PRI members and a few volunteers, undertook the evacuation task. The local vehicles were used for shifting people to safer places. With the help of Saibaba Sansthan and Shaneshwar Sansthan, the food packers were arranged for the evacuated population. The rainfall was relentless and hence water level was rising. As a response as well as precautionary measure, Mr. Dike with the help of others arranged a private hodi [small boat] from the nearby village for the rescue operation. On

further rise of water level in village, he contacted the tehsildar and then the district control room and two columns of army was pressed into evacuation task.

Considering the importance and usefulness of the training Programme, Mr. Dike has been attending most of the disaster management training Programs conducted at tehsil and district level. He is also being called for experience sharing during community level training Programs conducted under the Disaster Risk Management Programme. Mr. Dike whose wife is the sitting Sarpanch, revealed that the training Programme conducted in May 2006 for the Panchyati Raj Members, helped him to understand the nuances of disaster management especially, flood management. Importance of coordination, two-way communication, pre-flood planning, identification of safe shelters, usage of local resources, toll free district control room number, etc were also some of the takeaways of the trainings for Mr. Dike. **The training Programme had covered topics namely, Introduction of Disaster Risk Management and Disaster Risk Management Programme, Disasters and types of disasters, Role of PRI members in disaster management including awareness generation, emergency response and availability of resources and Preparation of Village Disaster Management Plans.**

### Replicable good practices

*The training of the selected engineers from prominent engineering departments as well as students of Engineering and Architecture Institutes, made them better equipped to deal with earthquakes, floods, landslides and other natural phenomena that were likely to cause damage. They were trained to build seismic resistant constructions, and to become aware of other safety and evaluation techniques.*

The creation of regional Early Warning Systems, and Risk and Vulnerability Assessments can be very cost effective to focus on local level and support communities to take simple disaster preparedness measures. Forging basic communication chains can help spread warnings effectively and save lives.

The training of Masons is another good practice since the actual construction of buildings is done by masons, making them aware of the need for safety, and the methods that would make this possible, can be the best safeguard of all against the loss of life and property that occur when a building is damaged or destroyed by an earthquake.

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**Uttar Pradesh** Earthquake don't kill but buildings kills is a well known statement which indicates the need for capacity building of all stakeholders involved in construction activities. This was translated into action under DRM+ in Uttar Pradesh by ensuring that not only Engineers and Architects in large numbers are trained in the state using State funds besides the DRM funds. Today more than 10,000 masons, 900 engineers and 50 architects have been trained in earthquake resistant construction in 13 districts (183 blocks) and 6 cities.

- **Abha Mishra** (Programme Associate, Delhi, UP and Uttaranchal)





# Chapter-III

# Institutionalization

*Laying the foundation stone for a better tomorrow!*

*We must act now. We must deliver this planet to our succeeding generation in a more environmentally sustainable way.*  
*Ban Ki-moon, UN Secretary General*





## Introduction

**D**isaster Risk Management Programme (DRMP) has taken strong roots at various levels of administration in the states. All heads of the state departments have been oriented on the subject of Disaster Risk Management from time to time. Disaster Management Committees are formed at various levels and are assigned the task of implementing the programme. Representation for these committees are drawn from elected representatives, officials of line departments, professional bodies, Civil Defense, NFO and CBO representatives and local opinion leaders. Women participation in DMCs has been especially encouraged to address the special needs of gender, particularly at the time of disaster and post-disaster situations. DMCs are involved in preparing disaster preparedness and mitigation planning at all levels to ensure sustainability and integrating management plan into development plan at various levels.

Capacity development Programs are organized by conducting meetings, workshops, seminars, training camps for sensitization, knowledge dissemination and developing skill sets of various stakeholders at various levels.

## SOME SUCCESSFUL INITIATIVES

### Emergency Operation Centers (EOC)

The Construction of EOCs is another step to make the people aware about the safe construction practices and earthquake resistant houses. This EOC construction is also being used as a demonstration unit for enabling construction of seismically resistant houses in the district.

Well equipped Regional Rescue Centres with latest technology are being established at Vadodara, Ahmedabad, Rajkot, Surat and Gandhidam with the objective to minimize the response time and for effective response in any emergency.

The EOC is strengthened with the Communication Equipments like under DRM Programme.

Mobile phone, Fax machine, Hand Set (Walkie talkie), Portable Diesel Generator set, Desktop Computer (including modem, UPS, CDRW), Printer, Scanner, Fax (Multi Utility Machine)

### A Winning Strategy- Corporate Partnership

The government of Uttar Pradesh made a strategic decision, to team up with a corporate house, TATA-TISCON to combine strengths and create a pool of engineers, architects, and masons who were made conversant with earthquake safe techniques in the earthquake prone areas of the states of Uttar Pradesh and Bihar. Since this corporate house is in the business of making and marketing steel products that go into the construction of safer buildings, and indeed, advertise this fact in various media, this is an



*"We got food in the mega camps. Doctors were also available there. Our children were fed with milk and biscuits apart from their meals. The family kit we were given at the camps was also useful since most of our things were washed away by the flood."*

**Kunkun Sada, Resident, Kehera Toola, Saharsa (Bihar)**

example of Private -Public partnership that benefits both parties: government, as well as the corporate house.

### Sarva Shiksha Abhiyan

The Sarva Shiksha Abhiyan seeks to provide useful and relevant elementary education to all children in the age group of 6 to 14 years by 2010. It aims



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to enable children to become familiar with their natural environment in a manner that allows the fullest growth of their innate potential. The SSA is committed to the safety of its students and employs masons trained in safety techniques to build their schools.

A standard operating procedure has been prepared which includes awareness generation, evacuation, search and rescue, first aid, and the formation of a team for site safety. Indeed, in an effort to forge partnerships among those most deeply involved with these issues, representatives from the Fire Department, Civil Defence, Police, BSES, Residents' Welfare Association, Parents-Teachers Association, Red Cross/ St John's ambulance Brigade and other NGOs participated in workshops.

### Safety Messages in the School Curriculum

A message imbibed in childhood, makes an immediate impact which remains with us all through our lives. Understanding this basic principle and in order to sensitize the young children and to develop their knowledge, aptitude

and skills for disaster management, **Central Board of Secondary Education (CBSE), GOI has introduced Disaster Management in the school curriculum of Social Sciences from Class VIII to X and in class XI in Sociology and Geography. Drawing from the positive experiences of CBSE, many state boards have also introduced the subject from class VII to IX.** This being a new subject, training, orientation and knowledge upgradation, Programs are being conducted across the country to orient the principals and teachers on this subject and for imparting skills for teaching this subject to the students. 14 State Boards have included disaster management in the school curriculum (13 in Social Science subject and one in environment science in Tamil Nadu). UNDP has facilitated NCERT in developing a chapter in Sociology for class XI which focuses on impact of disasters on environment and society. UNDP has helped IGNOU in developing course material on PG Diploma in Disaster management.

In schools for ensuring safety, school safety plans are being prepared by involving both the teachers and the students. Training modules for teachers, educators have been developed in collaboration with National Council of Education Research and Training (NCERT) to focus on the health, safety and well being of the School Children.

A large number of Teachers' training programs are being carried out to help the teachers transact the subject in the classroom effectively.

National Institute of Open Schooling (NIOS) is in the process of incorporating Disaster Management in their textbooks.

Development of Teacher's training module by CBSE with support from UNDP and UNESCO is in the process

Training modules have been developed in collaboration with National Council of Education Research and Training (NCERT) to focus on the Health, Safety and Well Being of the School Children.

UNDP has helped IGNOU in developing textbooks for its course on PG Diploma in Disaster management.

As part of the Sarva Shiksha Abhiyan a training module titled "Disaster Management- a School Manual" has been developed in Gujarat, which is used during the training Programs.



## CASE STUDY-I

### Integration of Disaster Management in the Training Programme of Sarva Shiksha Abhiyan in Jajpur District

Teachers play an important role in Disaster Management especially in awareness generation (amongst both students and community), formation of School Disaster Management Committee and preparation of school safety plans. Capacity building of the teachers in Disaster Management is a pre requisite for preparation of school safety plans across the district. It can also be realized that even the teachers are also playing a major role in preparation of the Village Disaster Management Committee though they are members of the VDMC and Counseling Teams in their respective villages. In DRM Programme there is a component of sensitization of School teachers at District & Block level but it is not sufficient to reach out to all the teachers in the district. Hence convergence is essential with the ongoing training Programs for the school teachers under various Programs of Education Departments of the district for raising the awareness on DM initiatives among the school teachers.

In Jajpur District in Orissa, the state nodal agency, OSDMA was involved in a Programme to involve teachers in building awareness and increasing the sensitization of the community, as also amongst the students of educational institutions on DRM. However, though sensitization of School teachers at District & Block level is an objective, it is difficult to reach all the teachers in the district. Hence educational training Programs of school teachers under different Programs of the Education Departments of the district can increase the awareness of DM initiatives among the school teachers.

During the year 2003-04, a training Programme for school teachers was organized at the District and block levels under the DRM Programme, in which 311 high school level teachers in the district were oriented in Disaster Management. As a result, the funds available under the DRM Component for the teachers training Programme were exhausted. Hence, it was proposed that Disaster Management would be included in UDAY-II Training Programme. Uday-II is a 7 day training Programme for teachers of classes VI & VII on the upgraded education pattern and methodology under Sarva Shiksha Abhiyan Programme and is being carried out in 19 centres of the district. The Sarva Shiksha Abhiyan Programme of the district, will thus take the DM topic to all the school teachers within a specified time limit and without any funds from the DRM Budget. It can therefore be called an effective way to sensitize school teachers and their students.



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### Mainstreaming Disaster Management into Development

The Government of India has adopted mitigation and prevention as essential components of their development strategy. The Tenth Five Year Plan document has a detailed chapter on Disaster Management. The plan emphasizes the fact that development cannot be sustainable without mitigation being built into developmental process. Each State is supposed to prepare a plan scheme for disaster mitigation in accordance with the

approach outlined in the plan. In brief, mitigation is being mainstreamed into developmental planning.

In order to mainstream disaster management into regular departmental activities, the Chief Secretary, Government of Maharashtra has included Disaster Management as a parameter in the performance appraisal of departmental Secretaries.

The Relief and Rehabilitation Department, the nodal agency for disaster management in the State, instructed the District Collectors to dovetail

One of the major concerns of Disaster Risk Management is reducing the impact of disasters and protecting the most vulnerable members of the societies which include children. Thus, Delhi prioritized schools over all the logical units identified under the Programme to initiate a School Safety Programme. Today, more than 4000 Schools have taken up sensitization Programs, prepared their plans and conducted mock drills besides training their Disaster Management Teams on basic techniques of First Aid and Search and Rescue. The Education department instructed all the schools to conduct mock drills.

disaster mitigation and preparedness activities as envisaged under the DM Act, 2005 in the annual district development plan.

Linkages with corporate sector were earlier established with the regional chapter of CII. establish a mechanism for regular interaction between administration and industry associations for dissemination of DM agenda through organization of sensitization-cum training Programs at various industrial clusters.

***The PRI functionaries are the key players and best equipped to undertake multifarious steps required before, during and in the aftermath of a disaster. The Disaster Management Act of the Central government envisages a District Disaster Management Authority in which the Chairman of the Zilla Panchayat will be the Co-Chairperson along with the District Collector. This would ensure close co-ordination between the civil administration and the local self-government. It will help to decentralize the DM Programme too.***

***The Government of Orissa plans to create Divisional Monitoring Committees for DM, headed by the Revenue Divisional Commissioner (RDC) and composed of local MLAs and MPs, and the President of the Zilla Parishad as its members. The Collector would be answerable to this committee. As per the Central DM Act, the State government is also expected to put in place a matrix for allocation of specific responsibilities among local authorities – the PRIs and the Municipalities.***

## CASE STUDY-II

### **A step ahead towards the goal: Disaster Management Institutionalized in Sikkim.**

In the state of Sikkim, the disaster management component got its due recognition in the state government and after years of dedicated work in the field of disaster management, the officials have been absorbed in the State Government as regular employees solely working in the field of disaster management.

Sikkim being a small state, when the DRM Programme was started, there were no resources, man power, absolutely nothing at all. But today, the state has set an example for others to emulate. **A dedicated Disaster Management Unit under the State Government.** Their success story as shared by them summarizes the mechanism steps they followed:

Beside the work plan activities, EOCs (Emergency Operation Centre) in the heart of Gangtok City was constructed under the funding of the Government of Sikkim.

Quick Response Teams representing East, West, North and South districts were appointed. They are trained in Search and Rescue Operation and Emergency First Aid. These teams will remain in EOCs round the clock and shall respond to any eventualities as first respondent. The salary component is being provided by Government of Sikkim.

The District Project Officers initially appointed on contract under GOI,UNDP are now absorbed in the regular establishment of Government of Sikkim.

As many as 24 field facilitators (FF) were trained, who were responsible for conducting and organizing various training Programs under PRIs



### Mainstreaming of Disaster Management in Plan Scheme, Delhi

Disaster Management has been mainstreamed into plan scheme of 2006-2007 and in the current financial year (2007-2008) to conduct activities under the head of Disaster Management. Adequate budget has been earmarked to carry out the activities under the head of Disaster Management. The funds have been largely proposed for preparedness measures such as information dissemination and awareness programs through information, Education and Communication (IEC) material, to raise the sensitivity to imminent disasters among the communities like Resident Welfare Associations (RWA), schools, medical institutions and offices etc. through street plays, training programs on search and rescue, first aid etc. Budget was also earmarked for strengthening of Emergency Operations Centers (EOC) with communication equipment that can link with different coordinating agencies and other necessary peripherals that can provide support and keep the administrative functions active in times of disasters. The EOC's are already operational in South, South West, East, North East, Central districts. Efforts are being made to operationalize other EOC's as well.

and are under disposal of Sikkim Institute of Rural Development (SIRD). Besides their routine work activities these FFs have scheduled Disaster Management in every Programme at their own and they have identified the State Project Officer and Districts Project Officer, as resource person. **Till date they have organized 34 Disaster Management Programme (24 at Block level, 7 GP level and 3 at village level).**

All institutions viz Police Training Centre, Emergency Operation in all four districts, all ULBs and Block Panchayats are fully equipped with Search & Rescue and Emergency First Aid equipments which has been procured from 10% CRF as well as from the DRM funds.

This clearly indicated the systematic approach taken in institutionalizing Disaster Management in the state and giving it a logical end.

#### CASE STUDY-III

##### Delhi Disaster Management Authority (DDMA)

Delhi Disaster Management Authority has been set up under the Chairmanship of the Hon'ble Governor of Delhi on October 9, 2004 with its Secretariat located at the Office of the Divisional Commissioner. The major objective of the DDMA is to institutionalize Disaster Management in the State with complete participation of all major Government Departments and other Stakeholders. At District level Disaster Management Committees have been constituted in the all nine

Districts under the chairmanship of Deputy Commissioners.

GoI-UNDP Disaster Risk Management Programme (DRM): Disaster Risk Management Programme is one of the major initiatives undertaken by the Authority to facilitate Disaster Preparedness, Mitigation and Response in the State. The primary objectives of the Programme are to facilitate mass awareness generation, capacity building at various levels with special emphasis on Community Based Disaster Management. A State steering Committee has been set up under the Chairmanship of the Chief Secretary to monitor implementation of the DRM Programme.

Towards ensuring sustainability, Disaster Management in Delhi has been mainstreamed into the Plan Scheme of the Government and funds have already been allocated for the purpose of Disaster Preparedness activities for the year 2006-07.

##### Delhi Earth Quake Safety Initiatives

The Government of NCT of Delhi in collaboration with Geo-Hazards International took up an innovative project of retrofitting five lifeline buildings in the Capital on a pilot project basis. These five buildings are Delhi Secretariat, Delhi Police Head Quarter, Delhi Disaster Management Authority Secretariat, Guru Teg Bahadur Hospital and Ludlow Castle School. The project includes structural and non-structural mitigation in these buildings.

*In West Bengal strong institutional mechanism up to block level is one among many meticulous lessons learnt for implementation of the Programme. The provisions of funds for disaster management and risk mitigation has always been positive, leading the road forward to a long term DRM institutionalization and sustainability*

-Subhasish Debnath (Programme Associate, West Bengal)

### **Replicable Good Practices**

Mason training programme through Tata Tiscon partnership is one of the successful initiatives taken under the GoI-UNDP DRM Programme.

The Sarva Shiksha Abhiyaan is another step towards integrating the DRM in to the development initiatives. The CBSE has introduced Disaster Management in the school curriculum of social sciences.

The Teachers' training Programs that oriented the teachers in various aspects of the Disaster Management and helped them to transact the subject in the classroom effectively.

Inclusion of Disaster Management as a parameter in the performance appraisal of departmental Secretaries to ensure mainstreaming disaster management into regular development initiatives by the state government is successful initiative towards sustainability.



# Chapter-IV

# Involvement of Community: a step towards Sustainability

*Of the people, by the people, for the people!*

*Volunteers play a crucial role in the period immediately after a crisis or disaster in reconstruction and bringing societies together.*

**Ad Melkert**, UNDP Associate Administrator





## Introduction

The strong community-based approach, supported by institutionalization of disaster risk management in policy framework is the very foundation for the programme sustainability. With trained human resources made available at village level, at the State and District levels and the entire DM planning process linked to development plans, UNDP Programme implementation support could gradually be withdrawn from all programme districts. Mainstreaming risk management and vulnerability reduction activities in the development plans and enhancing capacities of the Government functionaries ensure that the achievements of the programme are sustained, even after the programme duration is over.

### SOME SUCCESSFUL INITIATIVES

#### Citizen Leaders ensure sustainability, Sitapur District, Uttar Pradesh

To ensure the sustainability of its Programs, the DRM Programme proposed interventions aimed at developing the capacities of institutions and individuals so that they can play a lead role beyond the Programme. In Sitapur district, Uttar Pradesh, a promising initiative has prepared a large team of responsible women and men as Citizen Leaders. These Citizen Leaders are playing a direct role in increasing local resilience and addressing the root causes of vulnerability. Since most of these Citizen Leaders are women, their unique role in effectively mobilizing the whole community is worth highlighting.

#### National Youth Schemes

India has the largest youth population in the world which constitutes a vibrant and dynamic segment of the country's population and is potentially the most valuable human resource. In view of the large strength and countrywide presence of the youth volunteers of the NSS and NYKS schemes and to tap the constructive and creative energies of the youth, interaction was initiated with the Ministry of Youth Affairs and Sports, Govt. of India pursues the twin objectives of developing the personality



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of youth and involving them in various nation-building activities.

National Service Scheme launched in the Mahatma Gandhi Birth Centenary year 1969, as a student youth service Programme, aims at arousing social consciousness of the youth with an overall objective of personality development of the students through community service. The scheme covers all the states and union territories, 174 universities, 7500 colleges and institutions of higher learning, 16 senior secondary council and 2000 senior secondary schools. One NSS unit consists of 100 student volunteers led by a teacher Incharge called "NSS Programme Officer".

Importance of sensitization and awareness generation among the communities to their

vulnerabilities and the need to manage them has been felt at the highest levels in Government. With the help of volunteers to sensitize and reach out to communities in rural as well as urban areas, the Ministry aims to make Disaster Management a part of the everyday life of a common man.

Over the years, the NSS, NCC, NYKS, and even Bharat Scouts and Guides Programs have been influencing the young minds to extend a helping hand towards addressing social problems in the country, and have been motivating them to tackle development issues in India. The Ministry of Youth Affairs has been spearheading these national movements that have had many successes in various spheres of development including response to natural disasters, especially in the recent major disasters, Orissa super cyclone and Gujarat earthquake.

NYKS/NSS volunteers have traditionally been in the forefront of assisting the civil administration in times of national crisis – be it natural disaster or civil strife. The organization has been active in relief management and distribution. These trained volunteers are also facilitating the process of building disaster-resilient communities by focusing on disaster mitigation preparedness and response related Programs.

In the area of Disaster Management the primary activities of these organizations is to focus upon, in accordance with their presence and strength on facilitating community based disaster preparedness planning process as part of their community work, generating awareness among the common people about the mitigation and preparedness measures, undertaking school/college level disaster awareness and safety Programs especially in the case of NSS since they involve young student volunteers and developing the capacity of the youth in their capacity in first aid and search and rescue so as to enable them to assist the civil administration in times of emergencies.

The Programme envisages an important role for the youth volunteers in facilitating community plans to cope with disasters, identifying members of task forces and training them in different aspects of disaster management. These youth volunteers are

trained in facilitating development of community-based disaster management plans, awareness generation activities and in implementation of school/college awareness and safety plans. Amongst the success stories under this Programme are several initiatives in the states of Assam and Orissa.

Ministry of Home Affairs is providing support (both technical in terms of expert trainers under the DRM Programme and financial) for the training and capacity building of the officers and volunteers. Regular interaction is being done to upscale the activities.



### **Youth Volunteers' network to institutionalize disaster preparedness**

One of the key elements of Disaster Risk Management (DRM) Programme is to establish and sustain partnership linkages with important stakeholders. One such partnership with Nehru Yuva Kendra Sangathan highlights the potential of partnering with a youth volunteers' network in institutionalizing the DRM Programme. Women



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volunteers from NYKS are striving to enhance the participation of women by supporting the district administration. Their efforts have succeeded in generating interest among women and persuaded them to come forward and contribute to building the disaster preparedness of their community.

#### **Civil Defence, Nehru Yuva Kendra Sanghatan (NYKS) Volunteers and Anganwadi workers**

30 volunteers from Civil Defence and NYKS were trained in Delhi in March on Community Based Disaster Management Planning to facilitate the process of Disaster Management Plan Document Preparation, including an evacuation plan, along with Resident Welfare Association and Market Trade Associations in the South District. 500 Anganwadi workers were trained in Search & Rescue and First Aid as part of the preparedness measures.

### **CASE STUDY-I**

Vigilance, Courage and Efficiency of Volunteers of Disaster Management Team saved the life of six school children In 2007, during the incessant and relentless heavy rainfall in the monsoon season, a master trainer of the disaster management team, Mithilesh Kumar Nishad, resident of Nevari Gara Kulrat village, received a phone call from the control room of the disaster management office, Gonda instructing him to go to the flood affected village Sillo situated about 1.5 kilometers away, to participate in the rescue and relief operations being carried out there and to keep the control room posted about the current position of the operation. The heavy rainfall had submerged all the agricultural fields of Sillo and the main road was filled with nearly three feet under high water. Mithilesh Kumar Nishad continuously informed the control room at the district level about the progress made by the disaster management team in providing relief to the flood affected people.

One day when he was on his way to the Sillo village, he stopped for tea at the tiny tea stall between the high school and primary school near the Akari village. It was raining heavily at that time, and the entire area was filled with water. While sipping tea Mithilesh Kumar casually watched six children who were studying in the primary school, going to the school wading through the water. Suddenly one boy fell into a big hole on the side of the road which was not visible because of the water which had filled the road, and started drowning. Immediately the other children accompanying

the boy started shouting “burat ba, burat ba” (he is sinking). On hearing this Mithilesh Kumar put down his cup of tea, jumped into the hole and rescued the boy. By that time many other people had gathered at the tea stall. They all praised Mithilesh Kumar for acting so fearlessly.

Mithilesh Kumar’s bravery and courage granted a new lease of life to a five year old boy. When he informed the control room about the incident the SDM and Tehsildar made arrangements for boats which would make it easier for people to move till the flood water receded.

As a result of the vigilance, courage, location and skills developed among volunteers by the DRM initiative the life of the child was saved. Coordination with government officials and proper communication network appears quite visible out of the event.

#### **Building Safe Shelters**

Having gained a lot of relevant experience in the massive reconstruction effort after the 1993 earthquake in Latur, Maharashtra, Mir Sajjad Hussain, a civil engineer, has been overseeing the construction of schools, public health centers and whole townships in Gujrat.

When district officials in Bhuj were urgently seeking the services of engineers who had any expertise in reconstructing earthquake devastated regions Mr. Hussain joined the team of 30 National UN Volunteer engineers coming in from the Latur region to help. When most of his colleagues went back, he stayed on making sure that buildings could resist further earthquakes. He has observed that awareness raising among the local population is even more important than secure constructions. “Community involvement is a must for any post-disaster rehabilitation to succeed,” he says.

## CASE STUDY-II

### Resilient Community Volunteers instrumental in Bihar flood response

*The strength of disaster mitigation and management depends on the level of community involvement. UNDP's Disaster Risk Management (DRM) project has been able to mobilize volunteers through the initiative. This sense of civic engagement has proven an asset during the recent floods in Bihar.*

No one would ever guess that Kiran Devi, a frail and shy woman, can display strength and resilience when facing a disaster. But the 35 year old homemaker with two children was one of the community volunteers that made a difference during the Bihar floods.

"People poured into Duwania Chowk (Supaul district, Bihar) in hundreds and thousands. I think I would have made food for at least 2000 people whose homes and lives were washed away by the flood. Families just sat crowded in front of my house and they kept coming, even in the night. Together with my neighbours, we made food for them. You couldn't but want to do something when you saw their devastated expressions", says Kiran. She becomes animated as she remembers the days when the Kosi River came roaring into their lives. However, the dreaded Kosi did not stop her from wading through 4 feet of water and also carrying food for people in camps about 3 kilometres away from her home.

Kiran has also undergone first aid training as part of UNDP's disaster risk management (DRM) project in the latter half of 2007. Master trainers who were trained in the state capital Patna were deployed to train volunteers at the community level. In Supaul, training sessions in first aid, search and rescue and other disaster management techniques were concentrated in Pratapganj, Basantpur and Raghobpur blocks (each block is a group of villages). Kiran was trained in Pratapganj. She says, "I was able to help several people because of my first aid training. I tended to the injured."

She has a daughter and son, who are in high school. When asked if she has taught them how to administer first aid, she laughs saying "not yet; I think it should be introduced in the school syllabus."

There is a tone of disappointment in her voice when she says that it would have been nice to get some recognition from the local government for her work during the floods. But she is most pleased because the people who she helped have not forgotten her, "A lot of people have returned to their villages. And whenever they pass by this town they make sure to visit me. We have a cup of tea and talk for a while. That gratitude makes me feel good."

It is volunteers like Kiran who can make disaster management more effective. In Bihar's Supaul district alone, there are 150 such volunteers who had put their lives on the line to save others.

### Replicable Good Practices

A team of committed volunteers that model citizenship in the community is a critical resource that also provides sustained follow-up to the Programme activities.

Young people coming forward on their own accord leads to long term community ownership and sustainability. The potential of these Citizen Leaders may be utilized for a broad range of social development initiatives.

Thus under DRM Programme, community preparedness implies that both men and women design a community action plan or to get the support of stakeholders -officials or leaders or neighborhoods. Such a plan of action worked successfully since the core question, i.e., "participation by whom, for whose benefit and on what agenda", was tried to be answered with gender sensitive strategies.

Coordination with other popular non-governmental organizations working in close association with the local communities can be used as an effective stepping-stone to establish an element of credibility of the Programme in the minds of the men and women.



# Chapter-V

# Gender Mainstreaming

*Empowering Women!*

Gender equality is more than a goal in itself. It is precondition for meeting the challenge of reducing poverty, promoting sustainable development and building good governance.

**Kofi Annan**, Former UN Secretary General (1997-2006)





**W**omen act as a major change agents in any awareness Programme. The main objective of the Disaster Risk Management (DRM) Programme is sustainable reduction in disaster risk. One of the critical indicators of disaster risk reduction is gender equity in disaster preparedness. Thus, in this programme a strong emphasis has been laid on representation of women in disaster management committees and teams to ensure their increased and sustained involvement during different stages of disaster resulting in gender equitable community preparedness.

Attention has been given towards much greater equality, particularly, in the context of disasters and inclusive and sustainable development. Based on the lessons learnt so far, particularly from the experiences of developing countries, there is a clear indication that disasters expose the existing inequities and imbalances in a society-economic, social or gender inequities. They have a differential impact for both men and women (It is also seen that worldwide those living in poverty are more vulnerable to disaster impacts, out of which 70% are women) In India, the horrifying memories of Tsunami are still fresh where it is estimated that 75% affected persons were women and children.

The impact of disaster has also been seen on women's economic and social burdens. It has increased their vulnerability to violence and exploitation in disproportionate ways. And yet they carry on with the caring tasks they are principally responsible for and which are central to the re-establishment of social cohesion. It was therefore, an imperative for UNDP that the occurrence of disasters is seen in the context of gendered social systems, and addressed through gender sensitive disaster risk management programs.

To address the gender gap, Training of Trainers manual was also developed and extensive gender consultations were held on Gender Mainstreaming in Disaster Risk Management in various regions of the country. Under the disaster risk management Programme in thousands of villages across India, a growing number of ordinary people are learning to deal with disasters better and recover from them faster. This growing force includes many illiterate women trained to protect themselves and other during floods, earthquakes, rural fires and tsunami.

In all the 17 states, women have shown remarkable enthusiasm during the first aid trainings and search and rescue drills. An experience from the gender component of DRM has seen emerging one effective strategy which is to involve and organize village groups and women SHGs can be a good route. This ensures substantial gender participation and offers an already organized set-up. Socio-cultural imperatives also ensures that involvement of the woman in a public activity more times than not, ensures the involvement of the household's men, sooner rather than later. Secondly, the CCF, be it a grain bank or a cash contribution to maintain the village emergency shelter, is seen to be serving as a rallying point. They ensure regular village meetings and sustained commitment and ownership of DRM activities in normal times as well as during calamities. However, success could depend on existing or creating strong leaderships including women.

## Gender Equity In Disaster Risk Management Programme

The prime objective of GOI- UNDP Disaster Risk Management Programme is risk mitigation and preparedness for early response. This is a Programme with focus on community preparedness and building resilience of the vulnerable groups. The Programme envisages strengthening the decentralization processes (strengthening of the capacities of the states and local self Governments) and promoting gender equality, which are the two UNDAF (United National Development Assistance Framework) objectives.

Thus Gender Equity in disaster preparedness is a clearly stated goal for Disaster Risk Management programme (DRM) in India. Two Programme components that vividly highlight gender equity in community preparedness are – a) Constitution of Disaster Management Teams and Disaster Management Committees with adequate representation of women at all levels. b) Capacity development of Disaster Management Committees and Teams with special focus on training for women in first aid, shelter management and search and rescue.

Women are involved in all preparedness activities from the formation of teams up to mock drill across all the Programme states. The following analysis presents how women are involved in disaster preparedness and mitigation through out the Programme cycle.

### Formation of DMT and DMCs

The Programme guidelines emphasize that among Disaster Management Committees and Disaster Management Teams that were formed at different levels from District to village, representation of at least 30% women is mandatory. It is observed that across the country level of women's participation in teams and committees is varying from 10-30%.

Gender action plans are being implemented to have increased /equal number of women, so Programme is witnessing a progressive change. We need to keep in mind here, that women's participation is a gradual social process inter-linked to social conditions and structural relations in a patriarchic society.

### Sensitisation and Orientation of members

Members of Disaster Management Teams ( DMT ) & Disaster Management Committees ( DMC ) are sensitized about the need for community preparedness in disaster management. The sensitization and orientation is done through community consultations, trainings, focused group discussions and participatory mapping exercises. In these Programs women's participation is encouraged through gender sensitive planning and design of events and preparing extensive IEC campaigns to communicate to both men and women equally.

It is noticed that women's participation is relatively high in states of Assam, Gujarat, Meghalaya, Tamil Nadu, Tripura and Uttaranchal. Moderate levels of



Women involved in resource mapping



Men and women of DMC & DMT during a sensitization workshop



participation are reported from Orissa, Maharashtra, Delhi, Arunachal Pradesh, Sikkim and Manipur and women's participation is not very encouraging in Bihar and Uttar Pradesh. Special gender initiatives are being executed to ensure gender equity in the Programme. The following case study presents the experience of a women DMT member about being prepared for disaster.

**Plan Preparation:** As a preparatory exercise, a volunteers training is conducted in each block on preparation of DM Plan. Volunteers are imparted the detail procedure of Village DM Plan preparation including a demonstration in the nearby village. Standard plan templates are the guidelines broadly based on which community plans are made at all levels. These templates incorporate gender concerns and collect gender disaggregated data. This ensures gender equity in plans that result in better community preparedness.

**Skill training-** Special emphasis is laid in the Programme to involve more women in all skill trainings that enhance their capacities to meet risks during a disaster. So we see ever increasing

women's participation in Search and Rescue(S&R), First Aid (FA) and Psychological First Aid (Trauma Counseling), Shelter Management ,Health and Sanitation trainings. Women Self help Groups (SHGs), Anganwadi workers and women volunteers are playing a lead role in disaster management preparedness.

**Replicability:** Gender equity is never a complete process rather evolving and context specific. Disaster risk management Programme understands and operates with this perspective. These strategies are replicable as DRM Programme involves women from initial stages of making women equal members of committees and teams and making them equal partners in community need assessment, plan preparation and disaster management skill

Under this Programme, **women construction workers** were trained in low cost disaster resistant safer construction technologies. The participants shared their views on overall training programme. The participants were planning to share knowledge with the family and realized that learning will be helpful in practical manner.

A resource pool of **master trainers** from the government agencies/ line departments is created to facilitate capacity

development of stake holders in Disaster Risk Management. These master trainers impart training in various platforms with great community out reach. They also simultaneously support in mobilizing women's increased participation through sensitization of administration, PRIs and Self – Help Group networks.



Women's participation in First Aid and Search and Rescue Trainings

## CASE STUDY-I (FROM GUJRAT)

Jashpar village, 45 kilometers away from Limbadi, the Block headquarter in Surendranagar district is one of the least developed villages without the basic facilities such as all season roads, basic telephony, drinking water and adequate alternative livelihood for people. During the monsoon, the lone approach road to the village gets cut off and people often use the railway track which is slightly on a higher ground to approach the village. In case, the rail track gets flooded, Jashpar becomes unapproachable. It has already experienced such a worst scenario during 2005 and 2006 flood.

Vasantben P.Dharajiya of Jashpar village in Surendranagar district is member of first aid DMT. She is a physically challenged and surviving with a ten year old daughter alone after being divorced. She has to run the home and fulfill the responsibility of both the parents towards her only daughter.

But she accepts these challenges with grace and living a life with dignity. She believes that it is social taboos and customs weighing heavily against women of her village that are responsible for the less participation of women in development. Being a proactive woman member from Jashpar, she comes forward to take part in the formal Gram Sabha at the village Panchayat. Elaborating upon some of her past experiences at meetings, she quipped, "if she suggests any thing or put across an opinion, male leaders would retort that "TAMNE TO VATO KARVI CHE KAM KARO TO KHABAR PADE" (you just know how to talk; you would realize how difficult it is to get things done.)

She has received First aid training under the community capacity building initiative under DRM Programme. When the

constitution of other DMT's was taking place at Jashpur during the Gram Sabha, as per her commitment, she had mobilized around 35 women SHG members and Anganvadi workers at the Gram Sabha held during March 2007. Due to her effort, these women too took active part during the deliberations at Gram Sabha and discussed various issues pertaining to women and their concerns particularly during and post-flood scenario. She also articulated the need among the fellow members to enlist their names in S & R and water and sanitation and relief distribution teams.

With the acquired skills, she has turned into a good helping hand to the local PHC health worker. Presently, Vasantben is being given a stock of basic first aid medicines by the local PHC health worker which she uses for treating community members, women and children in case of an accident.

When asked, how she is going to utilize the first aid skills and motivate other community women of the village on disaster preparedness and response, she told, there is an urgent need to change the mindset of male members of our society and for that we need more forward looking and courageous women to come forward and take the lead. She is quite positive about her effort. She was sure, in due course; she would be able to help the community women, through her Mahila Mandal and would ensure that they have a say in the village affairs. She was also confident that with the help of her group she would educate and train fellow village women on understanding their special needs and making them realize about their potential to contribute to general awareness and preparedness of the village community.

## CASE STUDY-II

### Promoting Gender Equity in Search & Rescue Training

Vagda cluster in Palanpur Block of Banaskantha district comprises of 6 villages Lalavada, Jabalpur, Vagda, Fatepur, Kharodiya, Sadarpur, Karjodiya and Sangra. The cluster is prone to accidents as it is close to National Highway. A search & rescue training was organised for the village DMT members of these villages at Vagda on 12th May 07.

Considering the earlier experience of low participation of women in S & R training, a different mobilization strategy was worked out. Out of 39 total participants, only 8 women were DMT members. Looking at the less number of women members in the DMT, District Project Officer, Mr. Mukesh Chavda thought of contacting the local CBO-Seva Nidhi Foundation. After an interaction, Mr. Rameshbhai, the CBO representative suggested to contact Mrs. Bhavnaben Prajapati who runs a tailoring class at Vagda village. Women from surrounding villages learn tailoring under her mentoring. Mr. Chavda met Bhavnaben and explained her the utility of learning simple life saving skills by women and told her about the kind of role women could play in case of an small incident either at home or in the livelihood or in case of natural disaster. Impressed by the briefing, Bhavnaben asked all her friends to attend the training Programme. Result was- out of total 66 participants, 39 women volunteers took part in the training.

Mr. Chavda, prior to visiting the village had made official communication to Talati (village Patwari) and Sarpanch, Village Disaster Management Committee Chairman and Secretary. Even adequate advocacy was made for equitable participation of women in capacity building Programs at the village level.

**Participation:** Training was started with a general introduction followed by gender sensitization of participants. Women members themselves practiced different types of tying rescue knots, preparing stretcher out of bamboo and a piece of cloth for shifting an injured and bandaging and so on. More probing questions came from the women participants.

#### Lessons Learnt:

Women participation would be less in a Search & Rescue training is a mindset of the practitioner. If we would try to articulate the need of greater participation of women in this crucial sector specific training we could elicit greater participation.

Role of local NGO and CBO and the women leaders here was vital for mobilizing the women volunteers.

Advocacy on need of involving more women and appreciating their role at the community level helped in containing the initial resistance and breaking the gender stereotype i.e., search and rescue is the job of male members.



## SOME SUCCESSFUL INITIATIVES

### **Women Leaders addressing Differential Needs, Bhadrak Distt, Orissa**

In Bhadrak district of Orissa, promoting women leaders under the Disaster Risk Management (DRM) Programme has paved the way for greater inclusion of women at the village level. Women leaders have emerged as role models for village women and the larger community. The community can now visualize women in new roles, surpassing the traditional gender divide between men and women and bring them to a common platform that enables them to participate in decision making.

### **Women Volunteers shaping a gender equal tomorrow, Puri Distt, Orissa**

The DRM Programme in Puri District of Orissa has engaged young women as master trainers to impart training on first aid techniques and other requisite skills. The devastating super-cyclone that hit Orissa in 1999, led to a surge in community response and participation in development interventions. In their attempt to involve women, the DRM Programme functionaries decided to engage young women as master trainers. These master trainers would further facilitate in preparing the communities in building a gender responsive community disaster risk reduction plan.

### **Self help groups linking disaster management to development, Latur District, Maharashtra**

Latur District in Maharashtra is a region that is no stronger to disaster. Although the people of Killari (a village in Latur), welcomed the Disaster Risk Management (DRM) Programme, a low response from women was experienced especially in the

rural areas, as they are more reticent in participating in public. In order to address this challenge, an initiative to train Self Help Groups (SHGs) was undertaken. This initiative has successfully ensured increased participation of women in orientation meetings, participatory activities and trainings.

### **Accredited Social Health Activists as role models, Nagaon District Assam**

Assam is prone to natural disasters like earthquakes, floods, landslides, cyclones and occasionally even droughts. The Disaster Risk Management Programme was launched to reduce the vulnerability of the communities to natural disasters in this multi-hazard disaster prone area. In Naogaon district, the Programme was launched in 2004 with the help of "Accredited Social Health Activists" (ASHA workers) who are a link between the public health centres and the villagers. They are drawn from the community where they serve and are therefore conscious of the needs and available resources. It is these women who have dared to step out of their houses to take up community responsibilities and act as powerful change-agents to influence women in the village.

ASHA workers became members of the Disaster Management Teams (DMTs) and inspired other women to join in the DMTs as well. ASHA workers also facilitated first aid and search and rescue training for large number of people. The DRM trainings especially search and rescue trainings have enhanced their confidence and they feel that they are capable of handling any situation during a calamity.

### **Women Volunteers as essential change agents**

In Mayurbhanj district, women's role in development initiatives has traditionally been restricted to the so called "women related activities" because of gender bias and resistance by the community to accept women as change agents. In this background, the DRM Program's interventions promoted and encouraged women volunteers to spearhead community preparedness for hazards/disasters. The Programme initiatives in the community not only involved these women as the entry points for reaching out to the other women in the villages, but also mainstreamed their efforts and participation.

*"Say a doctor has not visited a mega camp in a few days. In 24 hours a doctor will be deputed to that mega camp from somewhere in the district. Our response time was very quick."*

The ASHA workers were aware of the available formal mechanisms and played the lead role in these women's groups and ensured that their needs were addressed. The groups have come together to form a gender advocacy and a network for social action that works to meet the most pressing needs of the community. This networking has brought to the fore their common needs, concerns and the views of the community.

### **Aanganwadi supervisors as an all-women first aid team, Kolhapur District, Maharashtra**

Aanganwadi supervisors have a considerable role in the development activities of local communities by virtue of their profession, as they coordinate and guide aanganwadi workers of different villages/habitations. Their association with any Programme lends to it an element of credibility in the eyes of the local people, especially the women. Realizing this, the District Project Officer of Kolhapur district collaborated with the integrated Child Development Scheme (ICDS) to form all-women first aid team with aanganwadi supervisors. The result of this was that fifty aanganwadi supervisors were selected from across the twelve talukas of the district, for specialized training in first aid at Kolhapur city.

Involving women has had a very positive influence on the participation of other women in this Programme at the taluka and village levels. The fact that the aanganwadi women have taken lead in training on first aid also inspires community women to be more than mere observers or passive supporters due to the comfort level by women functionary /trainer.

### **Gender and Disaster Management, Delhi.**

It has been noted from the experiences of various disasters in the past that men and women were affected by disasters differently and most of the deaths were of women, children and aged persons during disasters. While access to resources, gendered division of labour, women's primary responsibility towards domestic responsibilities make women more vulnerable to disasters, inadequate facilities, lack of control over domestic economic resources, inadequate availability of nutritious food especially for nursing and pregnant

mothers etc., make women vulnerable in a post disaster situation. Recognizing the fact that men and women need to be responded to and prepared differently due to their varying needs, in a post disaster situation, the Disaster Risk Management Programme aims at integrating a gender sensitive environment cutting across all its initiatives. Special emphasis has been given on training women volunteers in search and rescue, first-aid, fire fighting etc., which will help not only prepare the women community members, but also help children and the aged in crisis situation. Special attention is being paid to train women volunteers in all the districts especially women community members, teachers, aanganwadi workers, etc. these volunteers will go into the community to spread awareness and train women community members on the do's and do not's in case of a disaster.

### **Replicable Good Practices**

Women volunteers are a strong influence among the women in the community. This potential could be harnessed to rope them into long-term community initiatives, thus mainstreaming their presence and contribution.

It is necessary to sensitize the larger community about the wider role that women can play and the responsibilities that they can discharge in time of a crisis.

The perceptions of society regarding the traditional notions on women's abilities need to be changed. Taking the help of the aanganwadi women is an extremely beneficial practice, as they share a close bond with the local women and are in a good position to encourage them to participate.

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"It is the long-term disaster management preparedness that helped us handle this emergency crisis situation."

**Rabi Ranjan Pandey, UNV volunteer, Saharsa (Bihar)**

# Chapter-VI

# Convergence and Partnerships

*United we stand!*

The global work of the United Nations is not without reason compared to that of a family - striving for a common goal in concert with all members for a better future.

***Kofi Annan***







Involvement of the elected representatives have proved to be a motivating factor for any type of development in the communities, but lack of political will remains one of the major hurdles in the DRM activities in the State. It is observed that involvement of the PRIs and MLAs could partly address some of the bottlenecks and on-going activities under the Programme and yield better results. Questioning on progresses in the disaster management front during Assembly sessions by MLAs could also go a long way in getting various government departments to think of DRM and include DRM in their plan and expenditure. A total of 87 Members of the State Legislative Assembly have been sensitized, another 81 participated in the awareness generation Programme organized in the State Assembly hall while 6 members were taken on an exposure field trip to Keutunga village in Gop block of Puri district. The DRM concept and community based strategies of course place PRIs at center-stage. In some cases also the Sarpanchs do take lead role in preparation and implementation of DM plan using their Gram Panchayat funds. But their numbers are not encouraging.

Active participation by Panchayat Raj Institutions PRIs members as “Stakeholders in the DRM Programme, particularly the PRI functionaries seem to require constant prodding”, observes Dr. Arvind Padhee, District Collector, Jajpur. Dr Pramod Meherda, District Collector of Rayagada could not agree more, “PRIs are the key players. They not only need to be sensitized much more, they need to be given a financial responsibility. Without funds at their disposal they may not be inclined to commit themselves too much”.

For bringing NGOs into the government loop under the Programme, NGOs are largely instrumental in activating and motivating the community and the CBOs. As such, the NGOs are an indispensable part of disaster management – they can push the Programme ahead or let it languish. In Kendrapada district, NGOs working for disaster management have formed a conglomerate, which equips them to deliver more effectively.

NGOs such as Netajee Social Organization (NSO) a member of the Kendrapada NGO conglomerate, on receiving flood warnings as Mahanadi River crossed its danger levels, organized its DRM village level volunteers and organization members. They were again oriented on possible emergency operations. NSO volunteers continuously made rounds in the vulnerable flood zones exhorting

people to move to safer places, to stock up on dry food, firewood and drinking water. The volunteers remained the communication conduit between the block administration, the district control room and the marooned people. Besides distributing cooked food to people and fodder for cattle stranded on the National Highway, they helped Orissa Disaster Rapid Action Force (ODRAF - a technical unit set up under the Orissa State Police for meeting disaster related emergencies like removing roadblocks, constructing temporary bridges etc) rescue four men and three goats.

During the recent floods, NGO groups however alleged that the administration initially refused to share a working relationship of trust and transparency with them.

This barrier between administration and NGOs is not new. However slowly, the barrier is seen lifting

thanks to the DRM Programme. The Jajpur District Collector meets NGOs working under the DRM Programme every fortnight to review activities. Being part of the loop works as an incentive for NGOs to perform well.

Such positive partnerships are seen to contribute to overall success of the DRM Programme everywhere. In Rayagada again, when non-governmental agencies like LEpra and CARE impart training to their volunteers, DRM teams are invited to learn of leprosy and nutrition and ORS and the agencies' volunteers in turn are sensitized in first aid during disaster management. Such cross capacity building would be of great benefit during emergencies.

### SOME SUCCESSFUL INITIATIVES

#### **The Confederation of Indian Industry and the National Disaster Management Framework**

Working in tandem with the Framework developed by the Ministry of Home Affairs envisioning strengthening and development of capacities at all levels for holistic disaster risk management and sustainable development, the Confederation of Indian Industry (CII) has up scaled the scope of its association with the national disaster management agenda and has emerged as the flag-bearer of initiatives for integrating the same into the functioning of the corporate sector. Extending its support in the area of disaster management since 1999 especially in disaster response, rehabilitation and reconstruction, CII has partnered with the Government initiatives and development organizations like the United Nations Development Programme (UNDP) for effective implementation of disaster risk reduction activities and has been regularly organizing summits and symposiums to promote the same. The "Public-

Networking with district level departments like Education (MTs of Sarva Siksha Abhiyan), Universities for developing ULBs micro plans, Health Department for first aid training has been established. Youth and PRDs. CBOs like YMDs and MMDs, representatives of panchayats at all level, local NGOs and district and block level govt. Schemes like IFAD project, Watershed Management Sampurna Rojgar Guarantee Yojana etc. was made during the period from January –March, 2006 in Tehri Garhwal, Uttar Pradesh.

Private-People (PPP) Partnership for Natural Disaster Risk Management" is the off-shoot of these initiatives. In order to vest its initiatives vis-à-vis disaster management for corporate sector and the community a greater depth and substance and in consultation with the Ministry of Home Affairs, the CII has delineated a sustained Programme of action to deepen and strengthen its work addressing the entire socio-economic sector. It is intended to minimize the impact of natural and man-made disasters and to preclude disruption of economic activity impeding achievement of national developmental goals. The joint work plan evolved with the Ministry of Home Affairs primarily entails association of CII in the entire gamut of issues connected with integrating disaster management concerns in the developmental efforts of the private sector.

#### **Promoting Safe construction through Institutional and Corporate Partnership:**

The GoI-UNDP Disaster Risk Management Programme is implemented in 17 most multi-hazard prone states and 38 earthquake vulnerable states across the country. The Programme adopts a multi-stakeholder approach keeping the community at the centre stage. Recognizing the importance of integrating the corporate sector and their nodal organizations in disaster prevention, mitigation and preparedness agenda, the National Disaster Management Framework drawn up by the Ministry of Home Affairs, Government of India envisages " involvement of corporate sector in awareness generation and disaster preparedness and mitigation planning" through sensitization, training and co-opting of the corporate sector and their nodal bodies in planning process and response mechanisms UEVRP Ahmedabad in collaboration with the L D college of Engineering has undertaken the

NSS unit in Tripura is playing a lead role in establishing networks between GOs and NGOs, by involving cultural groups, local NGOs in preparing different awareness strategies for easy inception in educational institutions and communities. SIPARD (State Institute of Public Administration and Rural Development) in Tripura has included a half-day session on Disaster Management during PRI trainings.

construction of Earthquake Resistant Construction Unit. Being the state's resource Institute, it has permanent set up of Earthquake Engineering Laboratory in the premises of Applied Mechanics Department. Under the UEVR Project, a permanent Demonstration Unit (10"-10" ft.) would be set up which would have all visible earthquake resistant parameters that can be visited by construction professionals/ Govt. Engineers/ Engineering students/construction workers/masons. On display would be all the IEC posters and booklets pertaining to earthquake resistant construction technology.

**The unit would be one of the best examples of institutional and corporate partnership. L & T and L.D Engineering College, Ahmedabad being the partners.**

**Anganwadi & ASHA workers equipped as community's managers**

After a whole month of havoc, when the waters of the 2003 floods finally receded after affecting 29 lakh people, diarrhoea, fever and fungal skin infections continued to plague many; a number of people had died of snakebite. Had medical resources been at hand, much of this could have been contained. With this lesson in mind, Khordha district administration has taken an initiative to equip first-aid and home nursing skills to the Anganwadi workers.

In Gujarat, under the aegis of Gujarat Social Forum (GSF), a 10 day long event was organised in Ahmedabad in March 2006. NGOs and CBOs working on multi-sectoral and cross-cutting issues across the state came together to discuss, deliberate and share their experiences on a common platform. This event featured seminars, workshops, plenary sessions, exhibitions, displays, cultural events etc. Lakhs of people from different cross sections of society visited the exhibition.

Of the targeted 1000 AWWs, 220 had already been trained (evaluated and certified) prior to the 2006 floods in the flood prone blocks of Balianta, Balipatna, Khordha and Banpur, were able to provide on the spot basic emergency health services during the calamity.

The AWW trainings are an example of admirable multi-partnership - while civil defence organizations and St John Ambulance provide the technical training and District Red Cross Society meets the trainers' cost and gives the certificate, Sarva Shiksha Abhiyan bears the training Programme cost. Each of these organizations and government departments already has a DRM

component incorporated into their larger work plan.

Another effective strategy that emerges from the Gaukhana case study and has been implemented in Jajpur district as well is the desirability of involving more AWWs in DRM activities beyond medical and first aid. They can play effective leadership roles as they already have a well-respected status (in their position as AWWs) within the community. They are conversant and in touch with all families and are more knowledgeable than most, while their contact with the government system is also already established.

In Jajpur district, AWW are even intensely integrated into the DRM activities. On the District Collector's orders, 432 AWWs of four blocks have been orientated in preparing and upgrading Village Disaster Management Plans (VDMP). In Korei block, after undergoing capacity building training as master trainers in psycho-social first-aid (a capacity well discharged by women), AWWs are

now imparting training to volunteers or counselors of Santwana Dal or 'consolation teams' (the immediate need for trauma counseling for long term recovery of victims after major disasters was acutely felt after the 1999 super cyclone. For those who had lost family members a strong sense of hopelessness and lethargy hindered their resumption of

normalcy. The American Red Cross who specialize in disaster mental health has imparted the training under the DRM Programme at present)

Pramila Mahapatra and Basanti Mahapatra are two such trained first aid volunteers from Gundilo



village of Patapur gram panchayat in Dharmasala block of Jajpur district. Pramila says the 15 young women (each of them having passed Higher Secondary), who were trained gave yeoman service during the recent floods. She demonstrates how to tie the blood block for snakebite. The volunteers generated awareness among the community about using clean drinking water sources, distributed ORS and other medicines supplied by a local NGO.

### **CASE STUDY OF MASON TRAINING WORKSHOP IN VIJAYAWADA ORGANIZED UNDER THE UEVRP**

#### **Introduction**

Under the Urban Earthquake Vulnerability Reduction Project, UEVRP, Vijayawada Municipal Corporation had organized a Mason Training workshop during the month of April 2008. The workshop was co sponsored by the Tata Tiscon as per the MOU they signed with MHA and UNDP to support the mason training workshops in the DRM states where the project is implemented.

#### **Selection of Site and Resource Person for the Training**

The Engineering Department of Corporation and the Commissioner felt that training can be given to the Masons who are involved in the ongoing housing projects under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM), a GOI project which is also taken up in Vijayawada City. It was decided to have the training Programme in the Payakayapuram Housing site where nearly 350 houses are under construction.

Selection of the resource person was discussed and it was felt that instead of hiring an academic person



from the local Engineering college, a person who is involved in the training of Masons in a practical manner will be ideal for this Programme.

#### **Selection of Participants**

The participants were selected from the ongoing housing projects in the city under the JNNURM housing projects. It was felt that it is not sensible to impart training to masons alone, but to involve a few Rod benders and supervisory level staff (Diploma Engineers) from the sites also to be given proper training so that they can take up this in their future projects also. Tata Tiscon, a co sponsor for this training Programme was also consulted and they agreed to provide few masons and rod benders from the other locations of the city. It was finally decided to conduct a 10 days training Programme comprising of two batches of the masons, rod benders and supervisor (50 per batch).



#### **Funding and Budgeting**

As per the MOU with the MHA, Tata Tiscon co-sponsored the project in all the project cities, the local representative for Andhra Pradesh was contacted and they readily agreed to sponsor the Programme and also provide participants for the training. The Total budget for the 10 days training was about 240,000.00 which include loss of wages compensation for the participants @ 150 /day as most of the participants depend on their daily wages.

#### **Model Demonstration Unit**

It was felt that the training will not be comprehensive if the participants were only taught on theoretical aspects, rather involve them in the practical demonstration so that they can easily understand by doing it practically. Initially it was thought to have a technological demo unit (TDU) as it is done elsewhere in such type of trainings,



but bearing in mind the number of days and utility of the TDU after the training will be idle, it was decided to construct a complete structure which can be used as a community utility room. The Engineering department was asked to come out with an estimate (203 Sqft) for the same and put up for the Commissioner's perusal and approval, which was agreed by the Commissioner and approved for the budget. Tata Tiscon was also informed about this and requested them to give their share of 40 % which they readily agreed.

Apart for the work shop expenses, about 130,000.00 were allocated for the construction of Model Demonstration Unit. The total budget for the workshop is 370.000 out of which 148.000 was given by Tata Tiscon. (60: 40 as per the MOU).

The Model Demonstration Earthquake Resistant Unit has the following Earthquake Resistant features in it: **Pile Foundation as per the soil condition of the site (back cotton soil); Plinth Beam; DPC; Door and Windows Sill Band; Lintel Band; Rod bending and binding techniques (Stirrups); Reinforcements of the Rods;**

### The Training

The training Programme was held in the Payakapuram Housing site from April 18-27, 2008. The Inaugural function was graced by the Sub Collector and Commissioner Incharge, Shri Gaurav Uppal I.A.S and officials from the VMC and Tata Tiscon. The Training Programme was successfully completed and the participants were awarded the certificates in the valedictory function graced by the officials from the Vijayawada Municipal Corporation and the Representatives of Tata Tiscon.

### Engineers Sensitization Session

During the inaugural address of the mason training workshop, the Commissioner has stressed the importance of the construction of the earthquake safe building in the city and mainstreaming the same in all ongoing construction activities under the JNNURM and also the day to day constructions taken up by the Corporation. He also advised the resource persons to visit few sites where the constructions are going on to see if we can incorporate features of the earthquake resistant structures.

Taking the note of Commissioner's advices, the Corporation organized a Sensitization Session for the Engineers from departments of Engineering and Town Planning, The Resource Person took a 3 hours session which covered topics on Earthquake vulnerabilities of the City, How to mainstream the Structural Safety Measures in the on going projects and in the future projects which are to be taken up by the Corporation. The sessions were very interactive and the Engineers clarified the doubt about the Structural Safety measures to be mainstreamed in ongoing projects.

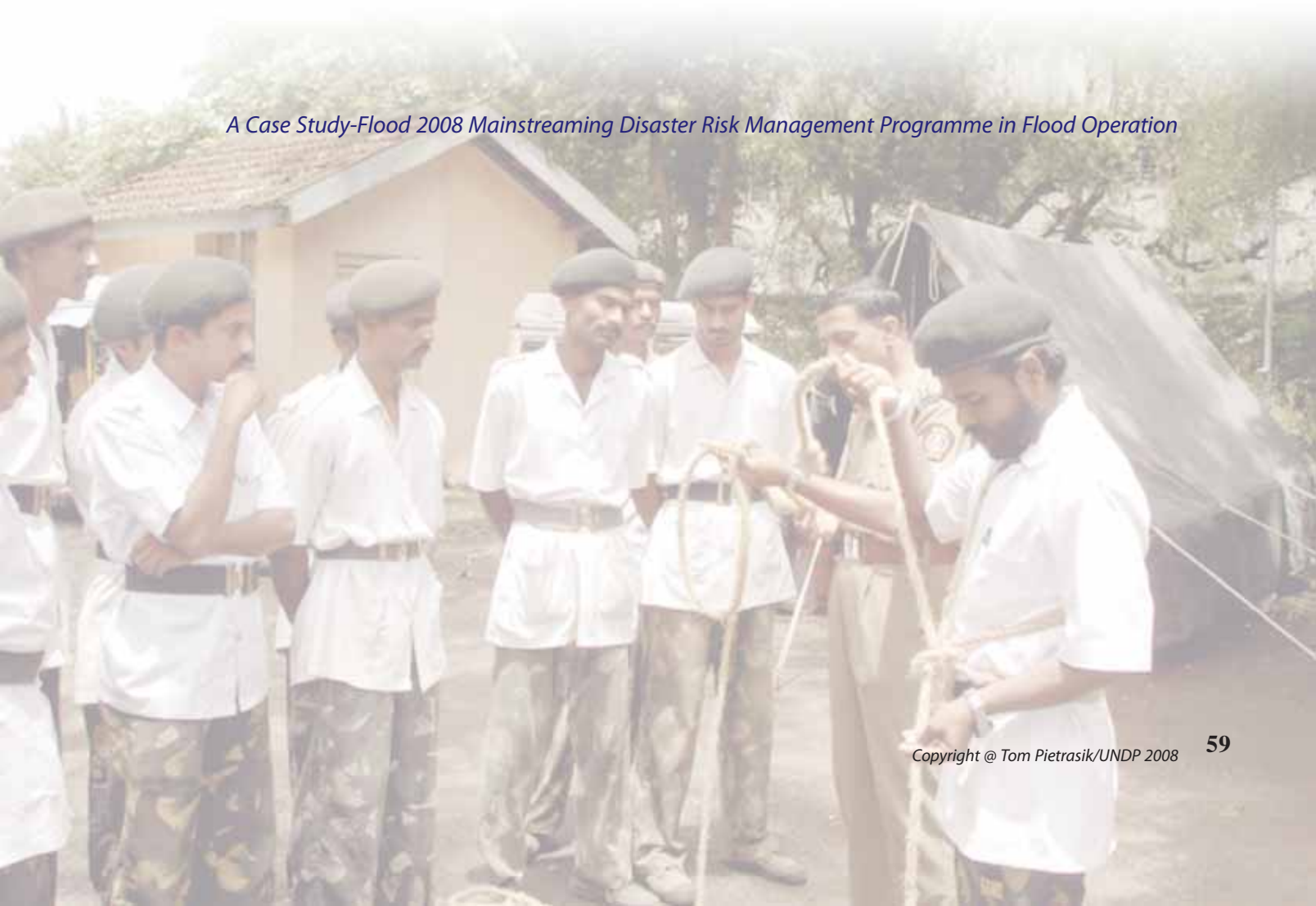


# Chapter-VII

# From the field

*Mainstreaming Disaster Risk Management Programme in Flood Operation*

*A Case Study-Flood 2008 Mainstreaming Disaster Risk Management Programme in Flood Operation*







## A Case Study-Flood 2008 Mainstreaming Disaster Risk Management Programme in Flood Operation

Cuttack district is a narrow strip of land spreading from east to west. Topographically, Cuttack has two prominent divisions i.e. Hilly terrain on the west and Mahanadi delta plain on the east. The highly fertile and densely populated land is criss-crossed by hundreds of rivers and rivulets. Large portion of the land mass is low lying and gets submerged during flood. People of Cuttack largely depend upon agriculture as the primary means of livelihood. The vast network of irrigation canals established by the Britishers after the great famine of 1866 is the backbone of agriculture. Cuttack city is still the commercial capital of Orissa with the Malgodown controlling the trade throughout the state.

Cuttack district is highly prone to natural disasters like flood and cyclone due to its geographical location. An unprecedented super cyclone affected this district during 1999 and flood in major rivers in the year 1972, 1973, 1975, 1978, 1980, 1982, 1984, 1991, 1999, 2000, 2001, 2003 and 2006 causing heavy loss to lives and property.

### Magnitude Of Flood

Due to low pressure in the Bay of Bengal on September 14, 2008 which was subsequently intensified to a deep depression there was very heavy rain in the upper and lower catchments of Mahanadi System, which resulted in an almost



endless nightmare for the people of Cuttack. Suddenly the discharge of flood water in river Tel and Hati at Pathrola and Khairmal started rising to more than 13 lakh cusec on September 18, 2008. The first heavy flood came on September 19 evening when more than 15 lakh cusec water passed through Munduli. Naraj is the point where Mahanadi divides into Mahanadi & Kathjodi systems. Discharge above 9 lakh cusecs at Naraj is dangerous for the embankments and villages of Mahanadi delta area. The nightmare started at midnight when the flood peaked 15.81 lakh cusec of water at Munduli with 26.70 ft. gauge at Bellview. Crossing the danger level at all points the flood water started breaching the embankments like an expert bowler hitting away the ninepins. The water level at Bellevue remained constant around 26.70 ft. for almost 12 hours on 20th September 2008 with a discharge of 15.81 lakh cusec. Such a high Flood coupled with heavy rains experienced after a gap of 26 years made the lives of the people miserable. The magnitude of this Flood was at par with the 1982 Flood which created havoc among the people of undivided Cuttack district.

### Strategy Developed To Combat Flood

**Preparation-** Preparation against disasters is the best step to face the disasters. Cuttack was slowly building on the achievement of the disaster management team and its training process largely due to the initiatives under Disaster Risk management process. The development of EOC, Formation of District Disaster Management Team, awareness generation and a defined Standard Operating Procedures for Emergency Support Functions has helped combating the disasters along with taking some on-the-spot measures for managing flood. The preparedness measures that clearly played a key role are:

**Structural measures-** The structural measures included strengthening district as well as Block

Emergency Operation Centers through increased technological presence. The **blocks are equipped with VHF sets, Emergency Operation Kits etc.** These Kits were used for demonstration purpose; the VHF sets help in quick dissemination of warnings and messages with zero cost at day to day basis during the disasters. The district emergency operation centre is equipped with Telephone, internet, VHF facilities. During emergency this centre acts as a nodal point for message receive and transmit to different quarters. These modern gadgets have helped in managing flood 2008 in all respect.

**Planning** - After 1999 super cyclone when the community preparedness and evolved coping mechanism to alertness was stressed. It was realized that without community involvement and participatory planning for disaster management, the long term goal of saving community for the fury of disaster is not possible. Again as Cuttack District is vulnerable to number of disasters there cannot be separate plans for each of these disasters as this will only add confusions. The plans need to be unique & integrated with mainstream development process. Various multi hazard disaster management plans have been prepared in 1752 villages so far. These plans have been prepared with the support of community based organization. District project Officer posted on behalf of the Orissa State Disaster Management Authority (OSDMA) looks after the preparation of village plans. Till date the 306 GP plans have been prepared. All the 14 blocks and District have prepared their plans. These plans are regularly updated.

**Formation of Disaster Management Teams/ Committee** - Different Teams and Committees at all level are being formed for the purpose of taking decisions related to disaster preparedness, management & disaster recovery. At District, block,



GP & village level such committees are formed. These committees include decision makers, opinion leaders, traditional leaders, SHG members, village youths, teachers, line dept. officials etc. These committee/ teams meet twice in a year to assess the vulnerability and prepares the measures to be under taken for disasters at different levels.

**Community Capacity Building** - Community based Disaster Preparedness is the best form of disaster preparedness as this advocates for a bottom up approach for disaster management. It is an acknowledged fact that whatever be the preparedness at top level it takes 24 to 48 hours for reaching at community in the normal condition. In case of severe disaster scenario, this time span may vary. Hence, the wise approach is to train the community in rescue operations, first aid and psychological first aid for self reliance. In order to build up community repertoire of skill the selected youths of the village be imparted training in chosen subjects. **Till now under DRM Programme, 5234 youths have been trained on Search and Rescue skills. Similarly 1745 nos. of youth have been trained on First Aid and 645 are trained in Psychological First Aid.**

**Specialized Trainings** - Disaster Management is a huge subject and it has number of components as a whole. Some of the selected youths have been imparted training on Gender inclusion, mainstreaming vulnerability in disaster management practices. Specialized training to PRIs have also been imparted under Disaster Risk Management Programme

**Women Empowerment** - Women constitute roughly 50% of population of Cuttack District. To have a compound impact in any Programme, it is very important to include women. Inclusion of women in the planning as well as execution process reduces their vulnerability and dependence on male counter parts. The Specialised needs of the women at the time of disaster can be taken care off, if they are trained. Hence, it has been made mandatory to involve women in the trainings.

**Training to other Stake holders** - Similar orientation & awareness trainings are also imparted to other stakeholders such as teachers, NSS/NCC volunteers, AWW workers, SHG members, Government officials etc. on different aspects of disaster management.

**Awareness Generation** - Being aware of a particular disaster reduces 50% of our losses. Thus awareness generation through various initiatives like distribution of IEC material, Wall Paintings has been the main focus of the disaster management Programme.

**Mainstreaming with development process**

- Most of the time disasters gives us an opportunity to amend the faulty constructions and designs. However, people have now realized that it is better that the designs or development processes be angled from the perspective of disaster. Thus, the Community Contingency Plans prepared at the village level people are looking at the constructions from the point of view of disasters. The actions as specific as raising the height of the roads, strengthening the village embankments are few of the initiatives taken up at village level to reduce disasters.

**Deployment of Senior Officers** - Keeping in view the gravity of the flood situation, the district administration deployed senior officers to three sub-divisional head quarters and different vulnerable blocks to assess and monitor the situation in flood affected areas as well as coordinate the relief and rescue operations.

In additions to the above measures, the officials were constantly on the vigil, till the time the situation was under control. Following steps were taken

The District Control Room was functioning round the clock to keep constant eye on the flood situation.

Similar control rooms are also functioning round the clock at the Sub-division / Blocks / Tehsils level.

The VC, BDA cum supervising officer deputed by Govt. personally monitoring the situation.

All Executive Engineers of Irrigation Department were instructed to keep round the clock vigil along all the embankments and weak points and to temporarily restore the breaches immediately.

The situation was closely monitored over VHF and Telephone.

There was a close liasoning with other districts and organizations for relief, personnel and other requirements.

Daily review was made to keep close track of sanitation, Health , Drinking Water supply and Veterinary Sectors and to prevent out break of epidemics in the flood affected areas.

Hourly gauge readings of Hirakud reservoir, Bellevue (Kathajodi River) and river Mahanadi were being maintained at the control room.

Country boats were mobilized from Ganjam and Bhadrak District for relief operation

*- This case study has been extracted from report of OSDMA (Orissa State Mitigation Disaster Mitigation Authority)*

### **Roles played by Disaster Risk Management Stakeholder other than Government.**

**Control Room Management-** The District Project Officer appointed by OSDMA-UNDP was assigned to look after the management of control room. He was assigned to receive and transmit messages, prepare daily situation report, transmit reports to several quarters, liasoning with NGOs, CBOs, and FBOs for resource leverages etc. The DPO was also key personnel in handling information related to boat engagement, food stuff allotment, compiling information on causality etc. For three days he remained in charge of the control room on a 24 hour basis and transmitted information to all concerned.

During this specific time frame he took innovative steps as such opening up of new email id's for Emergency Operation Centre, Cuttack, alerting DMTs and DMCs wherever possible as well played key role in linking service provider agencies with that of block administration.

**DM plan updation** - As a part of the DRM Programme, the district disaster management plans were prepared and updated on regular basis. Prior to this flood also the plan was updated. The blocks are asked to prepare their own contingency planning and update it. Similarly the DPO ensured the VHF sets, internet facilities etc remain upto date. For accepting changes the plans were uploaded in the website.

**DMT & DMC mobilization** - As soon as the flood warning was received it was transmitted to the block /Tehsil and other line dept officials for alert purpose. The areas with frequent disaster history are passed on the message from the control room. The DMTs and DMCs are alerted and they are asked to pass the message to the common people.

**Search and Rescue Activities** - The DMTs & DMCs of Bilipalda village of Banki after receiving the message started sending people to the safe areas. Similarly in Jasorajpur Village of Mahanga block the DMT rescued people from drowning people. The DMTs of Nagaspur G.P kept a close look on the weak areas of the bunds and ensured it did not break by filling the weak areas with that of sand bags. In Bahugram GP, the DMT volunteers went for a mock drill two days before the disaster in order to ensure every thing is in place. The NGO Janamangal mobilized volunteers when a breach occurred in Nischintakoili Block. These volunteers played key role in finding out alternate routes and smooth relief distribution among villagers.

**First Aid** - The first aid activities of the DMT teams are praise worthy. This was even highly appreciated by district administration. The NGO OMRAH in constitution with local DMT members organized two health camps in Tarat GP of Nischinta koili Block. The ODCAW NGO in collaboration with Help Age India organized two health camps in the Katikata and Asureswar GP. Apart from this number of DMT members went to administer first aid and psychological first aid services to the people

**Relief** - A total of 40 NGOs in the district supported the district administration in relief distribution activities. Out of them 26 are our DRM partners. Other DRM partners which could not be connected with district administration because of road cut off provide cooked food, water pouches, dress materials etc. The NGOs involved in the operation supported in health, education, food distribution, dress material distribution, maintaining law and order as well as developing effective sanitation practice in the area.

In the post flood aftermath the NGOs, DMTs involved in the programme assisted district administration in damage assessment, post flood sanitation restoration etc.



# Chapter-VIII

# Moments of Triumph

*The journey of a thousand miles begins with a single step...*



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***During the emergency response to the flood in Bihar, the State Government paid special attention to the needs of the children. At the mega camps (Government relief camps), children were provided with special nutritional biscuits and milk.***





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***Women are actively participating in Search and Rescue operations, which has been a male prerogative so far.***



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***Awareness generation activities are carried out through the medium of traditional folk forms like street theatre/nukkad natak etc.***



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**WOMEN IN ACTION!**  
***A college girl being trained in First Aid.***



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## **SCHOOL SAFETY INITIATIVES**

***Mock drills are regularly conducted in schools and students are trained in First Aid and Search & Rescue operations.***



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***The Disaster Management Plans are operationalised and tested through the Mock drills conducted at various levels. Thus enabling people to deal with any emergency situation.***



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## **VOLUNTEERS IN ACTION!**

***“The spirit of volunteerism saved many lives during floods in Bihar”!***



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## **THE FIRST STEP TOWARDS RESILIENCE**

***Community people coming together to make Disaster Management Plan of their village.***



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***Gender Equity has been a core area of DRM programme. Through various awareness initiatives, the perceptions are slowly changing. Now, women have started coming out of the confines of their homes to attend the training programs.***





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***Women and children are the most vulnerable group during emergencies. Thus training them is the first step to reduce their vulnerability. Women play an important role in bringing about a change and they have a compound impact on any development initiative.***



## Disaster Risk Management Programme

Repeated disasters threaten sustainable development. Disasters destroy decades of human efforts and investments towards development, thereby placing heavy demands on society for reconstruction and rehabilitation. Between the years 1991 to 2000, Asia has accounted for 83% of the population affected by disasters globally. Within Asia, 24% of deaths due to disasters occur in India, on account of its size, population and vulnerability. The India sub-continent is highly prone to natural disasters. Geographically floods affect 40 million hectares of the land, cyclones affect particularly the east and west coastal areas and 59% of the land is vulnerable to earthquakes. High level of risks combines with low levels of local capacity to cope with the hazards result in major loss of lives, property and livelihood.

The GoI (Government of India) and UNDP (United Nations Development Programme) Disaster Risk Management Programme provides support to the Government to set up an institutional framework addressing issues of disaster preparedness, response, prevention and mitigation. In addition, a sub-component of the programme focuses on earthquake vulnerability reduction in 38 cities falling in zones III to V (medium to high risk to Earthquakes) having a population of more than half a million each.

### Programme objectives

I. National capacity enhancement to institutionalize the system for natural disaster risk management in Ministry of Home Affairs.

II. Environment building, education, awareness programmes and strengthening capacities at all levels in natural disaster risk management and sustainable recovery. [Development of manuals and training modules, information, education and communication materials and their dissemination, awareness campaign strategy and implementation for disaster reduction and recovery.]

III. Multi-hazard preparedness, response and mitigation plans for disaster risk management at state, district, block, village and ward level in 185 most multi-hazard prone districts of 17 selected states.

IV. Networking knowledge on effective approaches, methods and tools for disaster risk management, developing and promoting policy frameworks at State and National levels.

The DRM programme is being funded under a multi donor framework of \$41 million. Apart from UNDP other donors such as European Union (EU), the United States Agency for International Development (USAID), the Government of Japan, the Australian Agency for International development (AUSAID), Department of International Development (DFID), the European Commission, Humanitarian Aid office (ECHO) and United Nations International Strategy for Disaster reduction (UNISDR) are part of this framework.



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